

**UNITED STATES DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
WASHINGTON, D.C.**

AIRCRAFT OWNERS AND PILOTS  
ASSOCIATION, *ET AL.*

Complainants,

v.

FAA Docket No. 16-22-08

COUNTY OF SANTA CLARA,  
CALIFORNIA

Respondent.

**ANSWER, STATEMENT OF FACTS, AND AFFIRMATIVE DEFENSES OF  
COUNTY OF SANTA CLARA, CALIFORNIA**

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## I. Introduction

Pursuant to 14 C.F.R. §§ 16.23(d) and 16.26(4), the Respondent, the County of Santa Clara, California (“County”),<sup>1</sup> file this Answer, Statement of Facts, and Affirmative Defenses (“Answer”) in response to the Complaint filed in this proceeding.

Effective January 1, 2022, the County of Santa Clara (“County”) prohibited the sale of leaded aviation gasoline (“avgas”) at Reid-Hillview Airport (“RHV”) and San Martin Airport (“E16”) (collectively, “County Airports”) and transitioned five County owned fuel tanks to the exclusive sale of unleaded avgas. The County took these actions to protect the health and welfare of the surrounding community and to promote the availability of unleaded avgas in response to a study demonstrating a clear causal link between general aviation operations using leaded avgas at RHV and significant increases in blood lead levels for children in the surrounding neighborhood. The County’s actions ended the sale of leaded avgas at the County Airports and prevented the emission of over 800 pounds of lead into the community in 2022, with negligible impacts on airport operations. While operators of aircraft unable to use commercially available unleaded avgas are no longer able to purchase leaded avgas at the County Airports, they can fuel at numerous airports in the immediate vicinity.

Complainants wrongly assert that the County has prohibited the use of leaded avgas and self-fueling with leaded avgas at County Airports. Complainants further assert that the unavailability of leaded avgas for purchase at the County Airports constitutes a denial of their rights to reasonable access and to self-fueling at the County Airports.<sup>2</sup> These allegations turn on

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<sup>1</sup> The Complaint appears to interchangeably refer to the County of Santa Clara, a municipal corporation, and Santa Clara County, the geographic region over which the County has jurisdiction. We assume references to “Santa Clara County” mean the County as a municipal corporation unless context suggests otherwise.

<sup>2</sup> In Complainant’s Answer in Opposition to Respondent County of Santa Clara’s Consolidated Motion to Dismiss and Motion for Summary Judgment, Complainants reinterpreted their claim that the County has banned the “use” of leaded avgas to mean that the County has restricted the “ability to access or obtain in order to use” leaded fuel. Opposition at 7.

novel interpretations of both the right of reasonable access and the right to self-fuel that would effectively require every airport sponsor to ensure availability of every type of fuel for every aircraft that could conceivably land there. Adopting these drastic reinterpretations would require significant changes at nearly 30 percent of public use airports in California and over fourteen hundred public use airports nationwide.

The Director should refuse to grant any relief to Complainants for several reasons. First, Complainants' claims the County has prohibited the use of leaded avgas and self-fueling with leaded avgas at the County Airports are simply untrue; the County has not taken these actions. Second, the County's prohibition on the sale of leaded avgas is a reasonable restriction necessary for the safe operation of the airport. Third, the County is under no obligation to sell leaded avgas (or any fuel at all) from its own fuel tanks. Fourth, unavailability of Complainants' preferred fuel for purchase does not amount to a denial of reasonable access to the County Airports. Fifth, unavailability of Complainants' preferred fuel for purchase does not affect Complainants' ability to self-fuel at the County Airports.

## **II. RESPONDENT'S ANSWER**

The Complaint fails to provide a clear and concise statement of the facts that Complainant relies upon, as required by 14 CFR § 16.23(b)(3). Instead, the complaint is a medley of sensationalized factual allegations and legal arguments, presented in a story-like fashion, rather than consecutively numbered paragraphs. This has made it difficult for the County to fully understand and prepare a response to Complainant's factual allegations. To facilitate the FAA's review of the pleadings, the County has numbered the individual paragraphs of Complainant's complaint on the copy of the complaint in Attachment A. The County will refer to the paragraphs of Complainant's complaint by number in this answer. The County will not

address Complainant's legal arguments herein; rather, the Complainant's legal arguments are addressed in Section IV, and in the County's pending Consolidated Motion to Dismiss and Motion for Summary Judgment ("Motion for Summary Judgment"). In some responses, Respondent identifies specific facts that are responsive to Complainant's inaccurate allegations. These specific factual responses are not exhaustive, and the County reserves the right to present additional facts that are responsive to Complainants' inaccurate allegations. To the extent that Respondent provides factual responses, they should be construed as a denial of Complainant's allegations.

1. The County admits that people across the nation - including pilots, aircraft owners, people who work on aircraft and at airports, and airport neighbors – desire an unleaded future as soon as possible, and that San Martin and Reid- Hillview are two airports in a national system. The County denies because of insufficient knowledge or information the allegation that each Complainant is committed to achieving a high octane, unleaded future for the entire national airport system. As to any allegations contained in this paragraph that have not been specifically admitted, each allegation is denied.

2. The County admits the first, second, and third sentence of ¶ 2. The remainder of ¶2 consists of conclusions that do not require a response; to the extent a response is required the County denies each allegation. With respect to the relationship between the EAGLE initiative and Santa Clara County, the EAGLE Initiative website states "In Santa Clara County, Calif., the FAA has outlined a path that would allow the airport to have safe lead-free operations. We continue to work with the county in efforts to reach a mutually acceptable implementation timeline to make this happen and we are looking at potential options." Attachment B, Eagle Initiative Website, available at <https://www.faa.gov/unleaded>.

3. The County admits the second sentence of ¶ 3, and that the Complaint accurately quotes from Complaint Attachments 1 and 2. The County denies because of insufficient knowledge or information the remaining allegations of ¶ 3.

4. In response to ¶ 4, the County admits that recipients of federal financial assistance pursuant to the FAA's Airport Improvement Program are required to sign contracts agreeing to comply with specified conditions relating to the operation of the airport at which the financial assistance is utilized. The remainder of ¶ 4 consists of the Complainant's policy recommendations, to which no response is required; to the extent a response is required the County denies each allegation.

5. The County admits that ¶ 5 correctly identifies the Complainants. Whether the complainants were "directly and substantially affected" by any alleged noncompliance of the County is a legal conclusion that does not require a response; to the extent a response is required the County denies each allegation.

6. The County admits the allegations of ¶ 6.

7. In response to ¶ 7, whether the complainants were "directly and substantially affected" by any alleged noncompliance of the County is a legal conclusion that does not require a response; to the extent a response is required, the County denies each allegation.

8. The County denies the allegations of ¶ 8 because of insufficient knowledge or information.

9. In response to ¶9, the County admits that Aperture Aviation, Inc. is a tenant of the County at RHV, that the County received a copy of the letter designated Complaint Attachment 5A from Aperture Aviation, Inc. in December 2021, and that the County had not responded to the letter as of October 14, 2022, informing Aperture Aviation that the County had not prohibited

the use of leaded avgas at either County Airport. The County denies because of insufficient knowledge or information all allegations of ¶9 not specifically admitted.

10. The County denies the allegations of ¶ 10 because of insufficient knowledge or information.

11. The County denies the allegations of ¶ 11 because of insufficient knowledge or information.

12. The County denies the allegations of ¶ 12 because of insufficient knowledge or information.

13. The County denies the allegations of ¶ 13 because of insufficient knowledge or information.

14. The County denies the allegations of ¶ 14 because of insufficient knowledge or information.

15. The County denies the allegations of ¶ 15 because of insufficient knowledge or information.

16. In response to ¶ 16, the County admits that Skyworks Aviation DBA Tradewinds Aviation (“Tradewinds”) is California corporation, and that the County executed a lease with Tradewinds (“Tradewinds Lease”) for the use of property located at 2505 East Cunningham Avenue, San José, California, which is part of RHV, for the purpose of operating a fixed base operation, including the provision of certain enumerated services. The enumerated uses of the premises pursuant to the lease include provision of pilot training, and do not include the sale of fuel of any kind. Accordingly, the County admits that the Tradewinds Lease prohibits Tradewinds from selling 100LL or any other type of fuel on the property that Tradewinds leases from the County at RHV. The County denies that Tradewinds Lease prohibits Tradewinds from

being able to self-fuel its flight school aircraft with 100LL. See Attachment C, Declaration of Harry Freitas (“Freitas Decl.”), Ex. A.4.

The County admits that Tradewinds performs flight school services at E16. The County denies that Tradewinds has a lease with the County for use of any property at E16. The County further denies that the Tradewinds Lease, which is the only lease between Tradewinds and the County, restricts Tradewinds’ activities at E16.

The County further denies that the quote designated as Section 4.1.6.3 or the alleged lease excerpt in Complaint Attachment 13A of the Complaint is part of any executed lease between Tradewinds and the County. As to any allegations contained in ¶ 16 that have not been specifically admitted, each allegation is denied.

17. In response to ¶ 17, the County denies that Tradewinds previously sold 100LL at RHV. The County further denies that Tradewinds is able to sell any fuel at RHV. As previously noted, the Tradewinds Lease prohibits Tradewinds from conducting any fueling operations on its leasehold. Tradewinds has not asked to conduct retail fueling operations in its ongoing negotiations with the County for an extension of the Tradewinds Lease. See Freitas Decl., Ex. A.4.

The County further denies that Tradewinds is restricted from self-fueling with 100LL at RHV. Self-fueling at the County Airports requires a permit. Freitas Decl., ¶ 43; Complaint, Attach 14. The County issued Tradewinds its first self-fueling permit for RHV effective December 30, 2021. Freitas Decl., Ex. J. Tradewinds does not have a self-fueling permit at E16. Accordingly, the County admits that Tradewinds is restricted from self-fueling at E16.

Tradewinds' self-fueling permit requires it to purchase fuel from the County, and effective January 1, 2022, the County sold only UL94. The County denies because of insufficient knowledge or information that Tradewinds conducted any unpermitted self-fueling with 100LL prior to January 1, 2022. The County denies the third sentence because of insufficient knowledge or information. As to any allegations contained in ¶17 that have not been specifically admitted, each allegation is denied.

18. The County admits that ¶ 18 accurately quotes from the County of Santa Clara Airport Rules and Regulations, and that the retail sale of 100LL is currently prohibited at the County Airports. The County denies that there “were no 100LL restrictions at the County’s airports” prior to August 17, 2021. The County’s Airport Rules and Regulations, which include regulations affecting the use of 100LL, such as for fuel storage and self-fueling, have been in effect since before August 17, 2021 and unchanged since March 27, 2001. Freitas Decl., ¶ 31. As to any allegations contained in ¶ 17 that have not been specifically admitted, each allegation is denied.

19. In response to ¶19, the County admits that the Santa Clara County Board of Supervisors (“Board”) received and discussed a study entitled *Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California*, and that the study did not assess any impacts related to lead exposure at E16.

The County admits that Complaint Attachment 16 is a true and correct copy of a report from County Executive Jeffrey Smith and Deputy County Executive Sylvia Gallegos regarding Actions to Prevent Lead Contamination from Operations at Reid-Hillview Airport on August 17, 2021 and accurately states their recommendations to the Board.



The County denies that the Board “voted to unanimously ‘adopt’ the recommendations of the County executive staff” with respect to Item 36 and 37. The County admits that Complaint Attachment 17 is a true and correct excerpt of the minutes from Board’s August 17, 2021 meeting, and accurately reports the actions taken by the Board. As to any allegations contained in ¶ 19 that have not been specifically admitted, each allegation is denied.

20. The County denies the allegations of ¶ 20.

21. In response to the allegations of ¶ 21, the County admits that all leases to businesses operating at RHV were set to expire on December 31, 2021. The County has agreements with fixed base operators (“FBOs”), specialized aviation service operators, and other tenants granting use of premises at RHV and E16 for certain enumerated uses. The leases with JMM Aviation, LLC, California In Nice DBA Nice Air, and Amelia Reid Aviation LLC DBA Aerodynamic Aviation at RHV and with San Martin Aviation at E16 authorize use of the premises for fueling operations with a further permit from the County. See Freitas Decl., Ex. A.1-4, B. The County admits that all other leases prohibit the tenant from conducting fueling operations on the leased premises, including the sale of 100LL. No lease at RHV or E16 references sale of specific types of fuel.

The County denies that it has entered into any current lease or agreement at RHV or E16 prohibiting the use of or self-fueling with leaded fuel. The County further denies that the quoted language alleged to be from a lease with Tradewinds appears in any executed lease between an airport tenant and the County. As to any allegations contained in ¶ 21 that have not been specifically admitted, each allegation is denied.

22. In response to ¶ 22, the County admits that the quoted text accurately states the County’s protocol for the emergency use of leaded fuel at the County Airports, and that the

policy grants authority to the Airports Director to evaluate requests made pursuant to the protocol. The County denies that the protocol is unavailable to airport tenants. The second sentence of ¶ 22 is a conclusion that does not require a response; to the extent a response is required, the County denies each allegation. As to any allegations contained in ¶ 22 that have not been specifically admitted, each allegation is denied.

23. With respect to ¶ 23, the County denies that the County has taken actions that were unreasonable or discriminatory. The County denies the remainder of ¶ 23 because of insufficient knowledge or information.

24. In response to ¶ 24, the County admits the first two sentences. The County admits that third sentence restates statements in Complaint Attachment 19. The County denies the allegations in the fourth and fifth sentences because of insufficient knowledge or information. The County denies the last four sentences of ¶ 24 for lack of sufficient knowledge or information.

25. In response to ¶ 25, the County admits to the allegation in the first sentence insofar as it refers to the fact that 100LL has not been available for sale during the specified time period.. The County denies the remaining allegations in ¶ 25 because of insufficient knowledge or information.

26. In response to ¶ 26, the County admits the first three sentences. The County denies the last sentence because of insufficient knowledge or information as to Complainants' motivation for filing their Complaint. The County denies that there has been "little, if any, progress toward a meaningful resolution" since the FAA initiated its investigation. The County states that since the commencement of the Part 13 investigation, the County and the FAA have met regularly to discuss issues stated in the FAA's December 22, 2021 Part 13 notice of investigation, and that on February 7, 2023, the County and the FAA entered into a

memorandum of understanding detailing a framework for the parties to resolve many of the allegations in the notice. Freitas Decl., Ex. M.

27. In response to ¶ 27, the County admits that the FAA identified Complainants' allegations as a basis for initiating its Part 13 investigation. The County admits the second through fourth sentences. The County denies that as of October 14, 2022 there had been no written response from the County to the FAA's February 22, 2022 request for additional information. The County states that it provided information to the FAA in response to the request for additional information on February 24, 2022, May 9, 2022, and September 13, 2022, and that its efforts to respond to the request are ongoing. The County denies the last sentence of ¶ 27.

28. Paragraphs 28-55 consist entirely of arguments and conclusions that do not require a response. To the extent an answer is required, the County denies all allegations in Paragraphs 28-55.

29. In response to ¶ 56, the County admits that it has prohibited the sale of leaded avgas at its airports effective January 1, 2022, that the Complainants have filed informal complaints with the FAA, and that the Complainants have communicated their concerns regarding the unavailability of leaded avgas for purchase at the County Airports to the County. The County denies that Complainants engaged in any good faith or substantial efforts to discuss the alleged County prohibitions on the use of 100LL or self-fueling with 100LL at the County Airports with the County. As to any allegations contained in ¶ 55 that have not been specifically admitted, each allegation is denied.

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### **III. Statement of Facts**

The County provides this Statement of Facts to further substantiate its Answer in accordance with 14 CFR § 16.23(i) and to demonstrate the thoughtful and diligent steps the County has taken to accommodate the needs of a minority of airport users that fuel with leaded avgas, while balancing its duties to operate the Airport in a manner that does not create hazards to other airport users and the surrounding community. The statement of facts herein supplements and updates the statement of facts set forth in the County's pending Motion for Summary Judgment.

#### **County Airports**

1. The County is the owner and operator of RHV and E16, both of which are public use airports. Freitas Decl., ¶ 6, 10. Air traffic at the County Airports consists entirely of general aviation operations, most of which is comprised of piston engine aircraft. *Id.* at ¶ 7, 11.

2. The County has accepted Airport Improvement Program funds from the FAA in the past twenty years for projects at both County Airports. The County entered into the grant agreements with the FAA, which state that the County must comply with certain grant assurances. *Id.* at ¶ 6, 10.

#### **Lead Emissions from Combustion of Avgas Threatens Public Health and Welfare**

3. The most common form of avgas for piston engine aircraft is 100LL, a leaded 100 octane fuel. Attachment D, U.S. Environmental Protection Agency, Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare, 199 Fed. Reg. 62758.

4. Combustion of leaded avgas due to piston engine aviation operations causes emission of lead into the environment. Lead emissions from piston engine aircraft are the largest single source of lead to air in the U.S. in recent years, contributing 70 percent of the annual emissions of lead to air in 2017. *Id.* at 9.

5. Exposure to lead can cause severe and irreparable human health effects, including harm to the nervous, cardiovascular, immune, and reproductive systems. The effects of lead exposure are particularly pronounced for children, for whom exposure to lead can also cause severe and often irreversible cognitive and intellectual impairment, harm academic performance, and increase children's risk for behavioral disorders. *Id.* at 23-25.

6. The EPA recently proposed to find that engine emissions of the lead air pollutant from piston engine aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under the Clean Air Act. *Id.* at 28.

7. RHV is one of the highest risk airports in the country for lead exposure. According to the US EPA's 2017 National Emissions Inventory, general aviation operations at RHV emitted 745 pounds of lead in 2017, the 36<sup>th</sup> highest output of any airport in the country. Over 30,000 people live within one mile of RHV, the third highest total of any airport among the 150 highest lead emitting airports. Freitas Decl. ¶ 9.

8. In August 2021, the County released the Zahran Study, which examined over 17,000 blood lead test results collected from children residing <1.5 miles of RHV and sampled between January 1, 2011 and December 31, 2020 by the California Department of Public Health over a 10-year period. The extensive data the study analyzed allowed for it to control for variables such as other sources of exposure to lead and demographic factors. See Freitas Decl. ¶

13, Ex. C.1. The Zahran Study's findings were published in the Proceedings of the National Academy of the Sciences. *Id.* at ¶ 13, Ex. C.2

9. The Zahran Study found correlations between various indicators of general aviation operation at the airport and significant increases in blood lead levels in children living near the airport. The Zahran Study also found that living downwind of RHV is associated with childhood blood lead level increases comparable to those from the Flint water crisis, and that children living within half a mile of the airport during periods of maximum piston-engine aircraft traffic had blood lead level increases nearly twice the amount that occurred during the Flint crisis. Freitas Decl., Ex. C at xi-xvii. In particular, the Zahran Study demonstrated a strong correlation between the volume of leaded avgas sales at RHV and increased blood lead levels in children living near RHV. *Id.* at Ex. C, p. 45.

#### **Most of the General Aviation Fleet Can Safely Use Available Alternatives to 100LL**

10. Several unleaded avgas options are available for piston engine aircraft. The most notable is an unleaded 94 octane fuel produced by Swift Fuels, known as UL94. *Id.* at ¶ 18. The FAA has determined that most models of piston engine aircraft in the US general aviation fleet, including a significant portion the piston engine aircraft using the County Airports, can operate using UL 94. *Id.*, at ¶ 36. Use of UL94 requires purchase of a supplemental type certificate from Swift Fuels. *Id.* at ¶ 18.

11. In September 2023, the FAA approved a 100 octane unleaded fuel produced by General Aviation Modifications, Inc. (GAMI), known as G100UL, for fleetwide use. G100UL is not yet commercially available, though GAMI has informed interested purchasers that it will be available in California in 2023. *Id.*, at ¶ 33.

12. Additional 100 octane unleaded avgas options are under development, including 100R, which Swift Fuels expects to begin selling in 2023. *Id.* at ¶ 20.

**August 17, 2021 Board Action**

13. On August 17, 2021, the Board directed the County Administration to take several actions to mitigate the risk of harm from lead exposure due to aviation at the County Airports.

Freitas Decl. ¶ 15, Ex. D. These actions included direction to:

- a. submit or join a Petition for Rulemaking to the U.S. Environmental Protection Agency under the authority granted by the Administrative Procedure Act, 5 U.S.C. section 553 to make a finding that lead emissions from general aviation aircraft endanger public health and welfare and issue proposed emission standards for lead from general aviation aircraft under Section 231(a)(2)(A) of the Clean Air Act.
- b. continue working on securing unleaded aviation gasoline for the County Airports System.
- c. take all actions necessary to transition to carrying only lead free gas at both County airports as soon as possible with the understanding that the sale of leaded gas will not be permitted at either County airport after December 31, 2021 except for emergency operations.
- d. take such actions as may be necessary to expeditiously eliminate lead exposure from operations at Reid-Hillview Airport, consistent with all established federal, state, and local laws and all court orders. Such actions may include, but are not limited to, both prohibiting the sale or use of leaded fuel.

### **The County Has Not Prohibited the Use of Leaded Avgas**

14. The Board's August 17, 2021 action authorized the County Executive to ban the use of leaded fuel, but did not implement such a ban. In other words, the Board authorized the County Executive to prohibit the use of leaded fuel at the County Airports without further consultation with the Board. However, the County Executive has not used this authority granted by the Board to adopt any rules, regulations, or policies that prohibit the use of leaded avgas at the County Airports. Moreover, the County has not taken any enforcement action for the use of leaded avgas at the County Airports. *Id.* At ¶ 43.

15. Operations by aircraft using leaded fuel occur at the County Airports daily. *Id.* at ¶ 44. In fact, multiple Complainants routinely conduct operations at both County Airports with aircraft using leaded fuel. See e.g., Complaint, Attachment 5, ¶ 7; Attachment 7, ¶ 9; Attachment 8, ¶ 8; Attachment 9, ¶ 8.

### **The County Has Not Prohibited Self-Fueling with Leaded Avgas**

16. The County has adopted no laws, regulations, or policies that prohibit self-fueling with leaded avgas at the County Airports. Freitas Decl. ¶ 42.

17. The County requires operators to obtain a permit to conduct self-fueling at the County Airports. *Id.* at ¶ 43; Complaint, Attachment 14.

18. The County issues two types of self-fueling permits: a general aviation self-fueling permit and a commercial self-fueling permit. Freitas Decl., ¶ 44.

- a. The general aviation self-fueling permit is a nondiscretionary permit issued to individual operators who wish to refuel their aircraft at the County Airports. This permit has been unchanged since 2002. *Id.* at ¶ 45, Ex. I.



- b. Commercial self-fueling permits are available to commercial operators seeking to perform self-fueling on a large scale. *Id.* at ¶ 47.
  - c. The general aviation and commercial self-fueling permits impose insurance, safety and equipment standards, and require payment of flowage fees, exactly the types of reasonable rules and regulations contemplated by the FAA. *See e.g., id.*, Ex. I, J; FAA Order 5190.6B: FAA Airport Compliance Manual (Sept. 30, 2009) at p.11-3, 11-4.
19. Neither the general aviation self-fueling permit nor the commercial self-fueling permit limits self-fueling with leaded avgas. Freitas Decl., Ex. I, J.
20. The County issued self-fueling permits to Tradewinds. The County has not denied any self-fueling permit applications from any Complainant. *Id.* at ¶ 43, 45.<sup>3</sup>
21. Other FBOs conduct self-fueling pursuant to permits for storage, sale or distribution of fuel and lubricants. *See e.g., id.*, Ex. G.1-3.

**The County is Using its Fuel Tanks to Promote the Availability of Unleaded Avgas**

22. There are four fuel tanks at RHV and one fuel tank at E16. Each of these fuel tanks is currently owned by the County (collectively “County Tanks”). *Id.* at ¶ 30, 33.
23. Prior to January 1, 2022, fixed base operators (“FBOs”) used the County Tanks to sell leaded avgas. *Id.* at ¶ 29, 33.

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<sup>3</sup> For the first time in its opposition to the County’s Motion for Summary Judgment, Complainant Tradewinds alleged that Section 5.A of its Commercial Self Fueling Permit improperly restricts its right to self-fuel. The County has since informed Tradewinds that its commercial self-fueling permit was only intended to cover fuel purchased from the County, and that the County would be open to discussing a different permit for self-fueling with other fuels purchased from other sources. The County regrets that Tradewinds chose to raise this matter to the FAA before discussing it with the County.

24. The County negotiated new leases with the four FBOs at RHV effective January 1, 2022. *Id.* at ¶ 8, Ex. A.1-4. The County negotiated a new lease with the FBO at E16 effective December 20, 2020. *Id.* at ¶ 12, Ex. B. None of the FBO leases at the County Airports prohibit the sale of leaded avgas.

25. The County authorized three FBOs at RHV and one FBO at E16 to use one County Tank each, effective January 1, 2022. *Id.* at ¶ 31, Ex. G.1, G.2, G.3 (RHV); ¶ 39, Ex. H (E16). The County specified that the FBOs could only use the County Tanks to store unleaded fuels. Since January 1, 2022, UL94 has been the only avgas available for purchase at the County Airports. *Id.* at ¶ 30, 38.

26. Since January 1, 2022, the County has taken over operation of one of the RHV tanks and is using the tank to sell UL94. The County expects to begin operating an additional tank in April 2023, and the remaining fuel tanks at RHV in 2023. The County intends to use the County Tanks to exclusively sell unleaded avgas. *Id.* at ¶ 34.

27. Prior to 2022, UL94 was only available at one airport west of the Rocky Mountains and substantial market demand for UL94 existed amongst users of the County Airports. *Id.* at ¶ 18. On August 16, 2021, prior to the County's action, AeroDynamic Aviation transitioned its entire fleet to the exclusive use of UL94 and began exclusively selling UL94 from the fuel tank at 2650 Robert Fowler Way at RHV. *Id.* at 25. In 2022, FBOs and the County have consumed and sold over 248,000 gallons of UL94 at the County Airports, preventing the emission of over 800 pounds of lead into the environment. The County expects sale of unleaded avgas to grow as pilots become more aware of the benefits of unleaded avgas, including reduced maintenance costs and lowered lead exposure. *Id.* at ¶ 51.

28. When purchasing UL94 in smaller quantities, Swift Fuels transported the fuel to the West Coast by truck. Purchasing UL94 in larger quantities has allowed Swift Fuels and its West Coast purchasers to take advantage of economies of scale, most notably transportation by rail. Buying UL94 in larger quantities has reduced the overall cost for all retailers in Northern California by about \$1.15 per gallon. *Id.* at ¶ 26.

29. The County is working to procure a supply of G100UL. The County expects G100UL to be available for purchase at the County Airports within months. The County also intends to evaluate the feasibility of selling other 100 octane unleaded fuels, such as 100R when they become commercially available. *Id.* at ¶ 33.

**The County Prohibited the Sale of Leaded Avgas Effective January 1, 2022**

30. The Board’s August 17, 2021 action prohibited the sale of leaded avgas at the County Airports as of January 1, 2022, except in emergencies. *Id.* at ¶ 15, Ex. E.

31. The County regulates fueling at the County Airports by issuing retail fueling permits. The County issued Permits for Storage, Sale or Distribution of Fuel and Lubricants to three FBOs at RHV, effective January 1, 2022. *Id.* at 31, Ex. G.1-3. The County issued a Permit for Storage, Sale or Distribution of Fuel and Lubricants, effective January 1, 2022, with San Martin Aviation. *Id.* at 39, Ex. H.

32. The County has neither received nor rejected any application from any Complainant to sell avgas, including leaded avgas, since January 1, 2022. *Id.* at ¶ 35.

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**The County’s Actions Have Had No Detrimental Effects on Operations at the County Airports**

33. The unavailability of 100LL for purchase has not affected utilization of the County Airports. Operations at RHV and E16 have exceeded operations for the same period in 2021. *Id.* at ¶ 54-55. There has been no significant reduction in aircraft based at County facilities at either County Airport. *Id.* at ¶ 56-57. The County has no record of any safety incidents resulting from the exclusive sale of unleaded avgas. *Id.* at ¶ 58.<sup>4</sup>

34. Transitioning to the exclusive sale of unleaded avgas has prevented over 800 pounds of lead emissions into the community in 2022. *Id.* at ¶ 53.

35. The County maintains a protocol for allowing pilots who land at a County Airport without sufficient leaded fuel to safely access and fuel with leaded fuel. *Id.* at ¶ 49. Notably, however, there has not been a single instance necessitating its use. *Id.* at ¶ 50.

36. Operators whose aircraft require 100LL and who wish to use the County Airports have numerous nearby options to purchase 100LL, including Palo Alto Airport, Livermore Municipal Airport, San José International Airport, Watsonville Muni Airport, and Hollister Municipal Airport. San José International Airport is about seven miles from RHV. Watsonville Muni Airport is about fifteen miles from E16. *Id.* at ¶ 23.

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<sup>4</sup> Complainants’ assertion that the July 22, 2022 crash at RHV was caused by the unavailability of leaded fuel for sale at RHV is premature and unsupported. The NTSB investigation into the cause of the crash is ongoing. More than ten gallons of fuel were removed from the plane after the crash. Freitas Decl. ¶ 70-74. And even if the aircraft was out of fuel, which does not appear to have been the case, the pilot could have requested emergency authorization to self-fuel with 100LL. The County has no record of a request for emergency authorization for 100LL self-fueling from the operator. *Id.* at ¶ 50.

**The County is Engaged in Productive Negotiations with the FAA on Grant Assurance Compliance**

37. On December 13, 2021, Complainants filed an informal complaint with the FAA pursuant to 14 C.F.R. § 13.1 making substantially similar allegations as in the Complaint. Freitas Decl. ¶ 61-62, Ex. K. The FAA issued a Notice of Informal Investigation Under 14 C.F.R. § 13.1 (“Part 13 Notice”) on December 22, 2021 that included the availability of leaded avgas for purchase at the County Airports. See Complaint, Attachment 20.

38. Since early 2022, the County and the FAA have been engaged in regular communication regarding the County’s efforts to address any legitimate issues raised in the Part 13 Notice. Freitas Decl., ¶ 65-66.

39. On February 7, 2023, the County and the FAA entered into a Memorandum of Understanding (“MOU”) regarding the resolution of issues raised in the Part 13 Notice. The MOU placed the FAA’s investigation into abeyance and established a framework for the County and the FAA to discuss issues raised in the Part 13 Notice. As part of the MOU, the FAA formally invited the County to participate in a demonstration project conducted by the Airport Cooperative Research Program to study best practices and develop resources that will help airports conduct a safe and efficient transition to unleaded avgas while maintaining continuity of service. *Id.* at 68, Ex. M.

**IV. Argument**

The points and authorities herein respond to legal arguments and conclusions in the Complaint. These points and authorities *supplement and update*, rather than replace, the arguments set forth in the County’s pending Motion for Summary Judgment.

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**A. Complainants' Claims Relating to the County's Prohibition on the Sale of Leaded Avgas Merit Dismissal.**

**1. Prohibiting the sale of leaded avgas is a reasonable condition necessary for the safe operation of the County Airports.**

The FAA, which has “exclusive authority over aviation safety,” has expressly recognized the danger of lead exposure from avgas emissions and acknowledged the ability of airports to take actions to reduce lead exposure. See *In the Matter of Compliance with Fed. Obligations by the City of Santa Monica, California*, FAA Docket No. 16-02-08, Director's Determination, 2008 WL 6895776, at \*69 (May 27, 2008). Consistent with the FAA's authority, the County has the authority to adopt “reasonable, nonarbitrary and non-discriminatory regulations” on environmental concerns at the local level.” See *National Helicopter Corp. of America v. City of New York* (2d Cir. 1998) 137 F.3d 81, 89; see also Grant Assurance 22(h) (authorizing the County to adopt “reasonable, and not unjustly discriminatory, conditions [...] as may be necessary for the safe and efficient operation of the airport.”) The County's prohibition on the sale of leaded avgas is a reasonable measure regulating exposure to an environmental hazard and promoting airport safety because it is an empirically based rule that is producing widespread benefit with marginal impacts on general aviation operations at the County Airports.

The FAA, among other federal agencies, has acknowledged that “[a]ll forms of lead are toxic if inhaled or ingested,” and is working to eliminate the use of leaded aviation fuels for piston-engine aircraft in the United States. Attachment E, Environment & Airports, Federal Aviation Administration, available at [https://www.faa.gov/about/initiatives/avgas/env\\_airports](https://www.faa.gov/about/initiatives/avgas/env_airports); see also, Attach. B, Eagle Initiative Website, Attach. D, EPA Proposed Endangerment Finding. The FAA has also acknowledged and even encouraged airport proprietors to take measures to mitigate lead exposure. *Id.*

Prohibiting the sale of leaded avgas is a reasonable measure to reduce lead exposure from general aviation operations at the County Airports. The Zahran Study found a direct and significant correlation between sale of leaded avgas at RHV and blood lead levels in children in the surrounding neighborhoods. Freitas Decl., Ex. C at 16. The County's actions have prevented over 800 pounds of lead emissions in 2022 alone. *Id.* at ¶ 39. Eliminating these emissions reduces severe and irreparable human health effects, including harm to the nervous, cardiovascular, immune, and reproductive systems, cognitive and intellectual impairment, and behavioral disorders that result from lead exposure. See Attach. D, 199 Fed. Reg. at 62775-77. Reducing lead emissions at RHV will have significantly greater benefit than at most other airports. RHV is one of the highest lead emitting airports in the country, exposing its surrounding community at an atypically high amount of lead. Freitas Decl., at ¶ 9. RHV is also located in one of the most densely populated areas of any general aviation airport in the nation, creating a greater risk that the lead emissions from RHV will result in lead exposure. *Id.*

The substantial public health benefits achievable by banning the sale of leaded avgas have negligible impacts on airport users of the County Airports. Many of the aircraft based at RHV can use available unleaded fuels, which means the prohibition affects only a small number of airport users. *Id.* at ¶ 52. Furthermore, leaded fuel remains available from multiple sources in the area, such that discontinuing the sale of leaded fuel at RHV will not deprive airport users relying exclusively on leaded fuel of their ability to access the airport. *Id.*, at ¶ 23. The Complainants have not identified any quantifiable evidence of restricted access. In fact, the number of operations and aircraft based at the County Airports have not meaningfully declined since January 1, 2022, demonstrating that the County's ban on the sale of leaded avgas has not restricted reasonable access to the County Airports. *Id.* at ¶ 54-57.

**2. Complainants lack standing to challenge the County’s ban on the sale of leaded avgas.**

To file a complaint, a complainant must be “directly and substantially affected by any alleged noncompliance.” 14 C.F.R. § 16.23(a); see *Truman Arnold Companies v. Chattanooga Metropolitan Airport Authority*, Docket No. 16-11-08, Director’s Determination, 2013 WL 12244247, at \*28 (Oct. 4, 2013) (claim of discrimination in leasing dismissed where there was no evidence that the complainant had ever requested to lease the facilities in question). Selling fuel at the County Airports requires a permit from the County. County of Santa Clara Airport Rules and Regulations, Section 6.2, *Aviation Fuel Distribution Regulations*. The County has not received or denied any request for a permit to sell leaded avgas at the County Airports from Complainants. In fact, the County has granted all four requests for fuel permits that it has received since 2021. See Freitas Decl., Ex. G.1-3, H. As the County has not denied any Complainant’s request to sell leaded avgas at the County Airports, no Complainant has been directly affected by the County’s prohibition on the sale of leaded avgas. Thus, Complainant’s claim that the County’s actions violate the County’s FAA grant assurances fails for lack of standing. Notably, the County is not required to make its fuel tanks available to Complainants to sell leaded avgas. *Ashton v. City of Concord* (Jan. 28, 2000) 2000 WL 132770 at \*21 (“The Assurance establishes a privilege [...] but does not, by itself, compel the sponsor to lease such facilities which may be necessary to exercise that right.”).

**B. The County has the Proprietary Discretion to Use the County Tanks to Exclusively Store and Distribute Unleaded Avgas.**

Prior to January 1, 2022, FBOs at the County Airports sold leaded avgas using the five County Tanks. Effective January 1, 2022, the County ceased the sale of leaded fuel at the County Airports by conditioning the FBO’s continued use of the County Tanks on the FBOs using the tanks exclusively to store and distribute unleaded avgas. Freitas Decl. at ¶ 30, Ex. G.1-



3 (RHV); ¶ 36, Ex. H. The County anticipates it will be using two of the County Tanks at RHV to sell UL94 by May 1, 2023 and expects to begin using the remaining two County Tanks at RHV to sell UL94 within a few months. *Id.* at ¶ 32-24. Both the County’s decision to place conditions on the use of the County Tanks by third parties and to use four County Tanks to sell UL94 rather than 100LL are exercises of its proprietary discretion as the owner of the County Tanks. Any allegation that the Grant Assurances require the County to sell 100LL or to make the County Tanks available for a third party for any particular purpose is unfounded.

Airport sponsors have a proprietary right to manage their own assets. *Skydive Monroe, Inc. v. City of Monroe*, Docket No. 16-06-02, Director’s Determination, (Mar. 30, 2007) 2007 WL 1058450, at \*12 (finding that the grant assurances do not “prevent the airport from exercising proprietary powers, such as determining how to structure the leasing of property on the airport.”) The FAA has applied this principle to sponsor-owned fueling equipment, expressly holding that the decision to sell a particular type of fuel is a business decision within the discretion of the County. See *Ashton*, 2000 WL 132770 at \*19 (sponsor’s “decision not to offer auto fuel is a business decision within its rights to make. The Sponsor is simply not obligated to provide a more detailed reason for this business decision.”). The County decided to exercise its proprietary right by making the County Tanks exclusively available for the storage and distribution of unleaded avgas to meet the market demand for unleaded avgas. In evaluating the availability of avgas in Santa Clara County, the County determined that there was a substantial unmet need for unleaded avgas and negotiated fuel permits with its FBOs for the exclusive sale of unleaded avgas from County-owned tanks. Freitas Decl. ¶ 21-27. Users of the County Airports had already begun to transition their fleets to UL94. Others, including Complainant

Aperture Aviation, Inc., have indicated their desire to use unleaded avgas when it is available. Freitas Decl. ¶ 24; Complaint, Attachment 5A.

Using all the County Tanks for sale of leaded avgas has made UL94 more accessible to the Northern California market by allowing Northern California fuel retailers to order UL94 in larger quantities. This increase has allowed the manufacturer and transporters of UL94 to better utilize economies of scale, reducing prices for UL94 by approximately \$1.15 per gallon and allowing the County to offer UL94 at a competitive price point with 100LL. Freitas Decl. ¶ 26. As cost and availability of unleaded avgas pose significant barriers to more widespread adoption, making unleaded fuel the most convenient option for fueling at County Airports will incentivize adoption among the aviation community.

Demand for UL94 has been strong since its introduction at the County Airports. Operators have consumed over 180,000 gallons of UL94 from the County Airports since January 1, 2022. Freitas Decl. ¶ 37. The County expects that UL94 sales will increase as operators realize the benefits of using unleaded fuels, including substantially decreased aircraft maintenance costs. *Id.* at ¶ 38. Indeed, a substantial portion of the aircraft operating out of RHV can use commercially available unleaded avgas, and many have already transitioned to unleaded avgas. *Id.* at ¶ 33. Once the County is operating all its tanks directly, the County expects to generate over \$100,000 annually for the County's Airport Enterprise Fund through avgas sales. *Id.* at ¶ 27. As previously discussed, this transition has also had significant environmental health benefits for surrounding communities.

While the Complainants may disagree with the County's assessment of the market for fuel and the needs of the community, the County is not required to use the County Tanks in a manner consistent with the wishes of any party, but rather may exercise its proprietary rights and

powers in a manner consistent with the public's interest. See *Santa Monica Airport Ass'n, et al. v. City of Santa Monica*, Docket No. 16-99-21, Final Agency Decision, 2003 WL 1963858, at \*17 (Feb. 4, 2003). In other words, the County has no obligation to use the County Tanks to sell fuel at all, much less Complainants' fuel of choice.

**C. Unavailability of 100 Avgas for Purchase Does Not Deny Complainants Reasonable Access to the County Airports.**

Grant Assurance 22(a) requires that the County "make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities." Complainants assert that the County has denied their right to reasonable access at the County Airports due to the unavailability of 100LL for purchase. In doing so, Complainants conflate the County's obligation to provide "reasonable access" to all users with providing equal levels of service or convenience. See *Ashton*, 2000 WL 132770 at \*21 (making the airport available to the public "does not mean that the sponsor is obligated to provide a specific level of service or level of convenience" to any type of aircraft). While the County must provide reasonable access to all types of aircraft, the County has the proprietary discretion to prioritize providing services to specific types of aircraft. The FAA has specifically held that availability of fuel for purchase is a matter of convenience, not access. See *id.* at \*27. Adopting Complainants' novel interpretation of reasonable access to include availability of an aircraft's preferred fuel for purchase would have drastic ramifications for airports across the country.

**1. Guaranteeing reasonable access to the County Airports does not require that the County provide equal levels of services to all classes of aircrafts.**

While airport sponsors are required to provide "reasonable access" to all users, airport sponsors are not required to provide the same level of service to all users and may providing

better services to certain types of aircraft at the expense of other types of aircraft. In *Pacific Coast Flyers Inc. v. County of San Diego*, the FAA rejected an argument by operators of piston engine aircraft that the County of San Diego had denied them reasonable access to an airport by redeveloping a hanger that previously provided storage for piston engine aircraft into a facility primarily serving jet aircraft. In doing so, the FAA held that Grant Assurance 22 “does not prevent an airport from developing facilities for new or different markets” and “does not require any airport sponsor to provide at all times exactly the facilities any particular segment of the aeronautical community might prefer.” *Pac. Coast Flyers, Inc., et al. v. County of San Diego*, No. 16-04-08, Director’s Determination, 2005 WL 1900515, at \*41(July 25, 2005); see also *Thermco Aviation, Inc. et al. v. City of Los Angeles, et al.*, No. 16-06-07, Final Agency Decision, 2007 WL 9666186, at \*31(Dec. 17, 2007) (no discrimination against piston engine aircraft displaced by redevelopment project). And the fact that an airport provides a service to a particular type of aircraft does not obligate the airport to provide the service indefinitely. *Pac. Coast Flyers, Inc.*, 2005 WL 1900515, at \*31 (“One class of aeronautical user cannot expect to indefinitely lay claim to airport facilities at the expense of another class of aeronautical users or jeopardize the airport’s ability to manage its facilities.”); *Thermco Aviation*, 2007 WL 9666186, at \*17. The FAA further found that the needs of some aircraft users displaced by the County of San Diego’s actions could be reasonably accommodated by facilities at other airports. *Pac. Coast Flyers, Inc.*, 2005 WL 1900515, at \*32.

The County’s choice to use the County Tanks to exclusively sell unleaded avgas is an exercise of the County’s proprietary authority to prioritize the fueling convenience of low-powered piston engine aircraft that can use lower octane fuel over the convenience of piston engine aircraft using high powered engines that rely exclusively on 100 octane avgas. Users of

high-power piston engine aircraft are no more entitled to the use of the County's fuel tanks to purchase their preferred fuel than the piston engine aircraft in *Pacific Coast Flyers* were to their hanger bays. See *Pac. Coast Flyers, Inc.*, 2005 WL 1900515, at \*41. Just as the County of San Diego had the proprietary discretion to allocate its facilities in a manner favoring jet aircraft, the County of Santa Clara can reallocate use of the County Tanks to take advantage of the unmet demand for unleaded avgas, promote the use and availability of unleaded avgas and to protect the health of surrounding communities. And just like the aircraft users in *County of San Diego*, any airport users inconvenienced by this transition can address their needs at other nearby airports that still sell leaded avgas. See *Pac. Coast Flyers, Inc.*, 2005 WL 1900515, at \*32; Freitas Decl., ¶ 23.

**2. Availability of an operator's preferred type of fuel for purchase is a level of service consideration and does not rise to a denial of access.**

The FAA has evaluated and rejected Complainants' exact contention that unavailability of an aircraft operator's preferred type of fuel amounts to a denial of reasonable access. In *Ashton v. City of Concord*, the FAA rejected a claim that an airport which did not have auto gas available for sale had denied access to an airport user whose aircraft required auto gas. In doing so, the FAA found that the complainant's allegations amounted to level of service concerns, not access concerns. *Ashton*, 2000 WL 132770 at \*27; see also *Mainardi v. Lincoln Park Airport*, No. 16-02-12, Director's Determination, 2003 WL 27377872, at \*16 (Nov. 25, 2003) (Grant Assurance 22 "does not require the airport owner to provide any and all services its aeronautical users may desire."). The FAA further held that "[m]anagement issues such as economy of collection and efficient use of the airport's limited facilities can be justifications for differing treatment of differing users of the airport" and the sponsor's "decision not to offer auto fuel is a

business decision within its rights to make. The Sponsor is simply not obligated to provide a more detailed reason for this business decision.” See *Ashton*, 2000 WL 132770 at \*22, \*19.

Unavailability of 100 octane avgas for purchase at the County Airports is no more a denial of access than the unavailability of auto gas was in *Ashton*. Both are “a specific level of service or level of convenience” that neither the City of Concord nor the County are required to provide. See *id.* at \*21. Complainants’ own declarations demonstrate that they continue to use and enjoy reasonable access to the County Airports for a variety of aeronautical purposes. See Complaint, Attachment 5, ¶ 7; Attachment 7, ¶ 9; Attachment 8, ¶ 8; Attachment 9, ¶ 8. Just as the FAA declined to interfere with the City of Concord’s business decision not to sell auto gas at its airports, the FAA should respect the County’s decision to use the County Tanks for the sale of unleaded fuels. See *Ashton*, 2000 WL 132770 at \*19.

### **3. Unavailability of Leaded Avgas for Purchase is Common at Public Use Airports.**

While the County is among the first public use airport systems to end the sale of leaded avgas, the unavailability of leaded avgas at a public use airport is hardly remarkable. There are *70 public use airports* across California where 100 octane fuel is not available for sale. Collectively, these airports account for almost 30% of public use airports in California. Freitas Decl. ¶ 20(a), Ex. F. These airports include large urban airports like Los Angeles International Airport, remote airports such as Siskiyou County Airport, and heavily used general aviation airports such as Mountain Valley Airport. Other airports frequented by jet craft, such as Zamprini Field in the City of Torrance and Rio Vista Municipal Airport, do not have jet fuel available for purchase. *Id.* Nationally, there are 1,434 airports that reported general aviation operations in the previous year where 100 octane avgas is not available for purchase. These airports reported over four million operations in the past year. *Id.* at ¶ 20(b), Ex. F. Forty-five of

these airports have chosen to sell other types of fuel. Eighteen of them exclusively sell unleaded low octane avgas or auto fuel. *Id.* at ¶ 20(c), Ex. F.

Adopting Complainants’ novel theory that unavailability of an operator’s preferred fuel for purchase amounts to a denial of reasonable access would have drastic ramifications nationwide. Hundreds of airports nationwide would need to make significant investments in fuel infrastructure and staffing and undertake new business enterprises – regardless of practicality or financial viability – to accommodate the fueling preferences of any pilot who might touch down on their runways. Piston engine aircraft operators would be able to compel Los Angeles International Airport to sell leaded avgas rather than filling up at Hawthorne Municipal Airport, less than six miles away. This drastic reinterpretation of Grant Assurance 22 would be a significant impingement on the right of airport sponsors to manage their airports.

**D. Complainants’ Claims Relating to Any Allegedly Improper County Restrictions on Self-Fueling Merit Dismissal**

**1. The Unavailability of Avgas for Purchase at the County Airports Does Not Affect Complainants’ Right to Self-Fuel.**

Complainants’ assertion that the unavailability of 100 octane avgas for purchase at the County Airports constitutes a restriction on their right to self-fuel misconstrues the right to self-fuel. Self-fueling means “the fueling or servicing of an aircraft by the owner of the aircraft with his or her own employees and using his or her own equipment.” FAA Advisory Circular No: 150/5230-4C: *Aircraft Fuel Storage, Handling, Training, and Dispensing on Airports* (Sept. 23, 2021), Appendix A, Sec. A.1(7). Self-fueling does not include use of a self-service pump or purchase of fuel from a third party. *Id.* The right to self-fuel “does not, by itself, compel the

sponsor to lease such facilities which may be necessary to exercise that right.” See *Ashton*, 2000 WL 132770 at \*21.<sup>5</sup>

Complainants have not identified any restriction on their right to self-fuel other than its unavailability for purchase. Neither the County’s business decisions regarding what fuels it will sell, nor the terms in a permit for the use of a County Tank, nor even a ban on fuel sale by third party FBOs, affect Complainants’ rights to self-fuel. As previously noted, about 30% of public use airports nationally do not have 100LL available for purchase.

## **2. Complainants lack standing to challenge the County’s rules on self-fueling.**

The Complainants lack standing to challenge the County’s self-fueling permit scheme because the County has not denied a request for a self-fueling permit from any Complainant.<sup>6</sup> To file a complaint, a complainant must be “directly and substantially affected by any alleged noncompliance.” 14 C.F.R. § 16.23(a); see *Truman Arnold Companies v. Chattanooga Metropolitan Airport Authority*, Docket No. 16-11-08, Director’s Determination, 2013 WL 12244247, at \*28 (Oct. 4, 2013). As the County has not denied any request for a general aviation self-fueling permit or a commercial self-fueling permit from any Complainant, no Complainant has been adversely affected by the County’s self-fueling permit requirement. Accordingly, the Director should dismiss this claim for lack of standing.

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<sup>5</sup> The right to self-fuel does prohibit airport sponsors from imposing reasonable restrictions on airport users who seek to construct fueling infrastructure or transport fuel onto an airport for the purpose of self-fueling. See e.g., *Hilton A. Turner, Jr. v. City of Kokomo, Indiana*, Docket No. 16-98-16, Director’s Determination at 26 (Mar. 30, 1997). None of the Complainants have stated that they seek to self-fuel in this manner, nor do they allege that any specific requirement imposed by the County is preventing them from doing so.

<sup>6</sup> While Complainant Marshall asserts that he applied for a self-fueling permit to the County, he withdrew his application before the County completed its processing of the application. See Complaint, Attachment 25 ¶ 8. The County did not deny Complainant Marshall’s application for a self-fueling permit.



**V. AFFIRMATIVE DEFENSES**

1. The Complaint does not establish a reasonable basis for further investigation by the FAA.
2. The Complaint does not contain sufficient information to meet Complainants' burden of proof on any of its claims.
3. The County has lawfully exercised its proprietary rights as owner and operator of the Airport.
4. The County is, and has been, in compliance with its grant agreements and FAA obligations.

**VI. CONCLUSION**

For all the reasons offered in the County's pending Motion for Summary Judgment, and in this Answer, the FAA should dismiss the Complaint in its entirety with prejudice.

Respectfully submitted this 28<sup>th</sup> day of March, 2023.

James R. Williams  
County Counsel



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# **ATTACHMENT A**

Date: October 14, 2022

Office of Chief Counsel  
Attention: FAA Part 16 Airport Proceedings Docket, AGC-610  
Federal Aviation Administration  
800 Independence Avenue, S.W.  
Washington, D.C. 20591  
9-AWA-AGC-Part-16@faa.gov

**COMPLAINT FILED PURSUANT TO 14 C.F.R. PART 16**

Aircraft Owners and Pilots Association, *et. al* v. County of Santa Clara, California  
Docket No. unassigned

1. Each Complainant listed below is committed to achieving a high octane, unleaded future for the entire national airport system. People across the nation - including pilots, aircraft owners, people who work on aircraft and at airports, and airport neighbors – desire an unleaded future as soon as possible. Systemic challenges such as this require systemic solutions. San Martin and Reid-Hillview are two airports in a *national system*, and Santa Clara County has taken unilateral actions that stand to obstruct a nationwide, coordinated, and safe transition to a future without leaded aviation fuel. Its actions violate federal Grant Assurances by unreasonably restricting access to public airports and unjustly discriminating against piston aircraft, particularly those that must have high octane fuel to safely operate. The actions also threaten the airports’ ability to be self-sustaining. Left unaddressed, these actions invite a domino effect that will erode the safe and efficient functioning of airports and aircraft in the national transportation system.
  
2. The Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative is a comprehensive government-industry effort consisting of aviation and petroleum industry stakeholders and the Federal Aviation Administration. A cornerstone of the EAGLE initiative is to ensure 100LL octane fuel remains available during a transition period, until a fleetwide fuel solution is identified and commercialized. EAGLE has set a target date of a lead-free future for piston powered aircraft of no later than 2030. This systematic approach will not compromise the safety or efficient function of the national aviation system. Conversely, Santa Clara County’s actions prohibiting 100LL sales and self-fueling is not participating in a national, systemic solution. Instead, it is creating obstacles to a nationwide solution by impermissibly prohibiting a legal and necessary high-octane fuel that allows all piston aircraft to equitably access and use Santa Clara County’s public, federally obligated airports that are part of the national system.

100LL Volume Sold in U.S.



- 70% sold to high performance aircraft requiring 100 octane
- 30% sold to aircraft that can use 94UL and/or Mogas

3. Approximately 70% of 100LL sold nationwide is for high performance aircraft that cannot safely or legally operate using 94UL, including users based at Santa Clara County airports and transient users.<sup>1</sup> One high octane unleaded fuel has been approved by the FAA for use in virtually all piston airplane engines, but it is not yet in commercial production or distribution. More high-octane unleaded fuels hold promise to be approved for use in the near future. At the EAGLE Executive Committee meeting on September 21, 2022, the FAA underscored the importance of EAGLE's mission in addressing "logistical issues of refining, distribution, deployment, training, education, transition solutions **and ensuring 100LL availability until UL fuel is available widespread**". (See Attachment 1, Excerpted EAGLE slide from September 21, 2022). As the FAA has highlighted in the EAGLE initiative, in a settlement agreement with Santa Monica and in a recent FAA letter to Santa Monica Airport, ensuring availability of 100LL while it remains legal and authorized for use by the FAA is vital and necessary and "a ban or restriction on the sale or use of 100LL at a federally obligated airport is also inconsistent with Grant Assurance 22, *Economic Non-Discrimination* (49 U.S.C. § 47107(a)(1) and conflicts with the self-service provision therein. Any restriction on the sale or dispensing of any type of fuel, when there is demand/need or a fuel provider willing to provide the fuel, must be approved in advance by the FAA." (See Attachment 2, FAA letter to City of Santa Monica dated September 1, 2022).
  
4. The FAA should be just as clear in holding Santa Clara County accountable for noncompliance with federal grant assurances. That is precisely what we are asking the FAA to do in this Part 16 Complaint. When airport owners or sponsors accept funds from FAA-administered airport financial assistance programs, they agree to grant assurance obligations that require them to maintain and operate their facilities safely and efficiently and in accordance with specified conditions. Airports should channel their resources towards compliance and expediting a safe nationwide transition to an unleaded future rather than raising impediments to nationwide, systemic solutions while causing safety risks, needless delays to progress, and unjust discrimination.

**Complaining parties:**

5. Aircraft Owners and Pilots Association  
Aperture Aviation, Inc.  
Glynn Falcon  
Robert A. Gingell  
Christopher Luvara  
Michael Luvara  
Paul Marshall  
Dr. Joseph C. McMurray  
Trade Winds Aviation  
as persons directly and substantially affected by the noncompliance by the County of Santa Clara, California.

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<sup>1</sup> Julie Boatman, *Avgas Coalition on Aviation Fuel Pushes for 100LL Bridge*, Flying, <https://www.flyingmag.com/avgas-coalition-on-aviation-fuel-pushes-for-100ll-bridge/>.

**Respondent:**

6. Santa Clara County, California, as proprietor and federal grant agreement sponsor for Reid-Hillview Airport (RHV) and San Martin Airport (E16).

**Standing of Parties**

7. Each Complainant has been directly and substantially affected by Respondent's noncompliance with the terms of applicable grant agreements, as follows:

*Aircraft Owners and Pilots Association*

8. The Aircraft Owners and Pilots Association (AOPA) is the world's largest aviation membership organization representing the interests of at least 847 pilots and aircraft owners who are based out of Reid-Hillview and San Martin airports and unable to access 100LL for retail purchase or to self-fuel with 100LL at their airports. AOPA members collectively operate more than 85% of all general aviation aircraft in the United States. As of August 31, 2022, 1,245 AOPA members live within 25 miles of Reid-Hillview and 1,224 AOPA members live within 25 miles of San Martin. AOPA members use the County's busy airports, which had 209,314 operations at Reid-Hillview for 12 months ending January 31, 2020, and 33,166 operations at San Martin for the 12 months ending August 21, 2019. (See Attachment 3, Form 5010 for Reid-Hillview Airport and Attachment 4, Form 5010 for San Martin Airport.) AOPA represents the interests of hundreds of thousands of individual pilots and aircraft owners using the 3,300 federally funded airports who will be affected by those airports' decisions to take similar action based on the precedent set by the Santa Clara County. AOPA maintains an airport support network with volunteers at thousands of public use airports to alert AOPA of issues related to general aviation activity, including AOPA airport support network volunteers at Reid-Hillview and San Martin who are able to report to AOPA about the adverse impacts that the County's fuel restrictions are having at the airports. As a 501(c)(4) social welfare organization, AOPA operates primarily to further the common good and general welfare of the general aviation community and not just AOPA members. AOPA's mission includes protecting pilots' freedom to fly, supporting activities that support the long-term health of General Aviation, and participating in informal and formal proceedings to keep General Aviation accessible to all. See AOPA website at <https://aopa.org/about/mission-vision-and-values>.

*Aperture Aviation, Inc.*

9. Aperture Aviation, Inc. is an aerial survey company owned by a pilot doing business at Reid-Hillview Airport. It operates a fleet of Cessna 206 aircraft that are unable to safely and legally use 94UL, which is the only available fuel at Reid-Hillview as of January 1, 2022. Aperture Aviation requested permission from the County of Santa Clara to continue to fuel its Cessna 206 fleet of aircraft with 100LL until such time as the aircraft would be able to use commercially available unleaded fuel. Aperture Aviation explained that the County's unreasonable action to prohibit the availability of 100LL at the airport left it in an untenable situation. To date, the County has not responded to Aperture Aviation's December 13, 2021, written request for a six-month exemption from the prohibition against fueling with 100LL to afford time to allow for a modification to its fleet of aircraft in order to be able to safely and compliantly operate with unleaded fuel from their home airport. (See Attachment 5, Affidavit of Michael McClelland on behalf of Aperture

Aviation, Inc., and Attachment 5A, Letter on behalf of Aperture Aviation to Santa Clara County dated December 13, 2021.)

Glynn Falcon

10. Glynn Falcon is an AOPA member, pilot and aircraft owner who regularly flew his aircraft, which cannot legally or safely use 94UL fuel, into Reid-Hillview to meet with business clients. Due to the County's action to prohibit 100LL availability at the airport, he is unable to reasonably access the airport as a transient user and therefore no longer flies into the airport. (See Attachment 6, Affidavit of Glynn Falcon.)

Robert A. Gingell

11. Robert A. Gingell is an AOPA member and a pilot who owns and flies a Cessna 310, which cannot legally or safely use 94UL, based at Reid-Hillview Airport. As a result of the County's prohibition of the use of 100LL at Reid-Hillview, he has been directly and substantially affected in not being able to obtain fuel at the airport, as detailed in his attached affidavit. (See Attachment 7, Affidavit of Robert A. Gingell.)

Christopher Luvara

12. Christopher Luvara is an AOPA member and a pilot who owns and flies a Cessna 182, which cannot legally or safely use 94UL, based at Reid-Hillview Airport. As a result of the County's prohibition of the use of 100LL at Reid-Hillview, he has been directly and substantially affected in not being able to obtain fuel at the airport, as detailed in his attached affidavit. (See Attachment 8, Affidavit of Christopher Luvara.)

Michael Luvara

13. Michael Luvara is an AOPA member and a pilot who owns and flies Cessna 182, which cannot legally or safely use 94UL, based at Reid-Hillview Airport. As a result of the County's prohibition of 100LL at Reid-Hillview, he has been directly and substantially affected in not being able to obtain fuel at the airport, as detailed in his attached affidavit. On June 13, 2022, he emailed the FAA requesting an update regarding the Part 13 complaint initiated by the FAA against Santa Clara County that pertained, in part, to the County's 100LL prohibition and, to date, has not received a response from the FAA. (See Attachment 9, Affidavit of Michael Luvara, and Attachment 10, Email from Michael Luvara to FAA dated June 13, 2022.)

Paul Marshall

14. Paul Marshall is an AOPA member and a pilot who flies a Bonanza A36, which cannot legally or safely use 94UL, based at San Martin Airport. As a result of the County's prohibition on the use of 100LL at San Martin, he has been directly and substantially affected as detailed in his attached affidavit. (See Attachment 11, Affidavit of Paul Marshall.)

Dr. Joseph C. McMurray

15. Dr. McMurray is an AOPA member and a pilot who flies a Beechcraft A36 Bonanza and American Champion Super Decathlon, both of which are unable to safely and legally use 94UL fuel, for personal and business purposes and is based at San Martin Airport. As a result of the County's prohibition on the use of 100LL at San Martin, he has been directly and substantially affected as detailed in his attached affidavit. (See Attachment 12, Affidavit of Dr. Joseph C. McMurray.)

Trade Winds Aviation

16. Trade Winds Aviation is a Fixed Based Operator and flight school doing business at Reid-Hillview and San Martin under an executed and effective lease that prohibits Trade Winds from conducting business selling 100LL and from being able to self-fuel its flight school aircraft with 100LL at the airports. Specifically, Section 4.1.6.3 of its executed lease states that:

“All fueling on the Premises conducted under the above sections or otherwise subject to all applicable federal, state and local laws and regulations, including but not limited to Lessor's order(s) relating to the prohibition of use of leaded fuels on County Airports, effective January 1, 2022.” See Attachment 13B, *Lease Agreement Between County of Santa Clara and Skyworks Aviation DBA Tradewinds Aviation*, effective January 1, 2022.

17. Trade Winds previously sold 100LL at Reid-Hillview and previously self-fueled its aircraft with 100LL, but now is prohibited from performing either service at Reid-Hillview or San Martin by reason of the County's unreasonable actions. Trade Winds is currently willing and able to sell 100LL and self-fuel with 100LL, but is restricted from doing so by the County's rules that ban the use of 100LL at the airport and the leasing restriction the County inserted into its lease renewal at the end of 2021. Moreover, Trade Winds and its flight school customers are substantially affected by the lack of 100LL availability at the airport since January 1, 2022, and must travel outside the county to obtain 100LL for its most expensive rental aircraft, a Cirrus SR22, which is legally prohibited from using 94UL. (See Attachment 13, Affidavit of Walter Gyger on behalf of Trade Winds Aviation; Attachment 13A, Trade Winds Lease Excerpt; and Attachment 13B, October 8, 2021 Complaint).

**General Description of the Facts Demonstrating  
the County of Santa Clara's Grant Assurance Violations**

18. Under the current Santa Clara County law, “No person, firm or corporation shall bring, store, use or distribute aviation fuel on the airport except as may be authorized in writing by the County.” (See Attachment 14, County of Santa Clara Rules and Regulations, Section 6.2, *Aviation Fuel Distribution Restrictions*; see also Attachment 15, Airports and Aircraft, Division B2, Sec. B2-17.) “No person, including aircraft operators shall bring, store, or distribute aviation fuel or lubricants on the airport except by contract or permit authorized in writing by the county.” The sale of any fuel at the County's airports has been tightly, specifically, and strictly controlled by the County, the airports' sponsor. The County has now prohibited all 100LL retail sales and self-fueling. There were no 100LL restrictions at the County's airports until the County imposed ones

effective January 1, 2022, after a unanimous vote at the August 17, 2021 County Board's Regular Meeting.

19. During the August 17, 2021 Santa Clara County Board of Supervisors meeting, there was a limited review of a study commissioned by the County to identify the impact of leaded aviation fuel on children living in the vicinity of Reid-Hillview airport, and it did not assess any impacts related to San Martin airport. County executive staff members Jeff Smith and Sylvia Gallegos represented to the Board that, based on the Lead Study, continued use of 100LL at Reid-Hillview was not recommended. (See Attachment 16, Recommended Action on August 17, 2021) At the meeting, the County Board voted unanimously to "adopt" the recommendations of the County executive staff, including:

Resolution 36 to "take all actions necessary to transition to carrying only lead free gas at both County airports as soon as possible with the understanding that the sales of leaded gas will not be permitted at either County airport after December 31, 2021 except for emergency operations."

Resolution 37 to take "[s]uch actions ... both prohibiting the sale or use of leaded fuel, and pursuing any and all available paths to early closure prior to 2031." (See Attachment 17, Board of Supervisors Decision)

20. To the best of Complainants' knowledge, at no time prior to the meeting where the County decided to prohibit 100LL at its airports did the County advise or coordinate with the FAA about its intent or decision to restrict fuel sales and use at the County's airports. To the best of Complainants' knowledge, at no time prior to the meeting where it decided to prohibit 100LL at its airports did the County seek input from (1) airport tenants, including pilots and businesses based at the airport, or (2) the public at large, and particularly the many persons living near the County's two airports.
21. Based on that County Board vote, the Deputy County Executive required that new tenant leases at both airports contain language forbidding the sale of and self-fueling with 100LL. (See Attachment 13A, Trade Winds Lease Excerpt). All airport FBO and business leases were set to expire December 31, 2021, less than 4 months after the adoption of the County Board's resolutions to prevent the availability of 100LL sales and self-fueling at both County airports. When new leases were negotiated and executed, terms consistent with the County Board's resolutions were included in the leases and uniformly prohibited the sale or use of leaded fuel at both County airports. In particular, the new leases provide that:

"All fueling on the Premises conducted under the above sections or otherwise subject to all applicable federal, state and local laws and regulations, including but not limited to Lessor's order(s) relating to the prohibition of use of leaded fuels on County Airports, effective January 1, 2022."

22. At an unknown point in time, the County provided for the emergency use of 100LL under very narrow conditions that only appear available to transient traffic, not airport tenants. As such, this emergency option does little, if anything, to relieve the impact of the County's fuel restriction on the tenants and other based users of the airport. If an aircraft that requires 100LL lands at a Santa



Clara County airport and does not have sufficient fuel to safely depart, the sole authority of whether to allow “one-time” self-fueling with 100LL and of the quantity allowed is held by the Santa Clara County Airports Director, not the pilot in command of the aircraft. (See Attachment 18, Santa Clara County Website Printout).

“Upon request, the Santa Clara County Airports Director will review and approve one-time permission, on a case by case basis, for an aircraft operator to obtain and fuel their aircraft with leaded fuel on the premises of Reid-Hillview or San Martin. Such permission will be granted for aircraft that do not have sufficient fuel onboard to safely leave the County airports and will be limited to a quantity of fuel necessary to safely reposition the aircraft to a nearby airport where the necessary fuel is available. Requests are to be made via email addressed to - [airportops@rda.sccgov.org](mailto:airportops@rda.sccgov.org)”

23. In practice, it will be rare that an aircraft operator would find themselves in this position. Therefore, the availability of the very limited access to 100LL subject to sole and absolute discretion of the Airports Director does not obviate, or even mitigate, the unreasonableness and discriminating nature of the County’s actions. Even if a transient operator requested permission, there is no 100LL on the airports nor an economical or convenient manner to obtain the 100LL and have it transported to the airport.
24. The FAA recently issued Supplemental Type Certificates (STCs) authorizing use of a 100 octane unleaded fuel in virtually all piston aircraft engines, however that fuel is not yet in commercial production or distribution. It is without dispute that a significant number of FAA-certificated General Aviation aircraft must continue to operate using 100LL at this time. Seventy-five percent of the nation’s piston fleet is based at 3,300 airports, which are mostly publicly owned and part of the National Plan of Integrated Airport Systems (NPIAS), such as Reid-Hillview and San Martin. (See Attachment 19, Excerpted Slide from EAGLE Presentation on March 25, 2022.) Piston aircraft that can currently use 94UL fuel are estimated to account for only 30% of Avgas sold each year.<sup>2</sup> The majority of the national fuel demand cannot be met by 94UL fuel. As a result, the availability of 100LL continues to indisputably be a necessary commodity and its availability ensures access to airports. Without the ability to fuel aircraft at airports that are able to provide such services, reasonable access to airports is cut off as the system fractures, failing to provide fuel services to the piston aircraft that consume the majority of avgas sold in the nation. Safety and efficiency of the national aviation system is at risk until an unleaded fuel that is legal and safe for use in all piston aircraft is widely available.
25. Since January 1, 2022, nine months prior to the filing of this complaint, 100LL has not been available at either of the County’s airports. The County’s unreasonable and wide-reaching decision is impacting the accessibility of the airports to all users and, ironically, forces pilots in high performance aircraft to fly more legs and burn more gas in the most fuel inefficient phase of flight (takeoff climb) to obtain the fuel they are legally required to use in their aircraft.

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<sup>2</sup> *Id.*

FAA's Notice of a Part 13 Investigation

26. On December 22, 2021, the FAA's Airport's Division in the Western Pacific Region commenced an informal investigation under 14 C.F.R. Part 13 of alleged grant assurance violations by Santa Clara County. (See Attachment 20, FAA Notice of Investigation.) The FAA's Notice was, in part, prompted by complaints sent to the FAA by airport tenants, businesses, and users. (See Attachment 13B, October 8, 2021 complaint; Attachment 21, October 18, 2021 complaint; and Attachment 5A, December 13, 2021 Letter on Behalf of Aperture Aviation to Santa Clara County dated December 13, 2021.) Complaints to the FAA from the Aircraft Owners and Pilots Association, Glynn Falcon, Aperture Aviation, Christopher Luvara, and Michael Luvara were incorporated into the Part 13 complaint against Santa Clara County. As a result of there being little, if any, progress toward a meaningful resolution or reasonable prospect for practical and timely resolution since the Part 13 complaint was initiated, Complainants have filed this Part 16 Complaint.
27. The FAA specifically identified the County's ban of leaded fuel at the County's airports and the County's prohibition on the sale and use of leaded fuel at the County's airports as the reasons for the FAA's investigation into possible violations of the County's federal grant assurance obligations. The FAA stated that "the County may not ban or phase out leaded fuel or take any actions related to fuel that would conflict with or undermine Federal law and airport access consistent with the grant assurances."<sup>3</sup> In response, by letter dated January 11, 2022, the County maintained that its actions were in compliance with all laws. (See Attachment 22, Santa Clara County Response to Notice of Informal Investigation.) On February 22, 2022, the FAA sent a follow up letter to the County asking for additional information related to their investigation. To date, there has been no written response from the County. However, there was a meeting between the FAA and Santa Clara County and a subsequent March 24<sup>th</sup> letter from the FAA to the County that suggested the FAA would consider putting the informal investigation into abeyance. (See Attachment 23, FAA response following the FAA and County meeting.) Since the effects of the County's decisions are immediate, they are in effect and on-going at the airports, an abeyance does nothing more than perpetuate the adverse impact of the County's unreasonable actions and undoubtedly constitutes violations of the County's grant obligations.<sup>4</sup>

**Grant Assurance Violations Committed by the County of Santa Clara**Grant Assurance 22 Economic Non-Discrimination, Access and Use of Airport

28. As to Complaining Parties, the County of Santa Clara has denied reasonable access to the airport by unreasonably prohibiting the availability of 100LL.

Grant Assurance 22 Economic Non-Discrimination, Right to Self-Service and Self-Fuel


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<sup>3</sup> The FAA evidenced a similar position in an investigation into similar conduct and an eventual settlement agreement reached with another California airport. "The FAA is committed as a matter of national policy to support the development and use of unleaded aviation gas appropriate to the operation of piston aircraft where commercially and technically feasible. ... Nothing in this Agreement shall allow the City to restrict the sale of leaded aviation fuel for as long as the FAA authorizes use of such fuels within the United States." Settlement Agreement/Consent Decree Between the Federal Aviation Administration and The City of Santa Monica, dated January 30, 2017.

<sup>4</sup> Upon information and belief, there was an additional meeting between the FAA and the County leadership on or around September 16, 2022.

29. As to the Complaining Parties, the County of Santa Clara has unreasonably denied the right to self-fuel aircraft with leaded fuel at the County's airports.

### Argument

30. While citizens nationwide, including pilots and aircraft owners look forward to a future with lead free aviation fuel, there is no solution currently commercially available to address the entire fleet and commercial availability is no less than 1-2 years away. Approximately 70% of 100LL volume sold in the United States is to aircraft operating in the U.S. airspace, including at the County's airports, which cannot legally or safely use 94UL fuel.<sup>5</sup> Aircraft with high compression engines must continue to operate with 100LL until an approved alternative is widely available. (See Attachment 1, Excerpted EAGLE slide from September 21, 2022.) Therefore, the County's choice to immediately cease having 100LL available for sale at its airports and to ban any use of 100LL at its airports directly and substantially affects the public's reasonable access to the County's two airports, Reid-Hillview Airport and San Martin Airport. (See Attachment 2, FAA Letter to City of Santa Monica dated September 1, 2022, and Attachment 20, FAA Notice of Investigation.) The County's decision in this regard is not reasonable, is unjust, and is unwarranted under the current facts and circumstances and thus renders the County in violation of its legal obligations under the grant agreement the County executed with the federal government.
31. Prohibiting the fueling with 100LL at Reid-Hillview and San Martin denies the public reasonable and nondiscriminatory access to a publicly funded airport. Here, the County has unreasonably chosen to ban all leaded fuel at its airports, without any compromise that could accommodate the time needed to allow all general aviation aircraft to use unleaded fuel. The County's complete leaded fuel ban is not reasonable and unjustly discriminates against a certain fleet of aircraft who, through no fault of their own and not due to anything under their control, simply cannot use unleaded fuel. It denies and unnecessarily restricts access to the airports and unnecessarily reduces the amount of revenue that the airports could collect from the sale of 100LL – therefore, the County's actions constitute clear violations of the legal obligations voluntarily entered into by the County in receiving and using federal funds meant for use in the public interest of maintaining a safe and efficient national transportation system.
32. Until December 31, 2021, 100LL was available at both County airports through Fixed Base Operators (FBOs) doing business at those airports. That availability was cut off solely because of the County's decision to ban fuel at both of its airports based on a Lead Study conducted at one of the airports and the overall national interest in reducing lead emissions. The County appears to justify their actions at *both* airports by relying on a report involving only one airport, which cannot simply be transferred over when the only common factor is County ownership.
33. The County has prohibited the sale by any commercial operators at the airports through its leasing power, which it exercised within months of its decision to ban legal and necessary 100LL at its airports. And, in this regard, there was no negotiation, but rather a clear singular exercise of municipal power to effectuate an agenda unrelated to the operation of the airport and with no

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<sup>5</sup> *Id.*, at 1.

regard to federal grant obligations that the County is bound by in the operation of those airports. The tenants had no choice. While the County recently informed the FAA of a decision to exercise its proprietary exclusive right over aviation gasoline sale at Reid-Hillview Airport and continue selling UL94, it has put forth no solution – through itself or any of the FBOs that stand willing, able and ready to provide 100LL again – to ensure availability of 100LL in the absence of a commercially available 100 octane unleaded fuel at Reid-Hillview or San Martin. (See Attachment 24, Letter from Santa Clara County to FAA dated September 21, 2022.) Action preventing an FBO from providing 100LL violates Grant Assurance 22. (See Attachment 2, FAA Letter to City of Santa Monica dated September 1, 2022.) It is especially egregious conduct when FBOs stand willing and able to provide the fuel and there is demand/need for the fuel. (*Id.* and see also Attachments 5-13, Affidavits of substantially affected parties).

34. Equally problematic is that the County is not allowing 100LL self-fueling, which is reasonable and required for high performance aircraft that cannot legally or safely use 94UL. Any restriction on the availability of 100LL, including and particularly self-fueling with 100LL, must comply with the County’s obligations under the grant assurances. “The FAA considers the right to self-service as prohibiting the establishment of any unreasonable restriction on the owners or operators of aircraft regarding the servicing of their own aircraft and equipment.” FAA Order 5190.6B p.11-2. When airport users have been denied the opportunity to self-fuel, or a proposed alternative to self-fueling is unreasonable or unjustly discriminatory, the airport sponsor is in violation of its obligation to provide access to self-fueling pursuant to Grant Assurance 22. *Monaco Coach Corp. v. City of Eugene*, Docket No. 16-03-1 (March 4, 2005) (Final Agency Decision). The FAA has made clear that only *reasonable* restrictions on access to fuel are permissible. And, even when certain restrictions on self-fueling are appropriate in light of safety and public welfare concerns, a sponsor is still in violation of its grant assurance obligations if some other means of self-fueling is not available. *Boston Air Charter v. Norwood Airport Commission*, Docket No. 16-07-03 (Aug. 14, 2008) (Final Decision and Order).
35. Even if, *arguendo*, the County had a valid justification to restrict leaded fuel, it must provide a reasonable and viable alternative for tenants to self-fuel their aircraft in compliance with the grant assurances. *See id.* Providing a self-fueling “option” that is not actually available for tenants equates to preventing tenants from conducting safe and efficient self-fueling in violation of Grant Assurance 22. *Cedarhurst Air Charter, Inc. v. County of Waukesha*, Wisconsin, Docket No. 16-99-14 (Aug. 7, 2000) (Final Decision and Order). Here, the permitting process is unsurmountable. And even the emergency allowance of using leaded fuel is limited to an emergency situation, which is going to naturally be rare, and the process is cumbersome and discouraging. A County Supervisor, under oath in a recent Congressional hearing, asserted that, “While the County maintains an emergency protocol for operators who need access to leaded fuel, the County has received zero requests to access it.”<sup>6</sup> One request made by Aperture Aviation has gone unanswered for 10 months. (See Attachment 5A, Letter on behalf of Aperture Aviation to Santa Clara County dated December 13, 2021.) The County has effectively prohibited self-fueling in violation of its federal obligations.

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<sup>6</sup> Hearing before H. Oversight Env. Subcomm., 117<sup>th</sup> Cong. 6 (2022) (statement of Santa Clara County Supervisor Cindy Chavez), <https://www.congress.gov/117/meeting/house/115056/documents/HHRG-117-GO28-Transcript-20220728.pdf> (last visited October 12, 2022).

36. While airport sponsors may prohibit aircraft owners who do not meet the standards and regulations for self-fueling from conducting that activity, the airport must have “reasonable minimum standards and rules and regulations relevant to the proposed activity” that are “applied objectively and uniformly.” *Jet 1 Center, Inc. v. Naples Airport Authority*, Docket No. 16-04-03 (Jan 4, 2005) (Director’s Determination. Such reasonable rules and regulations include requiring tenants to maintain a fuel permit and either own aircraft or have aircraft under its operational control, *Id.*, or prohibiting self-fueling outside of designated areas, 5190.6A, Sec. 3-9(e)(3), or requiring fuel tanks to be installed on the sponsor’s fuel farm, *Airborne Flying Service, Inc. v. City of Hot Springs, Arkansas*, Docket No. 16-07-06 (May 2, 2008) (Final Decision and Order). These and other prior decisions show that certain restrictions on the “when” or “how” self-fueling are permitted may be reasonable because they do not *prevent* tenants from fueling their aircraft. *See also Asheville Jet, Inc. d/b/a Million Air Asheville v. Asheville Regional Airport Authority et al*, Docket No. 16-08-02 (Oct. 1, 2009) (Director’s Determination). The County’s restriction here *prevents* users from self-fueling their aircraft entirely; any aircraft that cannot legally or safely operate with 94UL fuel is prohibited from fueling its aircraft at the airports, in violation of the obligations imposed by Grant Assurance 22.
37. There is no uniqueness to Santa Clara County’s airports warranting such a restriction. Restrictions on airport access required under the grant assurances may be conditioned on compliance “with reasonable and nondiscriminatory regulations adopted to assure the safe use of the airport.” *Hilton A. Turner, Jr. v. City of Kokomo, Indiana*, Docket No. 16-98-16 at 26 (Mar. 30, 1997) (Director’s Determination) (finding it reasonable to require self-fueling occur in a designated self-fueling area as a matter of safety at the airport and not in violation of grant assurances because the complainant was not prevented from self-fueling in the designated area). The County has no such reasonable regulations or valid connection to the safe use of the airports. The County argues in detail that its decision to ban unleaded fuel at *both* of its airports is predominantly based on the results of a Lead Study and the composition of the neighborhoods surrounding *one* of its airports, Reid-Hillview Airport. But, the County’s arguments are flawed and do not justify the whole-sale restriction against all leaded fuel at either Reid-Hillview or San Martin.
38. On August 17, 2021, the Santa Clara County Office of Education released a county-wide study entitled “Children’s Exposure to Lead in Santa Clara County.” This study revealed that there are multiple locations in Santa Clara County where children have elevated levels of lead in their blood; these areas are countywide and not just airport-centric. The study acknowledged that more than 67% of homes in the county may contain lead-based paint and that lead in plumbing pipes remains. The report listed multiple methods of lead exposure including paint, plumbing, industrial sites, and even artificial turf. Unfortunately, this report was released with little fanfare, no media attention and with no intent of engaging the public.
39. In a subsequent June 2022 report, which the County failed to make public for its residents, ground-based lead levels at both County airports – Reid-Hillview and San Martin – were studied. The report found that there are no significant lead levels in the soil that exceed EPA guidance and the highest lead levels were actually adjacent to a major vehicle interchange near the airport – not on the airport. More recently, the Bay Area Air Quality Management District ceased monitoring lead emissions at Reid-Hillview Airport in 2020 due to measurements being below the EPA nationally mandated limits. The County has failed to bring full transparency to the issues.

40. Furthermore, the ban on *sales* of fuel cannot currently prevent the *use* of the fuels or the undesirable emissions the County ban intends to eliminate. As explained above, many aircraft cannot safely or legally use 94UL fuel and a 100UL fuel is not yet commercially available. Thus, the only way the County will obtain its intended purpose of reduced lead emissions is if the aircraft that still require 100LL fuel cease using the airports. The County's actions violate its obligation to ensure access to the airport on reasonable terms but intentionally driving away tenants and users.
41. There is no allowance under the proprietary exemption that would permit the County's prohibition on fuel use. The prohibition of 100LL sales appears to be a de facto yet failed County exercise of its proprietary exclusive right to provide 100LL for sale at the airport, coupled with a choice not to exercise that right while prohibiting others from exercising 100LL rights they held within the last year and stand willing and able to exercise again once the 100LL fueling prohibition is lifted. "The implied power to exclusively dispense fuel does not extend to the point where the sponsor can contract the dispensing to a third party. Therefore, the interpretation requires the sponsor to operate the proprietary exclusive concession with its own equipment and own employees." *Naples Airport Authority, Docket No. 16-04-03* at 18 (July 15, 2005) (Final Agency Decision and Order). Similarly, the County lacks any implied power to prohibit under all circumstances the dispensing of certain fuels by contractors and tenants and has not provided its own equipment and employees to provide 100LL. Even an airport sponsor's proprietary right to be the exclusive provider of aeronautical services at the airport may not interfere with an aeronautical users' right to self-fuel. Such activity must be permitted in conformance with reasonable rules and regulations. *See FAA Airport Compliance Manual, Order No. 5190.6B, p.8-5 n.21.*
42. The fact that the fuel tanks were not paid for with federal funds does not relieve any obligation to comply with grant obligations. The County suggests that any grant obligations do not apply to the County's decision to provide, or not provide in this circumstance, certain fuel at the airports is partially based on the fact that federal funds were not used to pay for the County tanks at the airports. But the FAA has already rejected, and the US Court of Appeals affirmed the FAA's determination, such interpretation of a sponsor's obligations under the grant assurances. *See Atlantic Beechcraft Servs. v. FAA, No. 21-1047, 2022 U.S.App. LEXIS 14795 (D.C. Cir. 2022)* (affirming FAA's interpretation that grant assurances apply to the airport as a whole). The basis of the grant assurance obligation to provide a reasonable opportunity to self-fuel is "so that the public taxpayers that finance airport improvements can be assured that the Airport Improvement Program investments are reasonably available to the public, including reasonable access to self-fueling." *Monaco Coach Corp., supra* at 38. There are no grounds to insulate the County here from such accountability simply because it spent the taxpayer funds it received on something other than fuel tanks. The entire airports, at Reid-Hillview and San Martin, are obligated to be reasonably accessible, including with the ability to self-fuel.
43. The "inconvenience" is not incidental and adaption to the unreasonable restrictions does not obviate violations. The County has suggested publicly that the lack of leaded fuel at Reid-Hillview Airport has not adversely affected the use of the airport. However, the affidavits provided clear evidence of the burden that the County's discrimination has thrust upon tenants. (See Attachments 5 through 13.). Multiple tenants have aircraft that cannot safely or legally be fueled with 94UL fuel, the *only* fuel currently available at the airport. The airport is not available for public use on

reasonable terms if the tenants are unable to fuel their aircraft when that fueling option is otherwise available at the airports by qualified and experienced businesses who are willing to provide it.<sup>7</sup>

44. Safety is vital when it comes to fueling aircraft, and at least one misfuelling has occurred as a result of the County’s ban on leaded fuel. The County’s action earlier this year to prematurely ban higher-octane fuel that is required by thousands of general aviation aircraft to fly safely is simply irresponsible. Far beyond causing an inconvenience, the unavailability of required fuel at the airport poses a safety risk. Putting the wrong fuel in an aircraft can cause catastrophic engine failure – placing the pilot and those on the ground in danger – if not detected before takeoff. An AOPA member has reported a misfuelling incident at a Santa Clara County airport, where the pilot mistakenly self-fueled their aircraft with 94UL fuel in an aircraft that could not safely and legally use 94UL fuel. Thankfully, the error was identified before takeoff.
45. The danger of unintended consequences. The County’s willful conduct in violation of its grant assurances obligations and the FAA’s actions in response to this noncompliance are being closely watched. The County noted in its response to the FAA’s Notice of Investigation that “leaded Avgas is Causing a Public Health Crisis in Santa Clara County and *Across the Nation*.” (See Attachment 22, Santa Clara County Response to Notice of Informal Investigation, emphasis added.) If the County is not held accountable for its actions that constitute non-compliance with grant assurance obligations, this will send a clear message to airports across the nation that there are no consequences for such violations of their grant assurance obligations and pose an immediate threat to the safe and efficient function of the national aviation system and compliant use of federal funds.
46. FAA approval is required in advance for any restriction on the sale or dispensing of any type of fuel, when there is demand or need for the fuel and a fuel provider willing to provide it, as recently affirmed by the FAA in a letter from the FAA Office of Airport Compliance and Management Analysis to the Santa Monica Airport Director. (See Attachment 2, FAA Letter to City of Santa Monica dated September 1, 2022.) Santa Clara County leadership appears to be aware of this yet took deliberate action in violation in grant assurances. In a recent hearing, a Congressional subcommittee member stated, “The FAA is currently working with the County on a permanent ban on leaded fuel at Reid-Hillview Airport. You led the supervisors to pass a unanimous resolution on this,”<sup>8</sup> and a Santa Clara County Supervisor testifying under oath replied that the County needs the FAA to affirm the ability for local agencies to prohibit certain fuels.<sup>9</sup>
47. Through the network of public use airports and particularly National Plan of Integrated Airport Systems airports such as Reid-Hillview and San Martin, general aviation is an integral part of the

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<sup>7</sup> Note “the airport is used for emergency response to help fight wildfires and create local refueling stations. About 10 employees provide support services at the airport, and others use the space for flight training”. Vincente Vera, *Silicon Valley advocates of Reid-Hillview Airport closure face opposition*. San Jose Spotlight (May 15, 2021), <https://sanjosespotlight.com/silicon-valley-advocates-of-reid-hillview-airport-closure-face-opposition/>

<sup>8</sup> Hearing before H. Oversight Env. Subcomm., 117<sup>th</sup> Cong. 14 (2022) (statement of Chairman Ro Khanna), <https://www.congress.gov/117/meeting/house/115056/documents/HHRG-117-GO28-Transcript-20220728.pdf> (last visited October 12, 2022)..

<sup>9</sup> Hearing before H. Oversight Env. Subcomm., 117<sup>th</sup> Cong. 14 (2022) (statement of Santa Clara County Supervisor Cindy Chavez), <https://www.congress.gov/117/meeting/house/115056/documents/HHRG-117-GO28-Transcript-20220728.pdf> (last visited October 12, 2022).

transportation system that supports communities across the United States. General aviation operations include emergency medical personnel and supplies delivery, disaster relief and recovery, search and rescue, agricultural aviation activities, and more. Aircraft needing higher-octane fuel, which cannot use 94UL fuel, include those flying missions of search and rescue, disaster relief and law enforcement. We understand that some of these important missions from Reid-Hillview Airport have already been shelved, which is unfortunate news to local residents who rely on these services. Together the National Plan of Integrated Airport Systems stands but, divided by fuel unavailability, it will fall and fail to function as a successful and functioning integrated system. The Chair of the National Academies of Sciences consensus study *Options for Reducing Lead Emissions from Piston-Engine Aircraft* described it succinctly in her EAGLE initiative presentation on March 25, 2022: Restricting use of high performance aircraft would have far-reaching ramifications for transportation, medical transport and pilot training, and a multi-pathway approach is needed that includes using existing fuels and aircraft. (See Attachment 19, Excerpted Slides From EAGLE Presentation on March 25, 2022.)

48. The FAA and all stakeholders in the EAGLE initiative committed to a transition to lead-free aviation fuels for piston-engine aircraft by the end of 2030, without compromising safety or economic health of the general aviation industry.<sup>10</sup> Santa Clara County, the FAA, and industry stakeholders can work together on solutions enabling the public use airports to continue to safely serve their communities and the public interest. However, the County has been transparent in its desire to close Reid-Hillview early<sup>11</sup> and avoid the obligations it committed to when it accepted and spent federal funds to improve and maintain the airports. This decision to ban leaded fuel without waiting for an appropriate alternative is just another example of the County's intention to deny, sooner rather than later, the national transportation system of vital resources that Reid-Hillview and San Martin provide.
49. The County's Ban on 100LL sales or self-fueling of also violates its obligation to maintain a fee and rental structure that will make the airport as self-sustaining as possible. The intent of grant assurance 24 "is for the airport operator to charge fees that are sufficient to cover as much of the airport's costs as is feasible." *William Alfred Hicks, Jr., a/k/a Billy Hicks v. City of Mount Airy, North Carolina, et al*, Docket No. 16-15-07 at 96-97 (April. 29, 2016) (Director's Determination). The sponsor is expected to recover its costs through fair and reasonable fees or other charges that will make the airport as self-sustaining as possible under the circumstances existing at the particular airport. See FAA Order 5190.6B, Chapter 17. In considering such a challenge pursuant to Part 16, the FAA looks to whether the sponsor's complained-of actions are in the best interest of the Airport or are harmful to the Airport. See, e.g. William Alfred Hicks, Docket No. 16-15-07.
50. Here, the County has banned the sale of 100LL, including self-fueling, following the recommendation of County executive staff members that the use of 100LL at Reid-Hillview was

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<sup>10</sup> Background: ELIMINATE AVIATION GASOLINE LEAD EMISSIONS (EAGLE), <https://www.faa.gov/sites/faa.gov/files/2022-03/EAGLE-Commitment-BACKGROUND.pdf>, (last visited Sept. 7, 2022).

<sup>11</sup> "Santa Clara County officials, led by Supervisor Cindy Chavez, have been gunning to close the airport for years." Vicente Vera, *Blood lead levels near San Jose airport are average, despite alarm*, San Jose Spotlight (Aug. 13, 2021), <https://sanjosespotlight.com/san-jose-airport-lead-levels-are-average-despite-alarm/>, (last visited Sept. 7, 2022).



not recommended. (Attachment 16, Recommended Action on August 17, 2021.) The impact of the County's fuel ban is that revenue is diverted from the airport. At least one tenant is on the verge of having to close his business as a result of being unable to sell 100LL, others are facing increased costs as a result of having to travel to refuel their aircraft which require 100 octane fuel, and other users have stopped using the airport altogether. County Supervisor Chavez testified that fuel sales are down at least 10% from prior year sales.<sup>12</sup>

51. These numbers will likely continue to deteriorate with compounding financial consequence to the airports as more tenants are forced out of business, transient users go elsewhere because they are unable to obtain the fuel needed and legally required by their aircraft at Reid-Hillview and San Martin, and tenants are forced to spend their money buying fuel at other airports, rather than contributing to the fees acquired by Reid-Hillview and San Martin. The County's ban on sale of a necessary and legally required fuel violates its obligation to ensure the airports are as self-sustaining as possible, as well as the obligation to ensure reasonable access to the airports, while tenants remain willing and able to buy, sell and self-fuel with 100LL.
52. The FAA is sole enforcer when airports take money from the federal government under a statutory airport grant program and signs a grant agreement that obligates them to certain assurances to make the airport available to the public, but then fails to hold up their side of the bargain. We urge the FAA to use its authority to enforce the grant assurance obligations at issue in this case and assure equitable compliance among all federally funded airports. Allowing Santa Clara County's unilateral action in this case to unjustly discriminate against certain users of the national public-use airport system, to ban the sale and use of fuel that is legal and necessary for aircraft to safely and legally operate, and unreasonably restrict access to its airports is a breach of the grant agreement obligations and, if not addressed, is likely to exacerbate the situation by causing a domino effect at airports across the nation.

### Conclusion

53. Aviation works through a delicate choreography among people and services in an interconnected, complex system, supported by the investment of public monies in airports determined to be integral to a safe and efficient transportation system. When a link in the chain of these interdependencies breaks, as it has with unreasonable and unjustly discriminatory cessation of 100LL availability at Reid-Hillview and San Martin, the integrity and function of the entire system is disrupted and safety is put at risk. Complainants have demonstrated the disruption and safety risks that have occurred since January 1, 2022, and continue to this day, which must be remedied and should not be allowed to replicate and compound through the airport system.
54. The FAA and aviation stakeholders are working diligently together, through the EAGLE initiative, in pursuit of upstream solutions to address challenges of transitioning the national fleet of nearly 200,000 piston engine aircraft to an unleaded fuel that works safely in all such aircraft. Downstream attempts to tackle issues in isolation detract from efforts towards an industry-wide solution. That solution is closer at hand than ever, with the recent approval of STCs for an

---

<sup>12</sup> Hearing before H. Oversight Env. Subcomm., 117<sup>th</sup> Cong. 6 (2022) (statement of Santa Clara County Supervisor Cindy Chavez), <https://www.congress.gov/117/meeting/house/115056/documents/HHRG-117-GO28-Transcript-20220728.pdf> (last visited October 12, 2022).

unleaded fuel that the FAA has authorized for use in virtually all piston aircraft engines. Until a fuel that works safely in all piston engines is widely commercially available, the safe and efficient function of the national aviation system depends on continued availability of 100LL for the aircraft that consume 70% of fuel volume. Our aviation system works because the vast network of stakeholders operates in compliance with legal requirements. Consistent application of these requirements, in Santa Clara County and nationwide, is necessary for fairness and legitimacy of the rule of law, and for safety and reliability of the national aviation system.

- 55. By reason of the above, the Complainants submit that Santa Clara County’s actions violate its federal grant assurance obligations and the County should be ordered to immediately re-establish the ability to have 100LL reasonably available at the airport for airport users that cannot legally or safely use 94UL fuel.

**Pre-Complaint Resolution**

- 56. In compliance with the requirement of 14 C.F.R. section 16.21, the Complaining Parties make the following statement: We hereby certify that there have been numerous good faith and substantial efforts to resolve the disputed matter described herein informally with Santa Clara County, but those efforts have been unsuccessful, including informal complaints to the FAA that prompted an FAA Notice of Investigation. The County has prohibited sale and use of leaded fuel at both of its airports, despite repeated explanation to the County of the need for General Aviation aircraft to use 100LL until an alternative can be developed and approved and despite being told of the substantial effects on the airport users who must seek fuel outside the County. Nine months have passed since fuel has been unavailable at the airports, and there has not been any resolution or the appearance of a resolution on the multiple allegations of grant assurance violations from those affected and from the FAA. This includes the County’s failure to substantively respond to the FAA’s letter dated February 22, 2022, the continued lack of 100LL at the County’s airports, and the County’s failure to address 100LL in its recently announced intention to exercise proprietary exclusive rights. Therefore, sufficient evidence exists to demonstrate that there is no reasonable prospect for timely resolution of the grant assurance violations dispute, and the parties are entitled to formal review and a formal determination under 14 C.F.R. Part 16 over whether the County has and is continuing to violate its grant obligations to make their airports available on reasonable terms and to operate their airports to be self-sustaining.

Respectfully submitted,

DocuSigned by:  
**Justine A Harrison**  
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Aircraft Owners and Pilots Association  
421 Aviation Way  
Frederick, MD 21701  
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DocuSigned by:  
*Kathleen A. Yodice*  
1D61FB58305E4B9...  
Kathleen A. Yodice, Esq.  
Yodice Associates, Counsel  
to AOPA

DocuSigned by:

*Michael McClelland*

0F9DD1B816B340F...

Michael McClelland  
Aperture Aviation, Inc.

DocuSigned by:

*Robert A. Gingell*

4DDC1282337447F...

Robert A. Gingell

DocuSigned by:

*Michael S Luvara*

D5124CAAF954441...

Michael Luvara

Dr. Joseph C. McMurray

DocuSigned by:

*Glynn Falcon*

9A48E2B26B4C4A9...

Glynn Falcon

DocuSigned by:

*Christopher Luvara*

BB4D8A721B83413...

Christopher Luvara

DocuSigned by:

*Paul Marshall*

8449F78981AD474...

Paul Marshall

DocuSigned by:

*Walter Gyger*

4DEAF9EF4F32432...

Walter Gyger  
Trade Winds Aviation

**Certificate of Service**

I hereby certify that I have this day caused the foregoing Complaint to be served on the following persons at the following addresses by first-class mail with a courtesy copy by electronic mail:

Eric Peterson  
County Airports Administration  
Santa Clara County  
2500 Cunningham Ave.  
San Jose, CA 95148  
Eric.Peterson@rda.sccgov.org

James R. Williams  
County Counsel  
Santa Clara County  
70 West Hedding St.  
East Wing, 9<sup>th</sup> Floor  
San Jose, CA 95110  
james.williams@cco.sccgov.org

Dated this 14th day of October, 2022.

DocuSigned by:

**Justine A Harrison**

B62EAE4A321546F...

Justine A. Harrison, Esq.  
General Counsel  
Aircraft Owners and Pilots Association  
421 Aviation Way  
Frederick, MD 21701  
(301) 695-2000  
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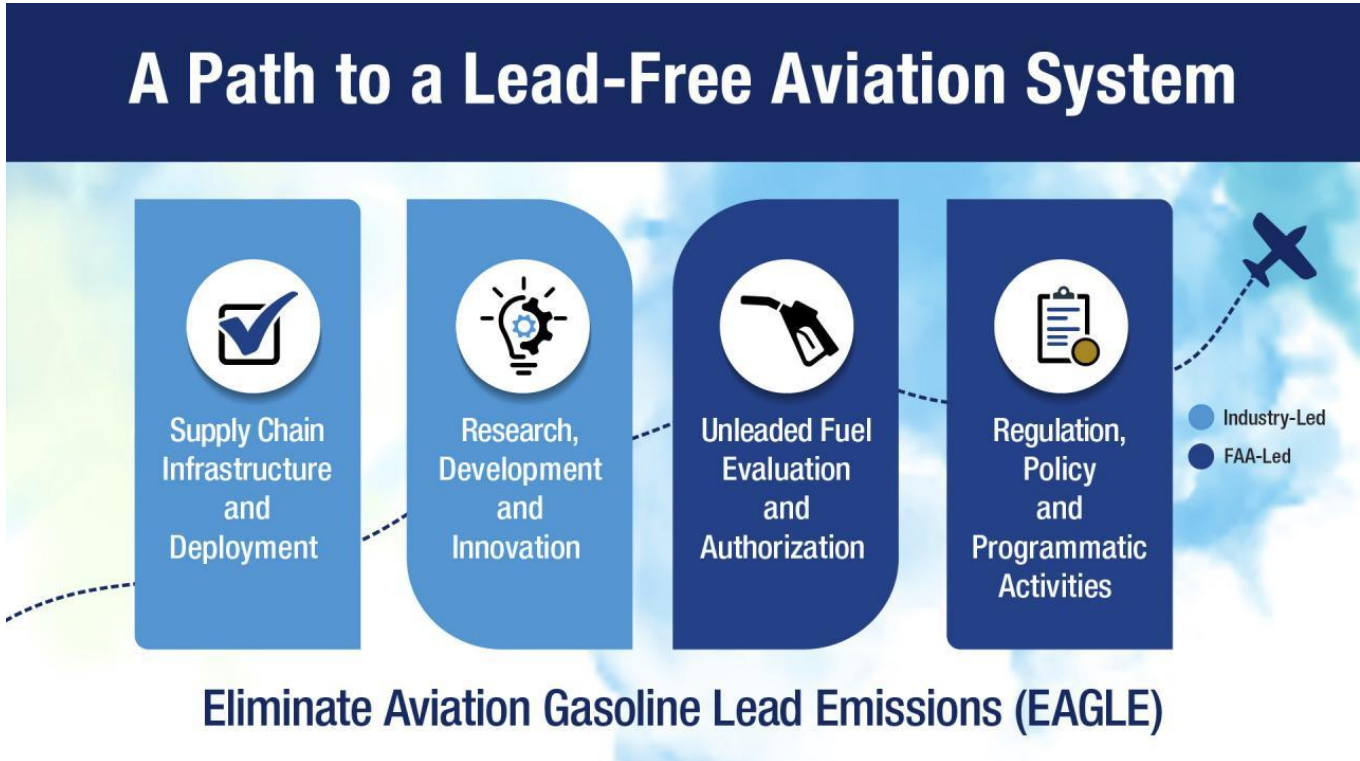
**ATTACHMENT B**



Federal Aviation Administration

[Home](#)

## EAGLE Initiative



In February 2022, aviation and petroleum industry leaders and the FAA announced a new initiative that outlines how our country can safely eliminate the use of leaded aviation fuel by the end of 2030 without adversely affecting the existing piston-engine fleet. We have created a team named **Eliminate Aviation Gasoline Lead Emissions (EAGLE)**. It is a government-industry partnership that also encompasses fuel producers and distributors, airport operators, communities that support general aviation airports, and environmental experts. Our work will focus on four pillars, each led by an industry or government expert:



- Develop Fuel Infrastructure and Access Viability
- Support Research, Development and Innovation
- Evaluate and Authorize Safe Fuels
- Establish Necessary Policies

## We are Fully Committed to EAGLE’s Success

The EAGLE initiative is ambitious and comprehensive. Activity under all of the pillars started immediately with a stakeholders meeting in Washington, D.C. on March 16-17, 2022. See the materials below for details about the plan and the EAGLE partnership:

- FAA, Industry Chart Path to Eliminate Lead Emissions – [news release](#)
- Aviation Stakeholder Groups Commit to Lead-Free Aviation Fuels Transition – [news release](#)
- [Industry Commitment](#) to EAGLE
- EAGLE [Background Information](#) and FAQs
- Other materials include the [NASEM report](#) on reducing lead emissions, [EPA regulations](#) on lead emissions, and an [EPA press release](#) regarding emissions from piston-engine aircraft.



Government information about leaded and unleaded aviation fuel can be found on the [FAA AvGas page](#), in an [FAA letter to GA pilots](#) and in the FAA Safety Briefing article, [Looking at the Future of AvGas](#).

## The Latest on Reid-Hillview Airport

In Santa Clara County, Calif., the FAA has outlined a path that would allow the airport to have safe lead-free operations. We continue to work with the county in efforts to reach a mutually acceptable implementation timeline to make this happen and we are looking at potential options.

Aviation remains the last source of lead emissions in transportation, and the FAA is committed to moving diligently and safely to a better future.

Last updated: Wednesday, December 14, 2022

### U.S. DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration  
800 Independence Avenue, SW  
Washington, DC 20591  
866.835.5322 (866-TELL-FAA)  
[Contact Us](#)

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**ATTACHMENT C**

1 **UNITED STATES DEPARTMENT OF TRANSPORTATION**  
2 **FEDERAL AVIATION ADMINISTRATION**  
3 **WASHINGTON, D.C.**

4  
5 AIRCRAFT OWNERS AND PILOTS  
6 ASSOCIATION, *ET AL.*

7 Complainants,

8 v.

9 FAA Docket No. 16-22-08

10 COUNTY OF SANTA CLARA,  
11 CALIFORNIA

12 Respondent.

13 **DECLARATION OF HARRY FREITAS IN SUPPORT OF**  
14 **RESPONDENT COUNTY OF SANTA CLARA'S**  
15 **ANSWER, STATEMENT OF FACTS, AND AFFIRMATIVE DEFENSES**  
16  
17  
18  
19  
20  
21

22 James R. Williams  
23 County Counsel  
24 Jerett T. Yan  
25 Deputy County Counsel  
26 County Government Center  
27 70 West Hedding Street  
28 East Wing, 9th Floor  
San José, California 95110-1770  
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[james.williams@cco.sccgov.org](mailto:james.williams@cco.sccgov.org)  
[jerett.yan@cco.sccgov.org](mailto:jerett.yan@cco.sccgov.org)

1 I, HARRY FREITAS, declare as follows:

2 1. I have personal knowledge of the facts set forth in this declaration. If called as a  
3 witness, I could and would testify competently to the matters set forth herein.

4 2. I graduated from San José State University in 1990, where I received a degree in Civil  
5 Engineering. I am a Registered Professional Engineer licensed to practice in the State of California.

6 3. Since 2017 I have been the Director of the County of Santa Clara (“County”) Roads and  
7 Airports Department, which, under the direction of the Santa Clara County Board of Supervisors  
8 (“Board”), is responsible for operation and maintenance of the County’s transportation  
9 infrastructure, including expressways, unincorporated roads and two general aviation airports: Reid-  
10 Hillview Airport (“RHV”) and San Martin Airport (“E16”) (collectively “County Airports”). The  
11 Airports Division of the Roads and Airports Department manages the County Airports, which  
12 includes renting the facilities at the airports to private individuals and businesses, setting the rules  
13 and regulations for operating aircraft and businesses at the County Airports, and providing services  
14 to aircraft operators, including the sale of fuel.

15 4. Before becoming the Director of Roads and Airports, I was employed for 27 years with  
16 the City of San José, where I served as the Director of Planning, Building, and Code Enforcement,  
17 Assistant Director of Public Works, Deputy Director of Public Works, Division Manager, Associate  
18 Engineer, and Project Engineer in the Public Works Department, and a Senior Engineer in the  
19 Department of Transportation.

20 5. I have reviewed the complaint filed on October 14, 2022, pursuant to 14 C.F.R. § 16  
21 titled *Aircraft Owners and Pilots Association et al. v. County of Santa Clara, California*  
22 (“Complaint”) which names as complainants Aircraft Owners and Pilots Association (“AOPA”),  
23 Aperture Aviation, Inc., Glynn Falcon, Robert A. Gingell, Christopher Luvara, Michael Luvara, Paul  
24 Marshall, Dr. Joseph C. McMurray, and Trade Winds Aviation (collectively “Complainants”).

25 **Reid Hillview Airport**

26 6. Reid Hillview Airport is a general aviation, public use airport located at 2500  
27 Cunningham Avenue in the City of San Jose, roughly three miles from downtown San Jose. The  
28 County has owned and operated Reid Hillview Airport since 1961. Since then, the County has

1 applied for and received a series of Airport Improvement Program grants from the Federal Aviation  
2 Administration (“FAA”), most recently in 2011.

3 7. Air traffic at RHV consists entirely of general aviation operations, most of which is  
4 comprised of piston engine aircraft.

5 8. The County rents space at RHV to private businesses, including four fixed base  
6 operators (FBOs): JMM Aviation, LLC (“Marconet”); Amelia Reid Aviation (“Aerodynamic  
7 Aviation”); California in Nice (“Nice Air”); and Trade Winds Aviation (collectively “RHV FBOs”).  
8 The County entered into leases, effective January 1, 2022, with each of the RHV FBOs for the use of  
9 County-owned facilities at RHV. The leases between the County and the RHV FBOs do not prohibit  
10 the use of leaded avgas, including self-fueling with leaded avgas, at RHV. True and correct copies  
11 of the 2022 leases between the County and the RHV FBOs are attached hereto as Exhibits A.1  
12 (Marconet), A.2 (Aerodynamic Aviation), A.3 (Nice Air), and A.4 (Trade Winds Aviation). The  
13 County is currently negotiating new leases with the RHV FBOs that the County expects to contain  
14 substantially similar terms with respect to use and sale of leaded avgas. Attachment 13A “Trade  
15 Winds Lease Excerpt” of the Complaint is not part of any executed lease between Trade Winds  
16 Aviation and the County.

17 9. According to the U.S. Environmental Protection Agency’s 2017 National Emissions  
18 Inventory, RHV emitted 745 pounds of lead, the 36<sup>th</sup> highest output of any airport in the country.  
19 Over 30,000 people live within one mile of RHV, the third highest total of any airport among the  
20 150 highest lead emitting airports.

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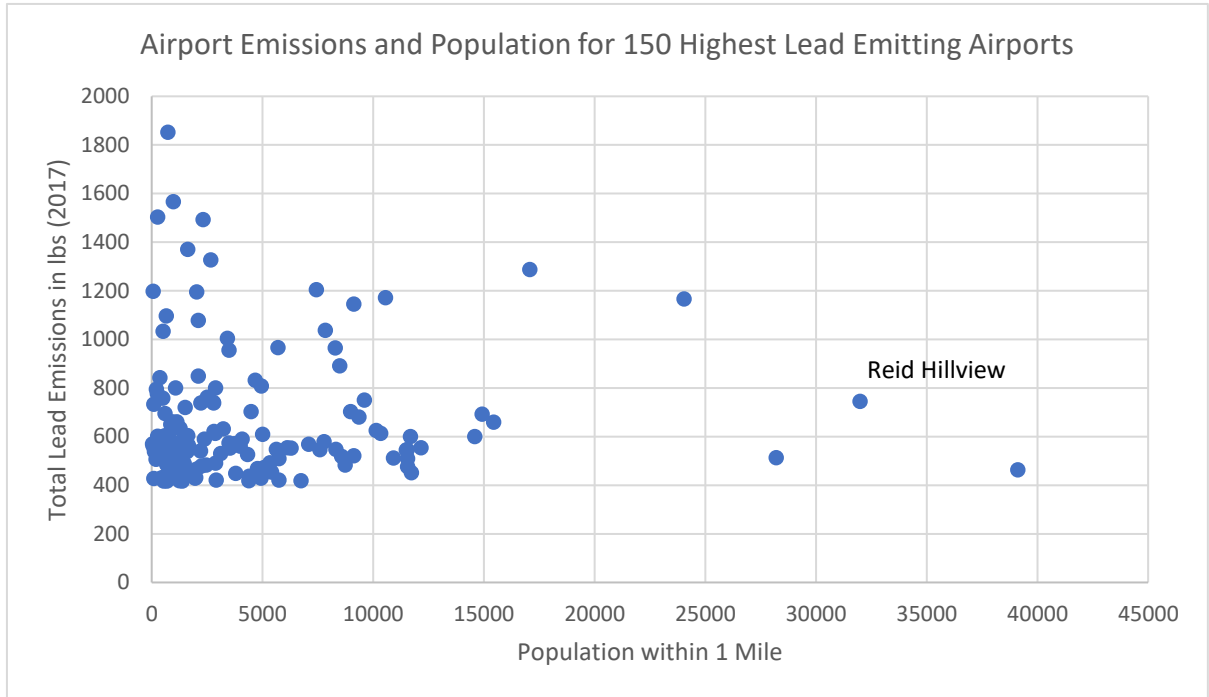
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**San Martin Airport**

10. San Martin Airport is a general aviation, public use airport located in unincorporated San Martin, California. The County has owned and operated San Martin Airport since it opened in 1972. Since then, the County has applied for and received a series of Airport Improvement Program grants from the FAA, most recently in 2022.

11. Air traffic at E16 consists entirely of general aviation operations, most of which is comprised of piston engine aircraft.

12. San Martin Aviation is the sole FBO at E16. The County entered into a lease with San Martin Aviation for the use of the County-owned facilities at E16. The leases between the County and San Martin Aviation does not prohibit the use of leaded avgas, including self-fueling with leaded avgas, at E16. A true and correct copy of the current lease between the County and San Martin Aviation is attached hereto as Exhibit B. I stated in ¶ 12 of my previous declaration that the San Martin Aviation lease was effective January 1, 2022. The lease was effective December 20, 2020.

**Reid Hillview Airport Lead Study and Subsequent Board Direction**

13. On August 17, 2021, the Board received a peer reviewed a study prepared by Dr. Sammy Zahran of Mountain Data Group entitled *Leaded Aviation Gasoline Exposure Risk at Reid-*

1 *Hillview Airport in Santa Clara County, California* (“RHV Lead Study”). A true and correct copy  
2 of the RHV Lead Study is attached hereto as Exhibit C.1. The results of the RHV Lead Study were  
3 published in the Proceedings of the National Academy of the Sciences. A true and correct copy of  
4 the RHV Lead Study, as published, is attached hereto as Exhibit C.2.

5 14. Among its results, the RHV Lead Study found that children residing within a half-mile  
6 of the airport have blood lead levels that are an average of 0.2  $\mu\text{g}/\text{dL}$  higher than those of statistically  
7 similar children more distant from the airport. Children living downwind of the airport were at the  
8 greatest risk, with blood lead levels that were, on average, 0.4  $\mu\text{g}/\text{dL}$  higher than their peers. These  
9 children were also 200% more likely than children residing upwind of RHV to have blood lead  
10 levels above 4.5  $\mu\text{g}/\text{dL}$  – the action threshold used by CDPH when testing for elevated blood lead.  
11 Measures of blood lead in local children also tracked changes in leaded avgas sale at the airport. A  
12 change in the quantity of aviation gasoline sold from the observed minimum to the maximum was  
13 associated with an increase in child blood lead levels by about 0.18  $\mu\text{g}/\text{dL}$ .

14 15. In response to the RHV Lead Study, On August 17, 2021, the Board directed County  
15 Administration to take several actions to mitigate the risk of harm from lead exposure due to aviation  
16 at the County Airports. These actions included direction to:

- 17 a. submit or join a Petition for Rulemaking to the U.S. Environmental Protection  
18 Agency under the authority granted by the Administrative Procedure Act, 5  
19 U.S.C. section 553 to make a finding that lead emissions from general aviation  
20 aircraft endanger public health and welfare and issue proposed emission standards  
21 for lead from general aviation aircraft under Section 231(a)(2)(A) of the Clean Air  
22 Act.
- 23 b. continue working on securing unleaded aviation gasoline for the County Airports  
24 System.
- 25 c. take all actions necessary to transition to carrying only lead free gas at both  
26 County airports as soon as possible with the understanding that the sales of leaded  
27 gas will not be permitted at either County airport after December 31, 2021 except  
28 for emergency operations.

- 1 d. take such actions as may be necessary to expeditiously eliminate lead exposure  
2 from operations at Reid-Hillview Airport, consistent with all established federal,  
3 state, and local laws and all court orders. Such actions may include, but are not  
4 limited to, both prohibiting the sale or use of leaded fuel.

5 A true and correct copy of the board report and minutes for the relevant item from the Board's  
6 August 17, 2021 meeting are attached as Exhibits D and E, respectively.

7 **Avgas Availability in the U.S.**

8 16. Currently the most common aviation gasoline ("avgas") commercially available is a  
9 leaded 100 octane fuel known as 100LL.

10 17. There are no commercially available unleaded avgas rated at 100 octane. The FAA  
11 recently approved G100UL, a 100 octane unleaded avgas, for use in virtually all aircraft in the U.S.  
12 piston engine fleet, though G100UL is not yet commercially available.

13 18. There is one commercially available 94 octane unleaded avgas, known as UL94, that  
14 is usable by a majority of the aircraft in the U.S. piston engine fleet. Prior to January 1, 2022, only  
15 one airport west of the Rocky Mountains sold UL94.

16 19. A minority of the aircraft in the U.S. piston engine fleet – typically aircraft with high  
17 performance engines – require a 100 octane avgas to operate.

18 20. Additional 100 octane unleaded avgas options are under development, including  
19 100R, which Swift Fuels expects to begin selling in 2023.

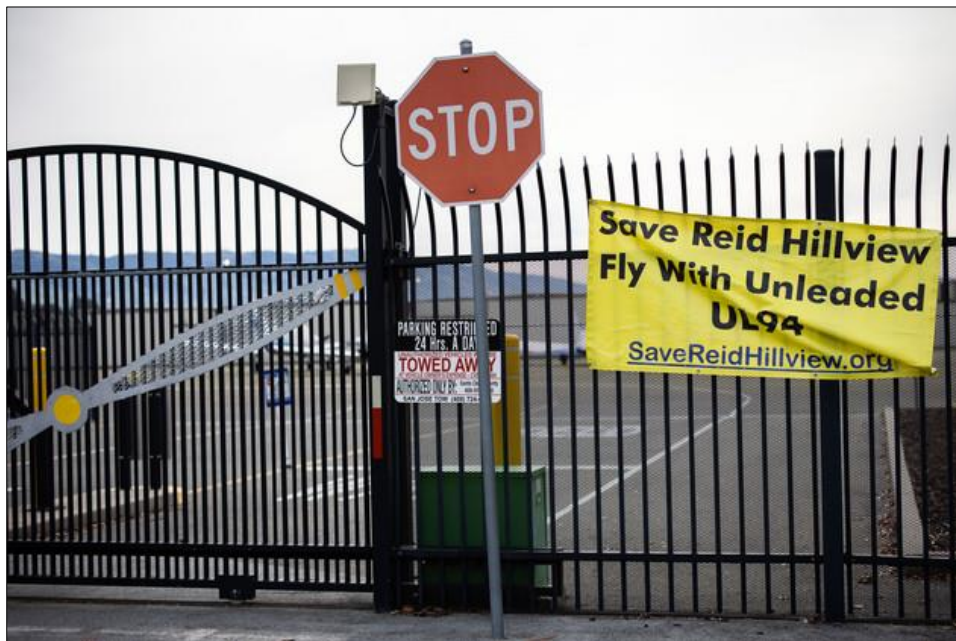
20 21. Unavailability of 100LL for purchase is a common condition at public use airports. I  
21 have prepared a chart, attached hereto as Exhibit F, based on data downloaded on November 14,  
22 2022 from FAA's Airport Data and Information Portal showing each of the 1,434 airports that  
23 reported general aviation "aircraft operations," as defined in 14 CFR § 170.3, in the previous year  
24 where 100 octane avgas is not available for purchase. Some select findings from the chart are as  
25 follows:

- 26 a. There is no 100 octane avgas available for purchase at 70 out of a total 244 public  
27 use airports in California that reported general aviation aircraft operations.  
28 b. There were over four million aircraft operations in the past year from public use





1           25.     Users of the County Airports have expressed interest in increased availability of  
2 UL94. On August 16, 2021, RHV FBO AeroDynamic Aviation transitioned its fleet to the exclusive  
3 use of UL94 and began exclusively selling UL94 from the fuel tank at 2650 Robert Fowler Way.  
4 Complainant Aperture Aviation, Inc. has also indicated its desire to use unleaded avgas when it is  
5 available. See Complaint, Attachment 5A. Save Reid Hillview, an advocacy group comprised  
6 largely of users at RHV has publicly lobbied for increased usage of UL94, including by hanging the  
7 banner below on airport property.



19  
20           26.     Transitioning to exclusive sale of UL94 has resulted in fuel sellers at the County  
21 Airports purchasing UL94 in larger quantities. This in turn has allowed the refiner to ship fuel from  
22 Indiana, where it is produced, via rail car which has reduced transportation costs. The reduced  
23 transportation cost has allowed retailers to offer UL94 at a reduced price to aircraft operators.  
24 Dedicating four tanks at RHV and one tank at E16 to the exclusive sale of UL94 and purchasing in  
25 conjunction with other airports has made rail transport of UL94 feasible. The net savings due to  
26 bulk purchase is approximately \$1.15 per gallon, a significant savings.

27           27.     Being able to purchase UL94 in larger quantities allows the County to offer UL94 for  
28 ///

1 purchase at a price comparable to 100LL. I believe that prior to the availability of UL94 at the  
2 County Airports, this price discrepancy was a significant barrier to UL94 adoption.

3 28. Fuel sales have historically been a revenue source for the County’s Airport Enterprise  
4 Fund through the fuel flowage fees imposed on fuel sales at the County Airports. I estimate that  
5 taking over the self-service island at RHV alone could generate over \$100,000 in additional revenue  
6 annually for the Airport Enterprise Fund. I anticipate that assuming operation of all the RHV Tanks  
7 would increase the potential revenue from fuel sales.

### 8 **Sale of Avgas at Reid Hillview Airport**

9 29. As of January 1, 2022, there were four County-owned fuel tanks at RHV (collectively  
10 “RHV Tanks”): 1) a 10,000 gallon above ground fuel tank (“AST”) located at 2555A Robert Fowler  
11 Way; 2) a 12,000-gallon underground fuel storage tank (“UST”) located at 2635 Cunningham  
12 Avenue; 3) a 10,000-gallon UST located at 2650 Robert Fowler Way; 4) a 15,000-gallon UST  
13 located on the Airport at 2655 Robert Fowler Way.

14 30. Prior to January 1, 2022, FBOs at RHV used the RHV Tanks to sell 100LL to the  
15 general public and to self-fuel their aircraft. Since January 1, 2022, UL94 has been the only avgas  
16 available for purchase at RHV.

17 31. Section 6.2, *Aviation Fuel Distribution Regulations* of the County of Santa Clara Airport  
18 Rules and Regulations states “No person, firm or corporation shall bring, store, use or distribute  
19 aviation fuel on the airport except as may be authorized in writing by the County.” Section 6.3,  
20 *FBO Retail Fueling Permit* of the County of Santa Clara Airport Rules and Regulations states “The  
21 County may license an FBO master lessee to provide retail fueling on the County Airports.  
22 Attachment 14 to the Complaint is a true and correct copy of Section 6 “Aviation Fuel Distribution  
23 and Permits” of the County of Santa Clara Airport Rules and Regulations. The County issued three  
24 Permits for Storage, Sale or Distribution of Fuel and Lubricants, effective January 1, 2022, granting  
25 permission to use the RHV Tanks (collectively “Fuel Permits”). The Fuel Permits allow the storage  
26 of unleaded avgas in the County owned tanks. They do not prohibit self-fueling with 100LL nor do  
27 they prohibit the use of leaded avgas in any aircraft at RHV.

28 a. The Permit for Storage, Sale or Distribution of Fuel and Lubricants between the

1 County and Marconet grants access to the “UST located at 2655 Robert Fowler  
2 Way for storage and distribution of Unleaded Aviation Fuel.” A true and correct  
3 copy of this permit is attached hereto as Exhibit G.1.

4 b. The Permit for Storage, Sale or Distribution of Fuel and Lubricants between the  
5 County and Aerodynamic Aviation grants access to the “UST located at 2650  
6 Robert Fowler Way for storage and distribution of Unleaded Aviation Fuel.” A  
7 true and correct copy of this permit is attached hereto as Exhibit G.2.

8 c. The Permit for Storage, Sale or Distribution of Fuel and Lubricants between the  
9 County and Nice Air grants access to the “AST located at 2555A Robert Fowler  
10 Way for storage and distribution of Unleaded Aviation Fuel.” A true and correct  
11 copy of this permit is attached hereto as Exhibit G.3.

12 32. Since January 1, 2022, the County has used the fuel tank located at 2635 Cunningham  
13 Avenue to sell UL94 to Tradewinds Aviation for use in their fleet of aircraft. Since November 1,  
14 2022, the County has used the fuel tank located at 2635 Cunningham Ave and its own fuel trucks to  
15 sell UL94 to the public.

16 33. On or before December 14, 2022, the County informed the RHV FBOs that it intends  
17 to terminate the Fuel Permits and take over operation of the remaining RHV Tanks as soon as their  
18 current load of fuel is exhausted. The County expects to sell unleaded avgas exclusively using the  
19 RHV Tanks. The County is also working to obtain a supply of G100UL. The County expects to  
20 begin providing G100UL for purchase by the end of June 2023 or as soon as it is commercially  
21 available. The County is also evaluating the feasibility of selling 100R when it is commercially  
22 available.

23 34. The County anticipates assuming operation of the fuel tank located at 2555A Robert  
24 Fowler Way by May 1, 2023 and to begin selling fuel from this tank at that time.

25 35. While the County is considering exercising its proprietary exclusive right to sell fuel  
26 at RHV in the near future, the County continues to consider reasonable requests to sell fuel at the  
27 County Airports as they arise. The County has not received or rejected any requests to sell leaded  
28 avgas or construct fueling facilities at the County Airports from any Complainant.

1 36. RHV is well suited for exclusive UL94 sales because a significant portion of the  
2 aircraft based at RHV are low-powered piston engine aircraft that do not need 100 octane avgas.

3 **Sale of Avgas at San Martin Airport**

4 37. As of January 1, 2022, the County owned one 10,000-gallon AST at E16 (“E16  
5 Tank”).

6 38. Prior to January 1, 2022, San Martin Aviation used the E16 Tank to sell 100LL to the  
7 general public. Since approximately January 1, 2022, UL94 has been the only avgas available for  
8 purchase at E16.

9 39. The County entered into a fueling permit, effective January 1, 2022, with San Martin  
10 Aviation for the use of the E16 Tank. This fuel permit allows the County to require that San Martin  
11 Aviation sell unleaded avgas once it becomes available. San Martin Aviation is complying with the  
12 requirement in its fuel permit to sell unleaded avgas by selling UL94. The fuel permit between the  
13 County and San Martin Aviation does not prohibit the use of leaded avgas, including self-fueling  
14 with leaded avgas, at E16. A true and correct copy of the fuel permit between the County and San  
15 Martin Aviation is attached hereto as Exhibit H.

16 **No Prohibition on Use of Leaded Avgas at the County Airports**

17 40. The County has taken no action to prohibit the use of leaded avgas at either of the  
18 County Airports. In particular, the County has never issued any orders prohibiting the use of leaded  
19 avgas at the County Airports. The County has also never taken any enforcement action for the use  
20 of leaded avgas at the County Airports.

21 41. Since January 1, 2022, aircraft using leaded avgas have conducted operations from  
22 each of the County Airports daily.

23 **Self-Fueling at the County Airports**

24 42. The County respects the right of aircraft operators to self-fuel at the County Airports,  
25 pursuant to Grant Assurance 22. The County has adopted no laws, regulations, or policies that  
26 prohibit self-fueling with leaded avgas at the County Airports.

27 43. Section 6.4, *Self Fueling* of the County of Santa Clara Airport Rules and Regulations

28 //

1 states “No person may conduct self-fueling activity on the airport without securing a permit from the  
2 Airport Authority.”

3 44. The County issues two types of self-fueling permits: a general aviation self-fueling  
4 permit and a commercial self-fueling permit. Other FBOs conduct self-fueling pursuant to permits  
5 for storage, sale or distribution of fuel and lubricants.

6 45. The general aviation self-fueling permit is a nondiscretionary permit issued to  
7 individual operators who wish to refuel their aircraft at the County Airports. This permit has been  
8 unchanged since 2002. The general aviation self-fueling permit does not prohibit fueling with  
9 leaded fuel. A true and correct copy of the County’s template general aviation self-fueling permit is  
10 attached as Exhibit I.

11 46. I stated in ¶46 of my previous declaration dated December 29, 2022 that “No  
12 Complainant has applied to the County for a general aviation self-fueling permit.” At the time I did  
13 not recall that Complainant Paul Marshall had submitted and voluntarily withdrawn an application  
14 for a general aviation self-fueling permit. The County has not denied any applications for a general  
15 aviation self-fueling permit to any Complainant.

16 47. Commercial self-fueling permits are available to commercial operators seeking to  
17 perform self-fueling on a large scale using a fuel transport vehicle. The commercial self-fueling  
18 permit does not prohibit fueling with leaded fuel.

19 48. Trade Winds Aviation is the only Complainant who has applied for a commercial  
20 self-fueling permit. Trade Winds proposed to self-fuel from a truck using fuel purchased from the  
21 County. The County issued a General Aviation Commercial Self-Fueling Permit to Trade Winds  
22 Aviation, effective January 1, 2022. This fuel permit does not restrict the use of leaded avgas,  
23 including self-fueling with leaded avgas, at RHV. A true and correct copy of this permit is attached  
24 hereto as Exhibit J.

25 49. The County has established an emergency self-fueling protocol that will allow  
26 operators of aircraft who cannot use unleaded avgas, and who do not meet the requirements for a  
27 self-fueling permit, to petition the Airports Director to fuel with leaded avgas. The protocol states,  
28 in its entirety:

1 Upon request, the Santa Clara County Airports Director will review and approve one-time  
2 permission, on a case by case basis, for an aircraft operator to obtain and fuel their aircraft  
3 with leaded fuel on the premises of RHV or E16. Such permission will be granted for aircraft  
4 that do not have sufficient fuel onboard to safely leave the County airports and will be  
5 limited to a quantity of fuel necessary to safely reposition the aircraft to a nearby airport  
6 where the necessary fuel is available. Requests are to be made via email addressed to  
7 [airportops@rda.sccgov.org](mailto:airportops@rda.sccgov.org)

8 50. To date, the County has received no requests to utilize the emergency self-fueling  
9 protocol.

### 10 **Effects on Airport Operations and Usage**

11 51. From January 1, 2022 to December 31, 2022, FBOs and the County have consumed  
12 and sold over 248,000 gallons of UL94 at the County Airports.

13 52. UL94 is relatively new to the market. I expect that demand for UL94 will increase  
14 over time as operator familiarity with UL94 and its benefits increase. A significant portion of the  
15 low-powered piston engine aircraft operators based at RHV have transitioned to UL94.

16 53. The U.S. Environmental Protection Agency (EPA) methodology for calculating lead  
17 emissions from general aviation estimates that the sale of 94UL at the County Airports has prevented  
18 the emission of over 600 pounds of lead from the environment. As aircraft use 94UL and 100LL at  
19 approximately the same rate, each gallon of 94UL sold displaces a gallon of 100UL. The EPA  
20 estimates 100LL contains about 2.12 grams of lead per gallon, and that 75% of the lead in avgas is  
21 emitted into the environment during combustion in a piston engine aircraft. This methodology is  
22 detailed in the EPA's Lead Emissions from the Use of Leaded Aviation Gasoline in the United  
23 States Technical Support Document, EPA 420-R-08-20 (2008).

24 54. There has been no reduction in operations at RHV attributable to the transition to the  
25 exclusive sale of unleaded avgas. In 2021, there were 155,472 general aviation operations at RHV.  
26 In 2022, there were 158,223 general aviation operations at RHV.

27 55. There has been no reduction in operations at E16 due to the transition to the exclusive  
28 sale of unleaded avgas. In 2021, there were 45,467 general aviation operations at E16. In 2022,

1 there were 51,549 general aviation operations at E16.

2 56. There has been no significant reduction in the number of aircraft based at County  
3 facilities at RHV due to the transition to the exclusive sale of unleaded avgas. On January 1, 2022,  
4 there were 227 aircraft based at County facilities at RHV. On December 31, 2022, there were 219  
5 aircraft based at County facilities at RHV.

6 57. There has been no significant reduction in the number of aircraft based at County  
7 facilities at E16 due to the transition to the exclusive sale of unleaded avgas. On January 1, 2022,  
8 there were 146 aircraft based at County facilities at E16. On December 31, 2022, there were 153  
9 aircraft based at County facilities at E16.

10 58. There have been no safety incidents at the County Airports relating to the  
11 unavailability of leaded avgas for purchase.

#### 12 **Informal Dispute Resolution Efforts with Complainants**

13 59. I stated in ¶56 of my previous declaration dated December 29, 2022 that  
14 “Complainants have made no meaningful efforts to resolve the allegations stated in the Complaint  
15 with the County prior to filing the Complaint.” At the time I did not recall the Complainants’  
16 comments at the August 17, 2021 Board of Supervisors meeting expressing concern about the  
17 Board’s proposed actions; the August 19, 2021 South County Airport Pilots Association meeting; or  
18 the October 18, 2021 letter to the County’s Board of Supervisors proposing that the County allow  
19 the sale of both UL94 and 100LL.

20 60. I stated in ¶57 of my previous declaration dated December 29, 2022 that “The County  
21 has not received any written communication from any Complainant proposing an informal resolution  
22 to any allegation raised in the Complaint.” At the time I did not recall Complainant Marshall’s  
23 October 18, 2021 letter to the County’s Board of Supervisors proposing that the County allow the  
24 sale of both UL94 and 100LL.

25 61. On December 13, 2021, Complainants filed an informal complaint with the FAA  
26 pursuant to 14 C.F.R. § 13.1 asserting that the unavailability of leaded avgas for purchase at the  
27 County Airports violates the County’s grant assurances to the FAA. A true and correct copy of the  
28 December 13, 2021 letter is attached hereto as Exhibit K.

1           62.     The County responded to the letter December 13, 2021 from Aperture Aviation, Inc.  
2 on December 19, 2022 informing Aperture Aviation, Inc. that the County had not prohibited the use  
3 of leaded avgas at either County Airport. The County has taken no action to prohibit Aperture  
4 Aviation, Inc. from using leaded avgas at the County Airports. A true and correct copy of the  
5 County’s response is attached as Exhibit L.

6           63.     On December 22, 2021, the County received a Notice of Informal Investigation Under  
7 14 CFR § 13.1 (“Part 13 Notice”) from Mark McClardy, Director, Airports Division for the  
8 Western-Pacific Region of the FAA. The Part 13 Notice included allegations relating to the  
9 availability of 100 octane leaded avgas for purchase at the County Airports. Attachment 20 of the  
10 Complaint is a true and correct copy of the Part 13 Notice.

11           64.     On January 11, 2022, the County sent Director McClardy a Response to Notice of  
12 Informal Investigation Under 14 C.F.R. § 13.1 via email. Attachment 22 of the Complaint is a true  
13 and correct copy of the January 11, 2022 response County sent to Director McClardy.

14           65.     On March 9, May 9, June 18, and September 16, 2022, County officials met with senior  
15 FAA officials to discuss resolution of the issues raised in the Part 13 Notice. FAA officials involved  
16 in the discussions have included DOT Assistant Secretary Annie Petsonk, FAA Deputy  
17 Administrator Bradley Mims, FAA Chief Counsel Marc Nichols, Assistant Administrator Shanetta  
18 Griffin, and Director McClardy.

19           66.     Since July 2022, County officials have been in approximately weekly discussions  
20 with FAA regional officials regarding resolution of issues raised in the Part 13 Notice.

21           67.     The FAA provided the County with multiple extensions to provide material  
22 responsive to the FAA’s February 22, 2022 Request for Additional Information. The County  
23 provided additional information on February 24, 2022, May 9, 2022, and September 13, 2022. The  
24 County’s efforts to respond to the request information are ongoing. The County and the FAA are  
25 discussing incorporating the provision of the outstanding information into the MOU.

26           68.     As a result of these ongoing discussions, the FAA and the County entered into a  
27 Memorandum of Understanding with the FAA on February 7, 2023 that placed the FAA’s  
28 investigation into abeyance, established a framework for the County and the FAA to discuss issues



1 raised in the Part 13 Notice, and invited the County to participate in a pilot demonstration initiative  
2 conducted by the Airport Cooperative Research Program studying best practices relating to the  
3 transition to unleaded avgas. A true and correct copy of the MOU is attached as Exhibit M.

4 69. As part of its most recent draft of the MOU, the FAA indicated to the County that it  
5 was no longer able to discuss matters that were the subject of the Complaint as part of the MOU  
6 negotiations. The pending adjudication of the Complaint is also inhibiting County staff from freely  
7 exchanging ideas with the FAA regarding fueling at the County Airports, which is crucial to our  
8 efforts to resolve the disputed issues.

### 9 July 27, 2022 Crash

10 70. On July 22, 2022, a Piper PA-32-301 aircraft, registration number N300BH  
11 (“N300BH”), crashed shortly after its departure from RHV.

12 71. Prior to takeoff from RHV, pilots state their intended destinations to the air traffic  
13 control tower. Prior to the takeoff resulting in the crash, the pilot of N300BH declared to the air  
14 traffic control tower his intention to do “closed traffic,” referring to a takeoff and landing at RHV.  
15 The pilot made no reference to departing for San José International Airport.

16 72. After the crash, the County secured N300BH and stored it in a County hanger at  
17 RHV.

18 73. A Piper PA-32-301 has fuel tanks in both its right and left wing.

19 74. The left wing of N300BH, including the fuel tank, was destroyed in the crash. The  
20 right-wing fuel tank contained fuel. The County stored five containers of fuel removed from the  
21 right-wing fuel tank of N300BH, which I estimate contained at least ten gallons of fuel in total. True



1 and correct copies of photos of N300BH and the fuel removed from N300BH are below.

2 75. After each aircraft crash, the National Transportation Safety Board (“NTSB”)  
3 investigates the cause of the crash. The NTSB investigation into the cause of the July 22, 2022 crash  
4 of N300BH is ongoing.

5 \* \* \*

6 I declare under penalty of perjury under the laws of the State of California that the foregoing  
7 is true and correct. This declaration updates and supersedes the declaration I submitted on  
8 December 29, 2022 in support of the County’s Consolidated Motion to Dismiss and Motion for  
9 Summary Judgment. Executed at San José, California on March 28, 2023.

11 /s/ Harry Freitas  
12 HARRY FREITAS

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# Exhibit A

# Exhibit A.1

**LEASE AGREEMENT  
BETWEEN COUNTY OF SANTA CLARA AND  
JMM AVIATION, LLC**

This Lease Agreement (“Lease”) is entered into by and between the COUNTY OF SANTA CLARA, a political subdivision of the State of California (referred to interchangeably as “COUNTY” or “Lessor”) and JMM Aviation, LLC (“Lessee”), effective as of January 1, 2022 (the “Effective Date”).

**RECITALS**

- A. COUNTY is the owner of Reid-Hillview Airport (“Airport”).
- B. Lessee desires to lease from Lessor and Lessor desires to lease to Lessee a portion of the Airport located at 2655 Robert Fowler Way, San Jose, California, San José California for the purpose of engaging in certain Commercial Aeronautical Activities, as defined below (the “Premises”). The Premises is as generally described on the attached Exhibit A that is incorporated herein by this reference.

**AGREEMENT**

**NOW THEREFORE**, for and in consideration of the mutual promises, covenants and conditions set forth below, COUNTY and LESSEE agree to the foregoing and as follows:

**1. Premises**

COUNTY agrees to lease to LESSEE and LESSEE agrees to lease from COUNTY the Premises, subject to the terms and conditions of this Lease.

1.1 The Premises consists of the following:

- 1.1.1 Land space of approximately 96,561 square feet that consists of a commercial hangar and office space, a storage shed, aircraft parking ramp and vehicle parking lot as shown as Area 1 on Exhibit A;
- 1.1.2 The Lessor maintains an easement, as shown in Exhibit A for the purposes of accessing the underground storage tank (UST). The Lessee may utilize this space but may be required to periodically clear the area for UST service or maintenance upon request of County.

**2. Term**

2.1 The term of this Agreement is one-year commencing on January 1, 2022. (“Term”).

**3. Monthly Rent**

3.1 The monthly “Rent” or initial Base Rent shall be \$6,708.67 due and payable in advance on the first day of each month of the Term.

3.3 A monthly rent discount of \$2,084.60 shall be applied to this lease. The discount period shall expire on December 31, 2022.

3.4 If this Lease is still in effect, beginning on July 1, 2023, and on each July 1 of each subsequent year, the Base Rent for the ensuing twelve (12) months shall be adjusted in the same percentage proportion that the January Consumer Price Index (CPI) of the San Francisco-Oakland-Hayward area of the United State Department of Labor, Bureau of Labor Statistics, increase or decreases over the January CPI of the base year of 2022. The annual CPI adjustment shall not exceed 2.5%.

3.5 All rent shall be made payable to the “County of Santa Clara”, in the form of a company check, certified check, money order or wire transfer, due and payable on the first day of each month without exception, and delivered by hand delivery, by courier or by U.S. Mail (first class, postage prepaid) to the following address, or such other address as designated by COUNTY in writing:

County of Santa Clara  
2500 Cunningham Ave  
San Jose, CA 95148

3.6 A Security Deposit of \$6,708.67 (equivalent to one-months’ rent) shall be payable by Lessee upon full execution of this Lease as security for the return of the Premises at the expiration of the term of the Lease in as good condition as when Lessee took possession of the Premises, normal wear and tear excepted, as well as the faithful, timely, and complete performance of all other terms, conditions, and covenants of this Lease. The Security Deposit may also be used in the event of termination of this Lease to apply to unpaid back due rent. The Parties agree that the Security Deposit may be used to cure any default or breach of this Lease without prejudice to any other remedies available to County and that County may increase the Security Deposit in the event of default or breach.

3.7 Late Charge as defined in the *Airports Schedule of Fees and Charges* as updated from time-to-time shall be automatically added to any rent, fee, or other charges not received by the County by the close of the business fifteen calendar days after

due and owing. Lessee shall also pay interest on said unpaid balance at a rate of ten percent (10%) simple interest per annum, from the date said payment was due and payable until paid in full.

**3.8 Other Fee**

Lessee shall pay Lessor the following fees in addition to Monthly Rent

3.8.1 10% of any rent received from non-aviation subtenants who shall be approved in writing by Lessor.

Lessor may perform a quarterly audit of Lessee's accounts pertaining to automobile rentals and all sub tenancies to verify amounts due. In the event such an audit discloses a discrepancy of \$1,000.00 or more owing to County in any given fiscal year, Lessee shall bear the audit expenses.

**4. Use of Premises**

4.1 This Lease grants Lessee the right and privilege to use the Premises for the purpose of operating a Fixed Based Operation (FBO) and shall be restricted to the uses listed herein ("Permitted Uses" or "Commercial Aeronautical Activities"). The Premises may not be used for any other purpose without County's prior written consent, which consent may be withheld in the sole discretion of County.

4.1.1 Throughout the term of this Lease, Lessee agrees that Lessee shall use the premises to provide the following Commercial Aeronautical Activities. Lessee shall be actively involved in providing these services and may not sublet or otherwise authorize another service provider to provide them, without the County's prior written consent, which consent shall not be withheld within the sole but reasonable discretion of County.

- a) Aircraft Maintenance and Repair;
- b) Aircraft Rental;
- c) Pilot Training; and
- d) Ground School for Flight Training

4.1.2 The following services may be provided by the Lessee or a secondary service provider. Use of a secondary service provider shall require written approval of the County:

- a) Aircraft Washing & Detailing;
- b) Aircraft Upholstery;
- c) Sale and/or Lease of New and Used Aircraft;
- d) Sale of New and/or Used Aircraft Parts, Supplies, Instruments and Accessories Avionics;

- e) Special Flight Services including Aerial Sightseeing, Aerial Advertising and Aerial Photography;
  - f) Air Taxi/Charter;
  - g) Vehicular Rental
- 4.1.3 To the extent required by applicable Laws, Lessee shall employ sufficient personnel who are appropriately rated by the Federal Aviation Administration (“FAA”) for the work being performed and who hold airframe, power plant, or aircraft inspection ratings.
- 4.1.4 If Lessee desires to provide additional services, written approval of the County prior to commencement of such service is required.
- 4.1.5 Lessee agrees not to wash vehicles on the Premises in such a manner as to allow any cleaning detergent or water to reach the surface of the ground.
- 4.1.6 Fueling
- 4.1.6.1 Lessee is authorized to operate its own fuel truck for the sole purpose of fueling its own aircraft used in the course of its daily flight training and aircraft rental business, provided Lessee obtains a Commercial Self Fueling Permit.
  - 4.1.6.2 If authorized in writing by the County separately from this lease to conduct retail fueling operations, Lessee must obtain an approved Permit for Retail Sale or Distribution of Fuel and Lubricants from Lessor prior to exercises of its privilege of retail fuel sales.
  - 4.1.6.3 All fueling on the Premises conducted under the above sections or otherwise subject to all applicable federal, state, and local laws and regulations.
- 4.1.7 Licensee shall use the premises for legal commercial business purposes only. No residential use is permitted. Licensee action of non-compliance shall constitute an Agreement violation.
- 4.2 A Fee Schedule describing all charges and hourly rates for services for airport patrons shall be posted at the Premises by the Lessee in plain view and kept up to date. All rates and charges shall be reasonable and fairly applied to all users of Lessee’s services.
- 4.3 Identification and Periodic Reporting of Stored Aircraft  
Lessee shall, at all times, maintain a current list of all aircraft permanently based, hangered, either inside or outside the Premises (excluding such other areas of the



Airport which are not part of the Premises), and containing for each aircraft the name and address of the aircraft owner, the aircraft type (make, model, year, if known), and the aircraft registration number. Starting on the Effective Date, the Lessee shall provide the County with a copy of such a list on the first day of every other month, and at any other time the County reasonably requests same.

4.4 Accident Reports

Lessee agrees to report any accidents at the Airport, including but not limited to, involving Lessee, or Lessee's guests which occur at the Airport to the Lessor in writing within 24 hours of Lessee's learning of such. Lessee is also responsible for notifying any federal, state or local authorities, as required by law.

4.5 Airport Access and Security

Security of the Premises must be maintained at all times. Lessee shall maintain secured controlled access at all entrances to the Premises to prevent unauthorized access onto Airport property. Lessee shall ensure the control of all movement of Lessee's operations and those of their guests/customers, including all deliveries. Lessee shall escort all guests, vendors and delivery personnel at all times. Lessee is responsible for the actions of its guests and delivery personnel until they exit the Airport. Accessible areas to the Airport from the Premises shall be controlled by the Lessee and all gate codes shall be kept confidential and shared with authorized individuals only, as appropriate. For clarity purposes, Lessee shall not have the duty nor the responsibility for general Airport security, as such general Airport security shall remain the sole responsibility and obligation of Lessor.

4.6 Compliance with Laws.

The use of the Premises by Lessee and this Lease shall be subject to, and at all times be in compliance with, and/or subordinate to: (a) County Airports Rules and Regulations; (b) Airport Sponsor Grant Assurances and all other federal laws or FAA regulations, obligations, or guidance; (c) any and all applicable local, state and federal laws, rules, codes, ordinances, statutes, orders and regulations as same exist from time to time throughout the Term (collectively, "Laws"), including without limitation, the requirements of the Americans with Disabilities Act, a federal law codified at 42 U.S.C. 12101 et seq., including, but not limited to Title III thereof, all regulations and guidelines related thereto and all requirements of Title 24 of the State of California (collectively, the "ADA"); (d) any and all instruments, licenses, restrictions, easements or similar instruments, conveyances or encumbrances which are at any time made by or given by County relating to the Premises or the Property and/or the construction, from time to time, of any additional improvements on the Property (collectively, "Development Documents"), and (e) any and all documents, easements, covenants, conditions and restrictions, and similar instruments, together with any and all amendments and supplements thereto made, from time to time, each of which has been or

hereafter is recorded in any official or public records with respect to the Premises or the Property (collectively, "Recorded Matters"), provided no such Development Documents or recorded Matters made or given after the date of this Lease shall (otherwise expand Lessee's obligations under this Lease, including but not limited to, Lessee's financial obligations.

4.7 Nonexclusive Rights

Lessee is allowed to use the Airport and its appurtenances together with all public areas and facilities, in common with others, on a non-exclusive basis and subject to the terms and conditions of this lease. Nothing in this Lease shall be construed to grant to Lessee any exclusive right to conduct any aeronautical activity at the Airport except of for the Premises.

4.8 Vehicle Parking and Storage

The premises may not be used for the maintenance or long-term storage of any vehicle not actively used in the day-to-day operations of the Lessees authorized use of premises. Any vehicle parked or stored on the premises must be fully operational, with the exception of short periods of time while the vehicle is waiting for service, in compliance with applicable Legal Requirements, and have current registration and insurance, as required.

For the purposes of this part, long-term storage is defined as any vehicle parked or stored on the premises for more than 14-days.

The Lessee has 14-days from the execution of this agreement to come into compliance with this requirement after which time, any vehicles parked on the premises in violation of this requirement may be towed and stored at the Lessee or vehicle owners expense.

4.9 Housekeeping

Lessee agrees to keep Premises, including the exterior and interior portions of all windows, doors and all other glass and signs, orderly, neat, safe and clean and free from rubbish or dirt at all times. Lessee agrees not to store parts, supplies, tires, batteries, engine, oil outdoors. Trash and garbage shall only be kept in area designated by Lessor for such storage and covered at all times.

Lessee agrees to ensure that all operations on the Premises will be in accordance with the Lessors current Storm Water Pollution Prevention Program (SWPPP) and associated Best Business Practices.

5. Expenses

Lessee shall pay for all expenses related to Lessee's use and occupancy of the Premises including, but not limited to, electric, telephone, cable, internet, water, sewer, gas, trash

collection, HVAC, possessory interest and related personal property taxes, and insurance. County shall cooperate with Lessee to the extent necessary to establish accounts in Lessee's name to facilitate Lessee's payment of expenses.

**6. Indemnification and Insurance**

Lessee shall comply with and provide insurance as set forth in Exhibit B attached hereto.

**7. Condition of Property**

**7.1 Condition for Occupancy.**

LESSEE accepts the Premises in an "as is", "with all faults" condition having first inspected the Airport and Premises at its own cost and expense. County makes no representations or warranties whatsoever concerning the legal, physical, environmental or any other condition of the Premises including improvements, facilities or utilities.

As required by Section 1938(a) of the California Civil Code, County discloses to Lessee that the Premises have not undergone inspection by a certified access specialist ("CASp"). As required by Section 1938(e) of the California Civil Code, County also states that:

"A CASp can inspect the Premises and determine whether the Premises complies with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the Premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the Premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Premises."

In furtherance of the foregoing, County and Lessee agree that any CASp inspection elected to be conducted by Lessee shall be done at Lessee's sole cost and expense, and to the extent that a CASp inspection identifies any necessary repairs to correct violations of construction-related accessibility standards, the other provisions of this Lease shall govern which party has the responsibility to correct such violations.

**7.2 Condition of Premises upon Surrender.**

At the expiration of the Term or earlier termination or cancellation of this Lease, Lessee shall immediately vacate the Premises and remove all personal property to which Lessee or Lessee Affiliates hold proper and legal title and shall remove all trash and debris from the Premises associated with or related to Lessee's use of

the Premises. Should Lessee or Lessee Affiliates fail to remove or dispose of the personal property as provided, County may consider the property abandoned and may claim proper title to it or dispose of it at Lessee's expense. However, under no circumstances shall County become or be considered the owner or operator of any Hazardous Material left on the Premises by Lessee or any of the Lessee Affiliates or others, regardless of whether County elects to initiate clean up or disposal of such Hazardous Material. Lessee and the Lessee Affiliates represent, warrant and agree that at all times, including after termination of this Lease, Lessee and the Lessee Affiliates shall be solely responsible and liable, as the owner and operator, for all Hazardous Material brought onto or generated on the Premises by Lessee or Lessee Affiliates during the Term.

### 7.3 Hazardous Materials.

#### 7.3.1 Definition of Hazardous Materials.

"Hazardous Materials" means, but is not limited to, (a) any hazardous, toxic or regulated wastes, materials or substances, and other pollutants or contaminants, which are or become regulated by any Environmental Laws, including but not limited to regulations pertaining to storage, labeling, handling, recordkeeping, reporting, transportation, use, disposal, handling or shipment; (b) petroleum, petroleum by products, gasoline, diesel fuel, crude oil or any fraction thereof; (c) asbestos and asbestos containing material, in any form, whether friable or nonfriable; (d) polychlorinated biphenyls; (e) radioactive materials; (f) lead and lead-containing materials; (g) any other material, waste or substance displaying toxic, reactive, ignitable or corrosive characteristics, as all such terms are used in their broadest sense, and are defined or become defined by any Environmental Law (defined below); (h) any materials which cause or threatens to cause a nuisance upon or waste to any portion of the Premises or any surrounding property; (i) any materials which pose or threaten to pose a hazard to the health or safety of persons on the Premises or any surrounding property; (j) any substances, ingredients, materials or products containing or that may contain blood borne pathogens, living or dead organisms, human remains or by-product, bio-waste or medical waste.

#### 7.3.2 Prohibition; Environmental Laws.

Lessee shall not be entitled to generate, manufacture, store, handle, transport to or from, use, dispose of, or ship to or from, any Hazardous Materials on, in, under or about any portion of the interior or exterior of the Premises or the Property ("Use") without, in each instance, obtaining County's prior written consent thereto. If County, in its sole discretion, consents to any Use then Lessee shall be permitted to engage in such Use only for those Hazardous Materials and in such quantities (A) that are

necessary for Lessee's business, (B) to the extent disclosed in connection with County's approval, (C) expressly approved by County in writing, and (D) only to the extent that such Use fully and completely complies with all applicable Laws and only to the extent Lessee is at all times solely responsible and liable for such Use. Lessee warrants and represents that in all events such Use will be at all times, at Lessee's sole expense, cost and liability, in full and complete compliance with any and all applicable local, state and federal environmental, health, consumer safety, medical and safety-related laws, statutes, orders, standards, courts' decisions, ordinances, rules and regulations (as interpreted by judicial or administrative decisions), decrees, directives, guidelines, permits or permit conditions, currently existing and as amended, enacted, issued or adopted in the future (collectively, the "Environmental Laws"). Lessee warrants and represents that any changes to the type and/or quantities of Hazardous Materials specified in the most recent HazMat Certificate may be implemented only with the prior written consent of County, which consent may be given or withheld in County's sole discretion. Lessee shall not be entitled nor permitted to install any tanks under, on or about the Premises for the storage of Hazardous Materials without the express written consent of County, which may be given or withheld in County's sole discretion. County shall have the right at all times during the Term to (i) inspect the Premises, (ii) conduct tests and investigations to determine whether Lessee is in compliance with this Section 7 or to determine if Hazardous Materials are present in, on or about the Premises, and (iii) request lists of all Hazardous Materials in use on, under or about any portion of the Premises. The cost of all such inspections, tests and investigations (collectively, "Inspections") shall be borne solely by Lessee, if Lessee or any of the Lessee Affiliates are responsible, by action or inaction, for the use or the presence of any contamination, release, emission, or source revealed by such Inspections. The aforementioned rights granted herein to County and its representatives shall not create (a) a duty on County's part to perform Inspections, monitor or otherwise observe the Premises or Lessee's and Lessee Affiliates' activities or Use with respect to Hazardous Materials, including without limitation, Lessee's operation or any remediation related thereto, or (b) liability on the part of County and its representatives for any Use, use or any Release, it being understood that Lessee shall be solely responsible for all liability in connection therewith. Lessor hereby consents to the use by Lessee of ordinary household cleaners, office supplies and janitorial supplies that may be used by Lessee in connection with maintaining the Premises as required under this Agreement.

### 7.3.3 Lessee's Environmental Obligations.

Lessee shall give to County immediate verbal and follow-up written notice of any contamination, exposure, deaths, injuries, illnesses, spills, releases, discharges, disposals, emissions, migrations, removals, shipments or transportation of, from or relating to Hazardous Materials on, under or about any portion of the Premises (collectively, a "Release"), provided that Lessee knows or reasonably should know of such Release. Lessee, at its sole cost and expense, covenants, warrants and represents to promptly investigate, remedy, clean up, remove, decontaminate, restore respond to, otherwise fully remediate, and resolve any and all claims relating to (including, without limitation, preparation of any feasibility studies or reports and the performance of any and all closures) any Release of Hazardous Materials caused by, arising from or related to the acts of Lessee or the Lessee Affiliates such that the affected portions of the Premises are returned to the condition existing prior to the Release of such Hazardous Materials (the "Remediation"). Any such Remediation shall only be performed after Lessee has obtained County's prior written consent, which consent may not be unreasonably withheld so long as such actions would not potentially have a material adverse long-term or short-term effect on any portion of the Premises. Notwithstanding the foregoing, Lessee shall be entitled to respond immediately to an emergency at its sole cost, expense and liability, without first obtaining County's prior written consent. Lessee, at its sole cost and expense, shall conduct and perform, or cause to be conducted and performed, all Remediation as required by any Environmental Laws or any agencies or other governmental authorities having jurisdiction thereof. If Lessee fails to so promptly complete the Remediation, County may, but without obligation to do so, take any and all steps necessary to rectify the same and Lessee shall promptly reimburse County, upon written demand, for all costs and expenses to County of performing the Remediation. All such Remediation, as required herein, shall be performed in such a manner so as to enable County to make full economic use of the Premises and the other portions of the Premises after the satisfactory completion of such Remediation. County acknowledges that Lessee shall have no obligation or liability with respect to Hazardous Materials existing in the Premises prior to the Delivery Date so long as Lessee or the Lessee Affiliates, invitees or guests have not, by action or inaction, disturbed or caused the disturbance or Release of said existing Hazardous Materials. Lessee shall ensure that all necessary monitoring, safekeeping and security of and for the Premises be sufficient to ensure other parties do not, cannot and are prohibited from causing or contributing to any Release or Use not allowed herein.

7.3.4 Environmental Indemnity.

Lessee shall protect, indemnify, defend (with legal counsel acceptable to County) and hold County and the County Affiliates (as defined in Section 13 herein below) harmless from and against any and all Claims (including, without limitation, diminution in value of any portion of the Premises and damages for the loss of or restriction on the use of rentable or usable space within the Premises) arising at any time during or after the Term in connection with, resulting from or related to, directly or indirectly, any and all Use, use, Release or Remediation arising out of, relating to or resulting from (directly or indirectly) any act or omission of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees. Neither the written consent of County to any Use, use, Release or Remediation, in whole or in part, nor the strict compliance by Lessee with any or all Environmental Laws shall excuse Lessee from its obligations of indemnification pursuant hereto. Lessee shall not be relieved of its indemnification obligations under the provisions of this Section 7 due to County's status as either an "owner" or "operator" under any Environmental Laws. Lessee shall, at its sole cost and expense, promptly observe, perform, and comply with any and all Laws relating to the activities of Lessee. Lessee shall, protect, indemnify, defend (with counsel acceptable to County) and hold County and the other County Affiliates harmless from and against any and all Claims arising at any time during or after the Term in connection with or related to the use, presence or release of Hazardous Materials on, in or about any portion of the Premises resulting from or related to the acts or omissions of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees.

7.3.5 Lessee shall immediately deliver to County complete copies of all written notices, demands, or other written communications in a party's possession from any governmental or quasi-governmental authority, or any insurance company or board of fire underwriters or like or similar entities, regarding any Release on, to, about, upon, under, at, in, or from the Premises or the Property. Lessee shall immediately, upon receiving notice thereof, inform County in writing (and orally in the event of a Release or other emergency) of (1) any and all enforcement or Remediation, or other governmental, regulatory, or judicial acts or orders instituted, contemplated, or threatened pursuant to any Law affecting Hazardous Materials in, on, upon, over or under the Premises or the Property; and (2) all claims made or threatened by any third party relating to damage, contribution, cost recovery, compensation, loss or injury resulting from

any actual, proposed, or threatened Use, use, Remediation or Release on, in, upon, at, under, from, to, or about the Premises.

## **8. Repairs and Maintenance**

- 8.1 Lessee's Repairs and Maintenance Obligations. Except for and subject to the Lessor's responsibilities as set forth in Section 12, Lessee shall, at its sole cost and expense, keep, manage, operate, and maintain all parts of the Premises in good, clean and safe condition and repair, promptly making all necessary repairs and replacements, all of the foregoing in accordance with the applicable provisions of this Lease, and to the reasonable satisfaction of the County including, but not limited to, repairing any damage (and replacing any property so damaged if necessary) whether caused by Lessee and/or Lessee Affiliates or visitors, and restoring the Premises substantially to the condition existing prior to the occurrence of such damage. Without limiting any of the foregoing, Lessee shall be solely responsible for promptly maintaining, repairing and replacing, (a) all Lessee signage (b) all partitions, fixtures, equipment of the Premises and every part. All work within the scope of Lessee's qualified, insured staff shall be completed by said staff, which shall be subject to County's final approval. All work within the scope of a contractor or subcontractors, shall be completed by licensed, qualified, insured and bonded contractors and subcontractors reasonably approved by County. Additionally, Lessee shall be solely responsible for the performance of the regular removal of trash and debris on or about the Premises, and otherwise as needed or required by any Law.
- 8.2 If Lessee refuses or neglects to repair and maintain the Premises properly as required by this Lease and to the reasonable satisfaction of County, then upon not less than thirty (30) days written notice to Lessee (except in the event of an emergency), (i) County may, but without obligation to do so, at any time make such repairs or maintenance without County having any liability to Lessee for any loss or damage that may accrue to Lessee's property or to Lessee's business by reason thereof, except to the extent any damage is directly caused by the willful misconduct or gross negligence of County or its authorized agents and representatives and (ii) Lessee shall pay to County all of County's reasonable costs and expenses incurred therefor within thirty (30) days upon demand. Lessee's obligations under this Section 8 shall survive the expiration of the Term or earlier termination thereof. Lessee hereby waives any right to repair at the expense of County under any applicable Laws now or hereafter in effect.
- 8.3 Lessee expressly waives any and all claims against Lessor for compensation or damage for any and all loss, cost or expense sustained by reason of any defect, deficiency or impairment of any utility system, water supply system, draining or



sewer system, heating or gas system, electrical apparatus or wires serving the premises, or the use or operation thereof.

**9. Alterations**

9.1 Lessee may make alterations or improvements to the Premises only with the prior written consent of the County which may be granted or withheld in County's sole and absolute discretion. Upon expiration or termination of this Lease, any permitted alteration or improvements shall become the property of the County; provided, however, if County consents in its sole and absolute discretion, Lessee may be permitted to remove its alterations and improvements but shall repair any and all damage caused by such installation and removal.

9.2 Lessee shall be responsible for and shall promptly repair any damage or destruction of the Property and the Premises caused by Lessee or Lessee's officers, agents, employees, contractors, invitees or licensees, reasonable wear and tear and casualty excepted.

**10. Damage or Condemnation**

If the Premises are materially damaged or destroyed by any cause or condemned, it is specifically acknowledged and agreed that County shall have no affirmative obligation to restore or replace the Premises, nor shall County have the obligation to contribute any funds to be used for such restoration or replacement. Lessee shall be responsible for the repair and restoration of its improvements, alterations and Lessee's property. If County elects not to restore or replace the Premises or portion thereof, Lessee or County may elect to terminate this Lease. Unless this Lease is terminated, in the case of material damage or destruction to the Premises (other than by any direct or indirect act(s) or omission(s) of Lessee or any of the Lessee Affiliates), a proportionate amount of the rent shall abate (calculated based on the portion of the Premises that are destroyed or damaged beyond use) until the Premises shall be so restored.

**11. Hazardous Materials Permit and Spill Plan**

Lessee shall comply with the requirements of the County's Hazardous Materials Permit and Storm Water Pollution Prevention Program (SWPPP).

Lessee shall prepare and maintain a written Spill Prevention Contingency and Control Plan (SPCC). The SPCC shall be reviewed and approved by the appropriate agency(s). The approved SPCC shall be kept current and a copy of the most current version shall be submitted to the County to be kept on file.

## 12. Responsibilities

### 12.1 Lessee Responsibilities

- 12.1.1 Report to County any suspected inappropriate activities at the Airport.
- 12.1.2 Monitor and report all safety concerns to County.
- 12.1.3 Keep Premises open during normal business hours.
- 12.1.4 Make available after-hours phone number for emergency issues that occur onsite and require Lessee's attention.
- 12.1.5 Maintain at least one restroom that is open to the public during business hours.

### 12.2 Operations and Maintenance Responsibilities

The Lessee has the primary responsibility for the daily upkeep and maintenance of items related to the leasing of the Premises including any repairs or maintenance necessitated by the negligent or intentional acts or omissions of the Lessee or the employees, agents, or contractors of Lessee. Lessee shall perform the items designated as the responsibility of the Lessee in Section 12.2.1. Further, except for maintenance work expressly listed as the County's responsibilities in Section 12.2.2 (which shall be at County's sole cost and expense), it shall be Lessee's responsibility, at Lessee's sole cost and expense, to continually keep and maintain the Premises and all improvements, systems, and equipment located thereon (whether constructed by Lessee or County) clean and neat, free of waste material and debris, in good condition and repair and in a fully operational condition and to make all necessary and appropriate preventive maintenance, repairs and replacements. One restroom shall be kept open to the public at all times during business hours, and the Lessee shall be responsible for its cleaning and upkeep.

County and Lessee have agreed on the following division of responsibilities regarding maintenance of the Premises.

#### 12.2.1 Lessee Responsibilities

- a) Non-Structural portions of the interior of premises of the building including windows, doors, carpets, tile, ceilings, floors and floor coverings.
- b) Janitorial services for and general upkeep of restrooms including restroom supplies.

- c) Interior electrical panels, including power from main electrical panel throughout the Premises, conduit and wiring, subpanels, power outlets and switches.
- d) Exterior of structures including roofs, sidings, gutters, drains, walkways, exterior doors, exterior painting.
- e) Asbestos Management
- f) Mold Remediation
- g) Termite and Rodent Infestation
- h) Fire systems, including sprinklers (heads and piping) and fire suppression equipment and devices.
- i) Interior and exterior light lamps, including wiring, light fixtures and light bulbs.
- j) Fixed Base Operator signs and directories.
- k) Interior of structures including ceilings, walls, floors and waterproofing and sealing of floor penetrations.
- l) Interior locks.
- m) Hot water heater and refrigeration units.
- n) Common areas to be kept free and clear of debris.
- o) Landscaping
- p) Cleaning exterior of building, including rain gutters, sidewalks, vehicular parking lot and aircraft parking ramp.
- q) Interior and exterior fire extinguishers
- r) Telephone system
- s) Internet
- t) Communication and information technology
- u) Graffiti Abatement
- v) Pick up and disposal of Hazardous Waste, E-waste, Battery and Universal Waste
- w) Modifications in public use areas required to meet the Americans with Disabilities (ADA) standards.
- x) Heating, air condition, ventilation systems and associated controls.

#### 12.2.2 Lessor Responsibilities

- a) Building identification and directory
- b) Exterior perimeter fence and gates

### 13. **Limitation of Liability and Indemnity**

13.1 Except to the extent of Claims (defined below) directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, Lessee agrees to protect, defend (with counsel reasonably acceptable to County) and hold County and County's lenders, partners, members, property management

company (if other than County), agents, directors, officers, employees, representatives, contractors, successors and assigns and each of their respective partners, members, directors, officers, employees, representatives, agents, contractors, heirs, successors and assigns (collectively, the "County Affiliates") harmless and indemnify the County and County Affiliates from, for and against all liabilities, damages, demands, penalties, costs, claims, losses, judgments, charges arising from Lessee's and Lessee Affiliates' use of the Premises and/or Lessee's failure to perform any covenant or obligation of Lessee under this Lease. Lessee agrees that the obligations of Lessee herein shall survive the expiration or earlier termination of this Lease.

- 13.2 Except to the extent of Claims directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, to the fullest extent permitted by law, Lessee agrees that neither County nor any of the County Affiliates shall at any time or to any extent whatsoever be liable, responsible or in any way accountable for any loss, liability, injury, death or damage to persons or property which at any time may be suffered or sustained by Lessee or by any person(s) whomsoever who may at any time be using, occupying or visiting the Premises, including, but not limited to, any acts, errors or omissions of any sublessees, subtenants, guests, invitees or occupants of the Premises. Lessee shall not, in any event or circumstance, be permitted to offset or otherwise credit against any payments of Rent required herein for matters for which County may be liable hereunder.
- 13.3 Notwithstanding any provision to the contrary contained in this Lease, at no time shall County be responsible or liable to the Lessee or the Lessee Affiliates for any lost profits, lost economic opportunities, punitive damages or any form of consequential damage of any kind or nature. Except as otherwise allowed or permissible by any other term or condition of this Lease including but not limited to Section 7 of this Lease, at no time shall Lessee be responsible or liable to the County for any lost profits or lost economic opportunities or punitive damages resulting from any actual or alleged breach by Lessee of its obligations under this Lease, provided that in no event shall County be precluded from exercising its remedies under Section 17 or any other provision of this Lease.

#### **14. Assignment and Subletting**

- 14.1 Lessee shall not assign, sublet, license or otherwise transfer or encumber all or any part or Lessee's interest in this Lease, the Premises or the Property without Lessor's prior written consent. Any attempted assignment, sublease or other transfer without Lessor's consent shall be void and of no force and effect, and shall, at the Lessors election, constitute an event of default hereunder.

- 14.2 Lessee shall submit the proposed written agreement between Lessee and the sublessee to County for review and evaluation. County may require that an application be completed and all relevant and applicable information relating to the requested sublease be provided to County for review and evaluation.
- 14.3 Sublessee may not occupy the Premises before County consents to the sublease in writing.

**15. Quiet Enjoyment**

So long as Lessee successfully complies at all times with all terms and conditions of this Lease, including the timely payment of all Rent, costs and fees when due, Lessee will be entitled to quiet enjoyment of the Premises.

**16. Right of Entry**

County or its authorized representatives shall have the right to enter the Premises at all regular business hours.

**17. Default and Remedies/Termination**

In addition to any other right to terminate this Lease, any of the following events or occurrences shall constitute a material breach of this Lease by Lessee, and shall be deemed an event of default upon the expiration of any stated period to cure said breach, at which time County may terminate this Lease and shall have all remedies available at law or in equity:

- 17.1. The failure by Lessee to make any timely payment required by this Lease in full within ten (10) business days after written notice from the County;
- 17.2. The failure by Lessee to observe or perform any covenant, condition or provision of this Lease when such failure continues beyond thirty (30) days after County gives Lessee written notice of breach; provided, however, that if the nature of such failure reasonably requires longer than thirty (30) days to cure, Lessee shall not be in default if it begins such cure in good faith and with due diligence within thirty (30) days of the notice of breach, and thereafter prosecutes such cure to completion in good faith and with due diligence, or as otherwise determined by County, in County's reasonable discretion. County reserves the right, however, to make a commercially reasonable determination that Lessee is or will be unable to satisfactorily comply with any term or condition of this Lease, and to deem any failure under this paragraph to be an event of default at the expiration of the thirty (30) day cure period (or longer as required herein);
- 17.3. Any attempted conveyance, assignment, mortgage or subletting of any or all of this Lease, the Premises or the Property, in which case there shall be no cure period;

- 17.4. Violation by Lessee of any applicable law, rule or regulation with respect to Lessee's use of the Property or the Premises beyond a ten (10) business cure period shall be a default of this Lease; intentional violation of any applicable law, rule or regulation by Lessee shall have no cure period;
- 17.5. Any of the following: a general assignment by Lessee for the benefit of Lessee's creditors; any voluntary filing, petition, or application by Lessee under any law relating to insolvency or bankruptcy, whether for a declaration of bankruptcy, a reorganization, an arrangement, or otherwise; the abandonment of the Premises by Lessee without County's prior written consent (after Lessee's notice and opportunity to cure); or the dispossession of Lessee from the Property or the Premises (other than by County) by process of law, in which case there shall be no cure period;
- 17.6. Lessee's failure to comply with any term, condition or provision of the Lease, beyond any applicable cure period;
- 17.7. The appointment of a trustee or receiver to take possession of all or substantially all of Lessee's assets; or the attachment, execution or other judicial seizure of all or substantially all of Lessee's assets located at the Property or of Lessee's interest in this Lease, unless the appointment or attachment, execution, or seizure is discharged within thirty (30) days; or a petition for reorganization or arrangement of Lessee under any law relating to insolvency or bankruptcy, unless, in the case of any involuntary filing, it is dismissed within one hundred twenty (120) days. There shall be no cure period;
- 17.8. Lessee's absence from the Premises for thirty (30) consecutive calendar days, without prior written notice to County, during which time rent or other charges are delinquent, shall be deemed abandonment of the Premises. Such abandonment will be deemed cause for immediate termination without notice. County shall thereupon be authorized to enter and take possession and to remove and dispose of the property of Lessee or its guests without any liability whatsoever to County.

## **18. Audit**

Lessee shall maintain for a period of at least three (3) years following the end of each calendar or tax fiscal year to which they pertain, complete and accurate books and records relating to Lessee's use of the Premises, compliance with the Lease terms, Improvements, Lessee improvements and Tax Expenses. Such books and records shall be kept at the location where Lessee customarily maintains its books and records however such location shall be within the County of Santa Clara, State of California. After delivery to County of at least thirty (30) days prior written notice, County, at its sole cost and expense, or through any accountant designated by it, shall have the right to examine and/or audit the books and records evidencing such expenses for any of the previous three (3) calendar years, during County's reasonable business hours but not more frequently than once during any calendar year. Lessee shall fully cooperate with County

or its representatives in such audits and shall promptly resolve any discrepancies between County and Lessee in the accounting of such expenses.

**19. Taxes**

19.1 Lessee shall pay and shall be liable and responsible for any and all Tax Expenses (as defined below) applicable to the Premises or its use. Prior to delinquency, Lessee shall pay any and all taxes and assessments levied upon the Premises, including, without limitation, (i) any and all taxes and assessments resulting from or relating to any increase in real property taxes attributable to any and all Improvements, fixtures, equipment or other improvements of any kind whatsoever placed or existing in, on or about the Premises and (ii) taxes and assessments levied or assessed upon or with respect to the possession, operation, use or occupancy of the Premises during the Lease Term. "Tax Expenses" means, without limitation, any form of tax and assessment (general, special, supplemental, ordinary or extraordinary), commercial rental tax, payments under any improvement bond or bonds, license fees, license tax, business license fee, rental tax, transaction tax or levy imposed by any authority having the direct or indirect power of tax (including any governmental, school, agricultural, lighting or other improvement district) as against any legal or equitable interest in the Premises or any other tax, fee, or excise, however described, including, but not limited to, any tax imposed in substitution (partially or totally) of any tax previously included within the definition of Tax Expenses and any cost and/or fee (including without limit attorneys' and appraisers' fees and court costs) incurred in calculating, contesting or negotiating any such taxes or assessments.

**19.2 Possessory Interest Tax.**

Lessee acknowledges that its interest in and/or use of the Premises may be subject to possessory interest taxation and that such taxation shall be Lessee's sole responsibility and liability.

**20. Notices**

Any notices which are required to be given hereunder, or which either party may wish to give to the other, shall be in writing and shall be effective for all purposes on any business day before 5:00 PM local time and on the next business day if received after 5:00 PM or on other than a business day, including without limitation, upon (i) receipt or refusal of receipt, in the case of personal delivery, (ii) the next business day after depositing notice with a reputable overnight courier, and (iii) three (3) days after depositing notice in with the United States Post Office for delivery by first class certified or registered mail, postage prepaid, and addressed as follows:

To COUNTY: County of Santa Clara  
2500 Cunningham Ave.  
San Jose, CA 95148

Or to such other place as COUNTY may designate by written notice.

To LESSEE: JMM Aviation, LLC  
2655 Robert Fowler Way  
San Jose, CA 95148

Or to such other place as LESSEE may designate by written notice.

**21. Miscellaneous****21.1 Waiver**

The failure of County to insist upon strict performance of any of the terms, covenants, or conditions of this Lease shall not be deemed a waiver of any right or remedy that County may have, and shall not be deemed a waiver of County's right to require strict performance of all terms, covenants, and conditions thereafter, nor a waiver of any remedy for the subsequent breach of any of the terms, covenants, or conditions.

**21.2 Severability and Governing Law**

Any non-material provision of this Lease which shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect. This Lease, and all the rights and duties of the parties arising from or relating in any way to the subject matter of this Lease, shall be enforced, governed by and construed in accordance with the laws of the State of California (excluding any conflict of laws provisions that would refer to and apply the substantive laws of another jurisdiction). Lessee expressly agrees that any and all disputes, lawsuits or proceedings arising out of, relating to or in connection with this Lease, including any and all mediation or other alternative dispute resolution proceedings or settlements or negotiations,



shall be brought, disputed and litigated only in the Superior Court of the State of California in the County of Santa Clara or the United States District Court, Northern District of California, San Jose Division (and in no other), and Lessee hereby consents to the exclusive personal jurisdiction and venue of said court.

21.3 Entire Agreement

It is understood and agreed that there are no oral agreements between the parties hereto affecting this Lease and this Lease (including all exhibits and addenda) supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by County to Lessee with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. This Lease and any separate agreement executed by County and Lessee in connection with this Lease and dated of even date herewith (a) contain all of the terms, covenants, conditions, warranties and agreements of the parties relating in any manner to the rental, use and occupancy of the Premises, and (b) shall be considered to be the only agreement between the parties hereto and their representatives and agents. This Lease may not be modified, deleted or added to except by a writing signed by the parties hereto. All negotiations and oral agreements have been merged into and are included herein. There are no other representations or warranties between the parties, and all reliance with respect to representations is based totally upon the representations and agreements contained in this Lease. The parties acknowledge that (i) each party and/or its counsel have reviewed and revised this Lease, and (ii) no rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall be employed in the interpretation or enforcement of this Lease or any amendments or exhibits to this Lease or any document executed and delivered by either party in connection with this Lease.

21.4 Warranty of Authority

Lessor and Lessee each represent that the person executing this Lease on behalf of such party (i) is duly and validly authorized to do so on behalf of the entity it purports to so bind, and (ii) has full right and authority to enter into this Lease. Each party hereby warrants that this Lease is legal, valid and binding upon such party and enforceable against such party in accordance with its terms.

21.5 Joint and Several; Covenants and Conditions

If Lessee consists of more than one person or entity, the obligations of all such persons or entities shall be joint and several. Each provision to be performed by Lessee hereunder shall be deemed to be both a covenant and a condition.

21.6 California Public Records Act

The County is a public agency subject to the disclosure requirements of the California Public Records Act ("CPRA"). If Lessee's proprietary information is

contained in documents submitted to County, and Lessee claims that such information falls within one or more CPRA exemptions, then Lessee must clearly mark such information “CONFIDENTIAL AND PROPRIETARY,” and identify the specific lines containing the information. In the event of a request for such information, the County will use reasonable efforts to provide notice to Lessee prior to such disclosure. If Lessee contends that any documents are exempt from the CPRA and wishes to prevent disclosure, it is required, at its sole cost, liability and expense, to obtain a protective order, injunctive relief or other appropriate remedy from a court of law in Santa Clara County before the County’s deadline for responding to the CPRA request. If Lessee fails to obtain such remedy within County’s deadline for responding to the CPRA request, County may disclose the requested information even if marked “CONFIDENTIAL AND PROPRIETARY” without any liability or obligation to Lessee or any third parties.

21.7 Waiver of Jury Trial

To the extent permitted by applicable law, the parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other on any matters whatsoever arising out of or in any way related to this Lease, the relationship of County and Lessee, Lessee's use or occupancy of the Premises and/or any claim of injury, loss or damage.

21.8 Headings

Section headings shall not be used in construing this Lease.

21.9 Conflict of Interest

Lessee represents, warrants and agrees that it shall comply, and require its employees, agents, representatives, contractors, consultants, sub-consultants and subcontractors (collectively, “Lessee Affiliates”) to comply, with all applicable (i) requirements governing avoidance of impermissible client conflicts; and (ii) federal, state and local conflict of interest laws and regulations including, without limitation, California Government Code section 1090 et. seq., the California Political Reform Act (California Government Code section 87100 et. seq.) and the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations section 18700 et. seq.). Failure to do so constitutes a material breach of this Lease and is grounds for immediate termination of this Lease by the County.

21.10 Relationship of Parties

The parties acknowledge and agree that nothing set forth in this Lease shall be deemed or construed to render the parties as joint venturers, partners, associations, master-servant, agents, a joint enterprise, employer-employee, lender-borrower or contractor. Lessee shall have no authority to employ any person as employee or

agent on behalf of County for any purpose. Neither Lessee nor any person using or involved in or participating in any actions or inactions relating to the Premises or this Lease shall be deemed an employee or agent of County, nor shall any such person or entity represent himself, herself or itself to others as an employee or agent of County. Lessee's status, as well as the status of its officers, agents or employees, including personnel in the administration and performance of services under this Lease, shall be in an independent capacity and not as an employee or agent of the County.

21.11 No Third-Party Rights

This Lease shall not be construed as nor deemed to be an agreement for the benefit of any third party or parties, and no third party or parties shall have any right of action herein for any cause whatsoever.

21.12 Signs

All signs and graphics of every kind visible in or from public view shall be subject to (i) County's prior written approval, and (ii), and in compliance with, all applicable Laws, Development Documents, Recorded Matters, Rules and Regulations, and County's sign criteria ("Sign Criteria") as same may exist from time to time.

21.13 Brokerage Commission

Lessee represents and warrants for the benefit of County that it has had no dealings with any real estate broker, agent or finder in connection with the Premises and/or the negotiation of this Lease, and that it knows of no other real estate broker, agent or finder who is or might be entitled to a real estate brokerage commission or finder's fee in connection with this Lease or otherwise based upon contacts between the claimant and Lessee.

21.14 OFAC

Lessee represents and warrants to County that: (i) Lessee is not acting, and shall not act, directly or indirectly, for or on behalf of any person, group, entity, or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially Designated National and Blocked Person," or other banned or blocked person, entity, nation, or transaction pursuant to any law, order, rule or regulation enforced or administered by the federal Office of Foreign Assets Control; and (ii) Lessee is not engaged in this transaction, directly or indirectly, on behalf of, or instigating or facilitating this transaction, directly or indirectly, on behalf of any such person, group, entity, or nation.

21.15 Non-Discrimination

Lessee and Lessee Affiliates shall each comply with all applicable federal, state and local laws and regulations including the County of Santa Clara's policies concerning nondiscrimination and equal opportunity in contracting. Such laws

include but are not limited to the following: Title VII of the Civil Rights Act of 1964, as amended; Americans with Disabilities Act of 1990; The Rehabilitation Act of 1973 (Sections 503 and 504); California Fair Employment and Housing Act (Government Code Sections 12900 et sea.); California Labor Code sections 1101 and 1102. Lessee and each of the Lessee Affiliates shall not discriminate against any subcontractor, employee, or applicant for employment because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organization affiliations, or marital status in the recruitment, selection for training including apprenticeship, hiring, employment, utilization, promotion, layoff, rates of pay or other forms of compensation. Nor shall Lessee or any of the Lessee Affiliates discriminate in the provision of services provided under this Lease because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organizational affiliations, or marital status.

21.16 No Relocation Assistance

It is understood that this Lease is intended to give Lessee a temporary conditional use of the Premises and that Lessee shall not be entitled to relocation benefits, assistance, damages (liquidated or otherwise), costs, claims or fees from County upon expiration, termination or cancellation of this Lease, except as expressly provided for elsewhere in this Lease.

21.17 Prevailing Wage

If the work to be performed by Lessee or any of its contractors hereunder is a public work as defined in California Labor Code Section 1720 et seq., then Lessee and its contractors must comply with the payment of prevailing wages and the employment of apprentices as set forth in Section 1770, et al. and following of the Labor Code. Lessee is solely liable for failing to comply with prevailing wage laws.

21.18 Wage Theft Prevention

These provisions are in relation to any work performed by Lessee or Lessee Affiliates under the terms or conditions of the Lease only.

**Compliance with Wage and Hour Laws.** Lessee and the Lessee Affiliates who are involved in the work must comply with all applicable federal, state, and local wage and hour laws. Applicable laws may include, but are not limited to, the Federal Fair Labor Standards Act, the California Labor Code, and any local Minimum Wage Ordinance or Living Wage Ordinance.

21.18.1 **Final Judgments, Decisions, and Orders.** For purposes of this Section, a “final judgment, decision, or order” refers to one for which all appeals have been exhausted. Relevant investigatory government agencies include: the federal Department of Labor, the California Division of Labor Standards Enforcement, a local enforcement agency,

or any other government entity tasked with the investigation and enforcement of wage and hour laws.

- 21.18.2 Prior Judgments against Lessee and/or its contractors. BY SIGNING THIS LEASE, LESSEE AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS, OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY FINDING—IN THE FIVE YEARS PRIOR TO EXECUTING THIS LEASE—THAT LESSEE OR ANY OF THE LESSEE AFFILIATES HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS.
- 21.18.3 LESSEE FURTHER AFFIRMS THAT IT AND/OR THE LESSEE AFFILIATES HAVE SATISFIED AND COMPLIED WITH—OR HAS REACHED LEASE WITH THE COUNTY REGARDING THE MANNER IN WHICH IT WILL SATISFY—ANY SUCH JUDGMENTS, DECISIONS, OR ORDERS.
- 21.18.4 Judgments During Term of Lease. If at any time during the Term of this Lease, a court or investigatory government agency issues a final judgment, decision, or order finding that Lessee or any contractor it uses to perform work under this Lease has violated any applicable wage and hour law, or Lessee learns of such a judgment, decision, or order that was not previously disclosed, Lessee must inform the Office of the County Executive-Office of Countywide Contracting Management (OCCM), no more than 15 days after the judgment, decision, or order becomes final or of learning of the final judgment, decision, or order. Lessee and its contractors shall promptly satisfy and comply with any such judgment, decision, or order, and shall provide the Office of the County Executive-OCCM with documentary evidence of compliance with the final judgment, decision, or order within 5 days of satisfying the final judgment, decision, or order. The County reserves the right to require Lessee to enter into an agreement with the County regarding the manner in which any such final judgment, decision, or order will be satisfied.
- 21.18.5 County's Right to Withhold Payment. Where Lessee or any contractor it employs to perform work under this Lease has been found in violation of any applicable wage and hour law by a final judgment, decision, or order of a court or government agency, the County reserves the right to withhold payment to Lessee until such judgment, decision, or order has been satisfied in full.
- 21.18.6 Material Breach. Failure to comply with any part of this Section constitutes a material breach of the Lease. Such breach may serve as a basis for termination of this Lease and/or any other remedies available under this Lease and/or law.

21.18.7 Notice to County Related to Wage Theft Prevention. Notice provided to the Office of the County Executive as required under this Section shall be addressed to: Office of the County Executive—OCCM; 70 West Hedding Street; East Wing, 11th Floor; San José, CA 95110. The Notice provisions of this Section are separate from any other notice provisions in this Lease and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.

21.19 Counterparts

This Lease, and any amendments thereto, may be executed in several counterparts, and all of such counterparts so executed together shall be deemed to constitute one and the same agreement, and each such counterpart shall be deemed to be an original. Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of this agreement, or an electronically signed agreement, has the same force and legal effect as the agreement executed with an original ink signature. The term “electronic copy of this agreement” refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of the original signed agreement in a portable document format. The term “electronically signed agreement” means the agreement that is executed by applying an electronic signature using technology approved by the County.

21.20 County Sustainability Policies

In performing any work on the Premises, Lessee will use best efforts to substantially comply with Lessor's Sustainability policies found in Board of Supervisors Policy Manual 8.1 through and including 8.4, as amended from time to time by Lessor, and Lessor's Green Cleaning Policy Administrative Guidelines, as amended from time to time by Lessor.

21.21 Integrated Pest Management Ordinance

When conducting or allowing the performance of any pest management practices or pesticide uses, Lessee, its contractors, employees, agents and representatives, will use best efforts to substantially comply with and require any pest management service providers to comply with the County Integrated Pest Management ordinance.

21.22 County No-Smoking Policy

Lessee and Lessee Affiliates, guests and invitees, shall not smoke on, in or around the Property or Premises unless expressly allowed by applicable smoking laws.

21.23 Liens

Except as expressly authorized in a term or condition found elsewhere in this Lease, Lessee shall keep the Premises free and clear of all liens and encumbrances. If, because of any act or omission of Lessee or any of its employees, officers, agents, representatives or volunteers, any mechanic's lien or other lien, charge or order for the payment of money are filed against any portion of the Premises, structures, or Alterations, Lessee shall at its own expense, cause the same to be discharged of record within thirty (30) days after written notice from Lessor; and, Lessee shall indemnify, defend and save harmless Lessor

against all resulting costs, liabilities, suits, claims and demands, including legal fees and court costs.

21.24 Prohibition of Alcohol and Controlled Substances

Sale, promotion or advertising of any type of alcohol or controlled substances are strictly prohibited on, in or near the Premises.

21.25 Timing

In the event the time for performance of any obligation under this Lease shall fall on a Saturday, Sunday or court holiday, such time for performance shall be extended to the next business day. "Business day" means days other than Saturdays, Sundays, and federal and state legal holidays in the state of California.

21.26 Survival

Those provisions which by their nature should survive termination, cancellation or expiration of this Lease, shall so survive.

21.27 Recitals and Exhibits

The Recitals stated above, and all Exhibits referenced in this Lease, are incorporated herein and made a part of this Lease by this reference.

**22. FAA Assurance**

Should Lessee provide any service to the public, including subleasing, at the airport, Lessee shall:

22.1 Furnish said services on a fair, equal, and not unjustly discriminatory to all users thereof; and

22.2 Charge fair, reasonable, and not unjustly discriminatory prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

**LEASE AGREEMENT BETWEEN COUNTY OF SANTA CLARA AND JMM AVIATION, LLC**

**IN WITNESS WHEREOF**, the parties hereto have executed this Lease as follows:

**LESSOR:**

**LESSEE:**

**County of Santa Clara, a political subdivision of the State of California**

**JMM Aviation, LLC**

DocuSigned by:

*Harry Freitas*

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**HARRY FREITAS**

**Director, Roads and Airports Department**

*Jeff Marzonet*

**Jeff Marzonet**

**Title: Manager**

Date: 1/3/2022

Date: 12-31-21

**APPROVED AS TO FORM AND LEGALITY:**

DocuSigned by:

*Chris Cheleden*




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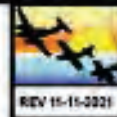
**Christopher R. Cheleden**

**Lead Deputy County Counsel**





-  Leasehold Boundary
-  Lessor Easement Boundary
-  UST Location Excluded From Leasehold



**Exhibit A**  
**Marconet Aviation Leasehold**  
COUNTY OF SANTA CLARA

EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

EXHIBIT B-8

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and

EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County

EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit A.2

**LEASE AGREEMENT  
BETWEEN COUNTY OF SANTA CLARA AND  
AMELIA REID AVIATION LLC DBA AERODYNAMIC AVIATION**

This Lease Agreement (“Lease”) is entered into by and between the COUNTY OF SANTA CLARA, a political subdivision of the State of California (referred to interchangeably as “COUNTY” or “Lessor”) and Amelia Reid Aviation LLC DBA Aerodynamic Aviation (“Lessee”), effective as of January 1, 2022, (the “Effective Date”).

**RECITALS**

- A. COUNTY is the owner of Reid-Hillview Airport (“Airport”).
- B. Lessee desires to lease from Lessor and Lessor desires to lease to Lessee a portion of the Airport located at 2650 Robert Fowler Way, San Jose, California, San José California for the purpose of engaging in certain Commercial Aeronautical Activities, as defined below (the “Premises”). The Premises is as generally described on the attached Exhibit A that is incorporated herein by this reference.

**AGREEMENT**

**NOW THEREFORE**, for and in consideration of the mutual promises, covenants and conditions set forth below, COUNTY and LESSEE agree to the foregoing and as follows:

**1. Premises**

COUNTY agrees to lease to LESSEE and LESSEE agrees to lease from COUNTY the Premises, subject to the terms and conditions of this Lease.

1.1 The Premises consists of the following:

- 1.1.1 Land space of approximately 97,400 square feet that consists of a commercial hangar and office space, a storage shed, aircraft parking ramp and vehicle parking lot as shown as Area 1 on Exhibit A;
- 1.1.2 The Lessor maintains an easement, as shown in Exhibit A for the purposes of accessing the underground storage tank (UST). The Lessee may utilize this space but may be required to periodically clear the area for UST service or maintenance upon request of County.



**2. Term**

2.1 The term of this Agreement is one-year commencing on January 1, 2022. (“Term”) unless modified in writing by both parties.

**3. Monthly Rent**

3.1 The monthly “Rent” or initial Base Rent shall be \$4,906.00 due and payable in advance on the first day of each month of the Term.

3.2 A monthly rent discount of \$1,085.00 shall be applied to this lease. The discount period shall expire on December 31, 2022.

3.3 If this Lease is still in effect, beginning on July 1, 2023, and on each July 1 of each subsequent year, the Base Rent for the ensuing twelve (12) months shall be adjusted in the same percentage proportion that the January Consumer Price Index (CPI) of the San Francisco-Oakland-Hayward area of the United State Department of Labor, Bureau of Labor Statistics, increase or decreases over the January CPI of the base year of 2022. The annual CPI adjustment shall not exceed 2.5%.

3.4 All Rent shall be made payable to the “County of Santa Clara”, in the form of a company check, certified check, money order or wire transfer, due and payable on the first day of each month without exception, and delivered by hand delivery, by courier or by U.S. Mail (first class, postage prepaid) to the following address, or such other address as designated by COUNTY in writing:

County of Santa Clara  
2500 Cunningham Ave  
San Jose, CA 95148

3.5 A Security Deposit of \$4,906.00 (equivalent to one-months’ rent) shall be payable by Lessee upon full execution of this Lease as security for the return of the Premises at the expiration of the term of the Lease in as good condition as when Lessee took possession of the Premises, normal wear and tear excepted, as well as the faithful, timely, and complete performance of all other terms, conditions, and covenants of this Lease. The Security Deposit may also be used in the event of termination of this Lease to apply to unpaid back due rent. The Parties agree that the Security Deposit may be used to cure any default or breach of this Lease without prejudice to any other remedies available to County and that County may increase the Security Deposit in the event of default or breach.

3.6 Late Charge as defined in the *Airports Schedule of Fees and Charges* as updated from time-to-time shall be automatically added to any rent, fee, or other charges

not received by the County by the close of the business fifteen calendar days after due and owing. Lessee shall also pay interest on said unpaid balance at a rate of ten percent (10%) simple interest per annum, from the date said payment was due and payable until paid in full.

3.7 Other Fee

Lessee shall pay Lessor the following fees in addition to Monthly Rent

3.7.1 10% of any rent received from non-aviation subtenants who shall be approved in writing by Lessor.

Lessor may perform a quarterly audit of Lessee's accounts pertaining to automobile rentals and all sub tenancies to verify amounts due. In the event such an audit discloses a discrepancy of \$1,000.00 or more owing to County in any given fiscal year, Lessee shall bear the audit expenses.

4. Use of Premises

4.1 This Lease grants Lessee the right and privilege to use the Premises for the purpose of operating a Fixed Based Operation (FBO) and shall be restricted to the uses listed herein ("Permitted Uses" or "Commercial Aeronautical Activities"). The Premises may not be used for any other purpose without County's prior written consent, which consent may be withheld in the sole discretion of County.

4.1.1 Throughout the term of this Lease, Lessee agrees that Lessee shall use the premises to provide the following Commercial Aeronautical Activities. Lessee shall be actively involved in providing these services and may not sublet or otherwise authorize another service provider to provide them, without the County's prior written consent, which consent shall not be withheld within the sole but reasonable discretion of County.

- a) Aircraft Maintenance and Repair;
- b) Aircraft Rental;
- c) Pilot Training; and
- d) Ground School for Flight Training

4.1.2 The following services may be provided by the Lessee or a secondary service provider. Use of a secondary service provider shall require written approval of the County:

- a) Aircraft Washing & Detailing;
- b) Aircraft Upholstery;
- c) Sale and/or Lease of New and Used Aircraft;

- d) Sale of New and/or Used Aircraft Parts, Supplies, Instruments and Accessories Avionics;
  - e) Special Flight Services including Aerial Sightseeing, Aerial Advertising and Aerial Photography;
  - f) Air Taxi/Charter;
  - g) Vehicular Rental
- 4.1.3 To the extent required by applicable Laws, Lessee shall employ sufficient personnel who are appropriately rated by the Federal Aviation Administration (“FAA”) for the work being performed and who hold airframe, power plant, or aircraft inspection ratings.
- 4.1.4 If Lessee desires to provide additional services, written approval of the County prior to commencement of such service is required.
- 4.1.5 Lessee agrees not to wash vehicles on the Premises in such a manner as to allow any cleaning detergent or water to reach the surface of the ground.
- 4.1.6 Fueling
- 4.1.6.1 Lessee is authorized to operate its own fuel truck for the sole purpose of fueling its own aircraft used in the course of its daily flight training and aircraft rental business, provided Lessee obtains a Commercial Self Fueling Permit.
  - 4.1.6.2 If authorized in writing by the County separately from this lease to conduct retail fueling operations, Lessee must obtain an approved Permit for Retail Sale or Distribution of Fuel and Lubricants from Lessor prior to exercises of its privilege of retail fuel sales.
  - 4.1.6.3 All fueling on the Premises conducted under the above sections or otherwise subject to all applicable federal, state, and local laws and regulations.
- 4.1.7 Licensee shall use the premises for legal commercial business purposes only. No residential use is permitted. Licensee action of non-compliance shall constitute an Agreement violation.
- 4.2 A Fee Schedule describing all charges and hourly rates for services for airport patrons shall be posted at the Premises by the Lessee in plain view and kept up to date. All rates and charges shall be reasonable and fairly applied to all users of Lessee’s services.

4.3 Identification and Periodic Reporting of Stored Aircraft

Lessee shall, at all times, maintain a current list of all aircraft permanently based, hangered, either inside or outside the Premises (excluding such other areas of the Airport which are not part of the Premises), and containing for each aircraft the name and address of the aircraft owner, the aircraft type (make, model, year, if known), and the aircraft registration number. Starting on the Effective Date, the Lessee shall provide the County with a copy of such a list on the first day of every other month, and at any other time the County reasonably requests same.

4.4 Accident Reports

Lessee agrees to report any accidents at the Airport, including but not limited to, involving Lessee, or Lessee's guests which occur at the Airport to the Lessor in writing within 24 hours of Lessee's learning of such. Lessee is also responsible for notifying any federal, state or local authorities, as required by law.

4.5 Airport Access and Security

Security of the Premises must be maintained at all times. Lessee shall maintain secured controlled access at all entrances to the Premises to prevent unauthorized access onto Airport property. Lessee shall ensure the control of all movement of Lessee's operations and those of their guests/customers, including all deliveries. Lessee shall escort all guests, vendors and delivery personnel at all times. Lessee is responsible for the actions of its guests and delivery personnel until they exit the Airport. Accessible areas to the Airport from the Premises shall be controlled by the Lessee and all gate codes shall be kept confidential and shared with authorized individuals only, as appropriate. For clarity purposes, Lessee shall not have the duty nor the responsibility for general Airport security, as such general Airport security shall remain the sole responsibility and obligation of Lessor.

4.6 Compliance with Laws.

The use of the Premises by Lessee and this Lease shall be subject to, and at all times be in compliance with, and/or subordinate to: (a) County Airports Rules and Regulations; (b) Airport Sponsor Grant Assurances and all other federal laws or FAA regulations, obligations, or guidance; (c) any and all applicable local, state and federal laws, rules, codes, ordinances, statutes, orders and regulations as same exist from time to time throughout the Term (collectively, "Laws"), including without limitation, the requirements of the Americans with Disabilities Act, a federal law codified at 42 U.S.C. 12101 et seq., including, but not limited to Title III thereof, all regulations and guidelines related thereto and all requirements of Title 24 of the State of California (collectively, the "ADA"); (d) any and all instruments, licenses, restrictions, easements or similar instruments, conveyances or encumbrances which are at any time made by or given by County relating to the Premises or the Property and/or the construction, from time to time, of any

additional improvements on the Property (collectively, "Development Documents"), and (e) any and all documents, easements, covenants, conditions and restrictions, and similar instruments, together with any and all amendments and supplements thereto made, from time to time, each of which has been or hereafter is recorded in any official or public records with respect to the Premises or the Property (collectively, "Recorded Matters"), provided no such Development Documents or recorded Matters made or given after the date of this Lease shall (otherwise expand Lessee's obligations under this Lease, including but not limited to, Lessee's financial obligations.

4.7 Nonexclusive Rights

Lessee is allowed to use the Airport and its appurtenances together with all public areas and facilities, in common with others, on a non-exclusive basis and subject to the terms and conditions of this lease. Nothing in this Lease shall be construed to grant to Lessee any exclusive right to conduct any aeronautical activity at the Airport except of for the Premises.

4.8 Vehicle Parking and Storage

The premises may not be used for the maintenance or long-term storage of any vehicle not actively used in the day-to-day operations of the Lessees authorized use of premises. Any vehicle parked or stored on the premises must be fully operational, with the exception of short periods of time while the vehicle is waiting for service, in compliance with applicable Legal Requirements, and have current registration and insurance, as required.

For the purposes of this part, long-term storage is defined as any vehicle parked or stored on the premises for more than 14-days.

The Lessee has 14-days from the execution of this agreement to come into compliance with this requirement after which time, any vehicles parked on the premises in violation of this requirement may be towed and stored at the Lessee or vehicle owners expense.

4.9 Housekeeping

Lessee agrees to keep Premises, including the exterior and interior portions of all windows, doors and all other glass and signs, orderly, neat, safe and clean and free from rubbish or dirt at all times. Lessee agrees not to store parts, supplies, tires, batteries, engine, oil outdoors. Trash and garbage shall only be kept in area designated by Lessor for such storage and covered at all times.

Lessee agrees to ensure that all operations on the Premises will be in accordance with the Lessors current Storm Water Pollution Prevention Program (SWPPP) and associated Best Business Practices.

**5. Expenses**

Lessee shall pay for all expenses related to Lessee's use and occupancy of the Premises including, but not limited to, electric, telephone, cable, internet, water, sewer, gas, trash collection, HVAC, possessory interest and related personal property taxes, and insurance. County shall cooperate with Lessee to the extent necessary to establish accounts in Lessee's name to facilitate Lessee's payment of expenses.

**6. Indemnification and Insurance**

Lessee shall comply with and provide insurance as set forth in Exhibit B attached hereto.

**7. Condition of Property**

**7.1 Condition for Occupancy.**

LESSEE accepts the Premises in an "as is", "with all faults" condition having first inspected the Airport and Premises at its own cost and expense. County makes no representations or warranties whatsoever concerning the legal, physical, environmental or any other condition of the Premises including improvements, facilities or utilities.

As required by Section 1938(a) of the California Civil Code, County discloses to Lessee that the Premises have not undergone inspection by a certified access specialist ("CASp"). As required by Section 1938(e) of the California Civil Code, County also states that:

"A CASp can inspect the Premises and determine whether the Premises complies with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the Premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the Premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Premises."

In furtherance of the foregoing, County and Lessee agree that any CASp inspection elected to be conducted by Lessee shall be done at Lessee's sole cost and expense, and to the extent that a CASp inspection identifies any necessary

repairs to correct violations of construction-related accessibility standards, the other provisions of this Lease shall govern which party has the responsibility to correct such violations.

7.2 Condition of Premises upon Surrender.

At the expiration of the Term or earlier termination or cancellation of this Lease, Lessee shall immediately vacate the Premises and remove all personal property to which Lessee or Lessee Affiliates hold proper and legal title and shall remove all trash and debris from the Premises associated with or related to Lessee's use of the Premises. Should Lessee or Lessee Affiliates fail to remove or dispose of the personal property as provided, County may consider the property abandoned and may claim proper title to it or dispose of it at Lessee's expense. However, under no circumstances shall County become or be considered the owner or operator of any Hazardous Material left on the Premises by Lessee or any of the Lessee Affiliates or others, regardless of whether County elects to initiate clean up or disposal of such Hazardous Material. Lessee and the Lessee Affiliates represent, warrant and agree that at all times, including after termination of this Lease, Lessee and the Lessee Affiliates shall be solely responsible and liable, as the owner and operator, for all Hazardous Material brought onto or generated on the Premises by Lessee or Lessee Affiliates during the Term.

7.3 Hazardous Materials.

7.3.1 Definition of Hazardous Materials.

"Hazardous Materials" means, but is not limited to, (a) any hazardous, toxic or regulated wastes, materials or substances, and other pollutants or contaminants, which are or become regulated by any Environmental Laws, including but not limited to regulations pertaining to storage, labeling, handling, recordkeeping, reporting, transportation, use, disposal, handling or shipment; (b) petroleum, petroleum by products, gasoline, diesel fuel, crude oil or any fraction thereof; (c) asbestos and asbestos containing material, in any form, whether friable or nonfriable; (d) polychlorinated biphenyls; (e) radioactive materials; (f) lead and lead-containing materials; (g) any other material, waste or substance displaying toxic, reactive, ignitable or corrosive characteristics, as all such terms are used in their broadest sense, and are defined or become defined by any Environmental Law (defined below); (h) any materials which cause or threatens to cause a nuisance upon or waste to any portion of the Premises or any surrounding property; (i) any materials which pose or threaten to pose a hazard to the health or safety of persons on the Premises or any surrounding property; (j) any substances, ingredients, materials or products containing or that

may contain blood borne pathogens, living or dead organisms, human remains or by-product, bio-waste or medical waste.

7.3.2 Prohibition; Environmental Laws.

Lessee shall not be entitled to generate, manufacture, store, handle, transport to or from, use, dispose of, or ship to or from, any Hazardous Materials on, in, under or about any portion of the interior or exterior of the Premises or the Property ("Use") without, in each instance, obtaining County's prior written consent thereto. If County, in its sole discretion, consents to any Use then Lessee shall be permitted to engage in such Use only for those Hazardous Materials and in such quantities (A) that are necessary for Lessee's business, (B) to the extent disclosed in connection with County's approval, (C) expressly approved by County in writing, and (D) only to the extent that such Use fully and completely complies with all applicable Laws and only to the extent Lessee is at all times solely responsible and liable for such Use. Lessee warrants and represents that in all events such Use will be at all times, at Lessee's sole expense, cost and liability, in full and complete compliance with any and all applicable local, state and federal environmental, health, consumer safety, medical and safety-related laws, statutes, orders, standards, courts' decisions, ordinances, rules and regulations (as interpreted by judicial or administrative decisions), decrees, directives, guidelines, permits or permit conditions, currently existing and as amended, enacted, issued or adopted in the future (collectively, the "Environmental Laws"). Lessee warrants and represents that any changes to the type and/or quantities of Hazardous Materials specified in the most recent HazMat Certificate may be implemented only with the prior written consent of County, which consent may be given or withheld in County's sole discretion. Lessee shall not be entitled nor permitted to install any tanks under, on or about the Premises for the storage of Hazardous Materials without the express written consent of County, which may be given or withheld in County's sole discretion. County shall have the right at all times during the Term to (i) inspect the Premises, (ii) conduct tests and investigations to determine whether Lessee is in compliance with this Section 7 or to determine if Hazardous Materials are present in, on or about the Premises, and (iii) request lists of all Hazardous Materials in use on, under or about any portion of the Premises. The cost of all such inspections, tests and investigations (collectively, "Inspections") shall be borne solely by Lessee, if Lessee or any of the Lessee Affiliates are responsible, by action or inaction, for the use or the presence of any contamination, release, emission, or source revealed by such Inspections. The aforementioned rights granted herein to



County and its representatives shall not create (a) a duty on County's part to perform Inspections, monitor or otherwise observe the Premises or Lessee's and Lessee Affiliates' activities or Use with respect to Hazardous Materials, including without limitation, Lessee's operation or any remediation related thereto, or (b) liability on the part of County and its representatives for any Use, use or any Release, it being understood that Lessee shall be solely responsible for all liability in connection therewith. Lessor hereby consents to the use by Lessee of ordinary household cleaners, office supplies and janitorial supplies that may be used by Lessee in connection with maintaining the Premises as required under this Agreement.

7.3.3 Lessee's Environmental Obligations.

Lessee shall give to County immediate verbal and follow-up written notice of any contamination, exposure, deaths, injuries, illnesses, spills, releases, discharges, disposals, emissions, migrations, removals, shipments or transportation of, from or relating to Hazardous Materials on, under or about any portion of the Premises (collectively, a "Release"), provided that Lessee knows or reasonably should know of such Release. Lessee, at its sole cost and expense, covenants, warrants and represents to promptly investigate, remedy, clean up, remove, decontaminate, restore respond to, otherwise fully remediate, and resolve any and all claims relating to (including, without limitation, preparation of any feasibility studies or reports and the performance of any and all closures) any Release of Hazardous Materials caused by, arising from or related to the acts of Lessee or the Lessee Affiliates such that the affected portions of the Premises are returned to the condition existing prior to the Release of such Hazardous Materials (the "Remediation"). Any such Remediation shall only be performed after Lessee has obtained County's prior written consent, which consent may not be unreasonably withheld so long as such actions would not potentially have a material adverse long-term or short-term effect on any portion of the Premises. Notwithstanding the foregoing, Lessee shall be entitled to respond immediately to an emergency at its sole cost, expense and liability, without first obtaining County's prior written consent. Lessee, at its sole cost and expense, shall conduct and perform, or cause to be conducted and performed, all Remediation as required by any Environmental Laws or any agencies or other governmental authorities having jurisdiction thereof. If Lessee fails to so promptly complete the Remediation, County may, but without obligation to do so, take any and all steps necessary to rectify the same and Lessee shall promptly reimburse County, upon written demand, for all

costs and expenses to County of performing the Remediation. All such Remediation, as required herein, shall be performed in such a manner so as to enable County to make full economic use of the Premises and the other portions of the Premises after the satisfactory completion of such Remediation. County acknowledges that Lessee shall have no obligation or liability with respect to Hazardous Materials existing in the Premises prior to the Delivery Date so long as Lessee or the Lessee Affiliates, invitees or guests have not, by action or inaction, disturbed or caused the disturbance or Release of said existing Hazardous Materials. Lessee shall ensure that all necessary monitoring, safekeeping and security of and for the Premises be sufficient to ensure other parties do not, cannot and are prohibited from causing or contributing to any Release or Use not allowed herein.

#### 7.3.4 Environmental Indemnity.

Lessee shall protect, indemnify, defend (with legal counsel acceptable to County) and hold County and the County Affiliates (as defined in Section 13 herein below) harmless from and against any and all Claims (including, without limitation, diminution in value of any portion of the Premises and damages for the loss of or restriction on the use of rentable or usable space within the Premises) arising at any time during or after the Term in connection with, resulting from or related to, directly or indirectly, any and all Use, use, Release or Remediation arising out of, relating to or resulting from (directly or indirectly) any act or omission of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees. Neither the written consent of County to any Use, use, Release or Remediation, in whole or in part, nor the strict compliance by Lessee with any or all Environmental Laws shall excuse Lessee from its obligations of indemnification pursuant hereto. Lessee shall not be relieved of its indemnification obligations under the provisions of this Section 7 due to County's status as either an "owner" or "operator" under any Environmental Laws. Lessee shall, at its sole cost and expense, promptly observe, perform, and comply with any and all Laws relating to the activities of Lessee. Lessee shall, protect, indemnify, defend (with counsel acceptable to County) and hold County and the other County Affiliates harmless from and against any and all Claims arising at any time during or after the Term in connection with or related to the use, presence or release of Hazardous Materials on, in or about any portion of the Premises resulting from or related to the acts or omissions of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees.

7.3.5 Lessee shall immediately deliver to County complete copies of all written notices, demands, or other written communications in a party's possession from any governmental or quasi-governmental authority, or any insurance company or board of fire underwriters or like or similar entities, regarding any Release on, to, about, upon, under, at, in, or from the Premises or the Property. Lessee shall immediately, upon receiving notice thereof, inform County in writing (and orally in the event of a Release or other emergency) of (1) any and all enforcement or Remediation, or other governmental, regulatory, or judicial acts or orders instituted, contemplated, or threatened pursuant to any Law affecting Hazardous Materials in, on, upon, over or under the Premises or the Property; and (2) all claims made or threatened by any third party relating to damage, contribution, cost recovery, compensation, loss or injury resulting from any actual, proposed, or threatened Use, use, Remediation or Release on, in, upon, at, under, from, to, or about the Premises.

## **8. Repairs and Maintenance**

- 8.1 Lessee's Repairs and Maintenance Obligations. Except for and subject to the Lessor's responsibilities as set forth in Section 12, Lessee shall, at its sole cost and expense, keep, manage, operate, and maintain all parts of the Premises in good, clean and safe condition and repair, promptly making all necessary repairs and replacements, all of the foregoing in accordance with the applicable provisions of this Lease, and to the reasonable satisfaction of the County including, but not limited to, repairing any damage (and replacing any property so damaged if necessary) whether caused by Lessee and/or Lessee Affiliates or visitors, and restoring the Premises substantially to the condition existing prior to the occurrence of such damage. Without limiting any of the foregoing, Lessee shall be solely responsible for promptly maintaining, repairing and replacing, (a) all Lessee signage (b) all partitions, fixtures, equipment of the Premises and every part. All work within the scope of Lessee's qualified, insured staff shall be completed by said staff, which shall be subject to County's final approval. All work within the scope of a contractor or subcontractors, shall be completed by licensed, qualified, insured and bonded contractors and subcontractors reasonably approved by County. Additionally, Lessee shall be solely responsible for the performance of the regular removal of trash and debris on or about the Premises, and otherwise as needed or required by any Law.
- 8.2 If Lessee refuses or neglects to repair and maintain the Premises properly as required by this Lease and to the reasonable satisfaction of County, then upon not less than thirty (30) days written notice to Lessee (except in the event of an emergency), (i) County may, but without obligation to do so, at any time make

such repairs or maintenance without County having any liability to Lessee for any loss or damage that may accrue to Lessee's property or to Lessee's business by reason thereof, except to the extent any damage is directly caused by the willful misconduct or gross negligence of County or its authorized agents and representatives and (ii) Lessee shall pay to County all of County's reasonable costs and expenses incurred therefor within thirty (30) days upon demand. Lessee's obligations under this Section 8 shall survive the expiration of the Term or earlier termination thereof. Lessee hereby waives any right to repair at the expense of County under any applicable Laws now or hereafter in effect.

- 8.3 Lessee expressly waives any and all claims against Lessor for compensation or damage for any and all loss, cost or expense sustained by reason of any defect, deficiency or impairment of any utility system, water supply system, draining or sewer system, heating or gas system, electrical apparatus or wires serving the premises, or the use or operation thereof.

**9. Alterations**

- 9.1 Lessee may make alterations or improvements to the Premises only with the prior written consent of the County which may be granted or withheld in County's sole and absolute discretion. Upon expiration or termination of this Lease, any permitted alteration or improvements shall become the property of the County; provided, however, if County consents in its sole and absolute discretion, Lessee may be permitted to remove its alterations and improvements but shall repair any and all damage caused by such installation and removal.
- 9.2 Lessee shall be responsible for and shall promptly repair any damage or destruction of the Property and the Premises caused by Lessee or Lessee's officers, agents, employees, contractors, invitees or licensees, reasonable wear and tear and casualty excepted.

**10. Damage or Condemnation**

If the Premises are materially damaged or destroyed by any cause or condemned, it is specifically acknowledged and agreed that County shall have no affirmative obligation to restore or replace the Premises, nor shall County have the obligation to contribute any funds to be used for such restoration or replacement. Lessee shall be responsible for the repair and restoration of its improvements, alterations and Lessee's property. If County elects not to restore or replace the Premises or portion thereof, Lessee or County may elect to terminate this Lease. Unless this Lease is terminated, in the case of material damage or destruction to the Premises (other than by any direct or indirect act(s) or omission(s) of Lessee or any of the Lessee Affiliates), a proportionate amount of the rent

shall abate (calculated based on the portion of the Premises that are destroyed or damaged beyond use) until the Premises shall be so restored.

**11. Hazardous Materials Permit and Spill Plan**

Lessee shall comply with the requirements of the County's Hazardous Materials Permit and Storm Water Pollution Prevention Program (SWPPP).

Lessee shall prepare and maintain a written Spill Prevention Contingency and Control Plan (SPCC). The SPCC shall be reviewed and approved by the appropriate agency(s). The approved SPCC shall be kept current and a copy of the most current version shall be submitted to the County to be kept on file.

**12. Responsibilities**

**12.1 Lessee Responsibilities**

12.1.1 Report to County any suspected inappropriate activities at the Airport.

12.1.2 Monitor and report all safety concerns to County.

12.1.3 Keep Premises open during normal business hours.

12.1.4 Make available after-hours phone number for emergency issues that occur onsite and require Lessee's attention.

12.1.5 Maintain at least one restroom that is open to the public during business hours.

**12.2 Operations and Maintenance Responsibilities**

The Lessee has the primary responsibility for the daily upkeep and maintenance of items related to the leasing of the Premises including any repairs or maintenance necessitated by the negligent or intentional acts or omissions of the Lessee or the employees, agents, or contractors of Lessee. Lessee shall perform the items designated as the responsibility of the Lessee in Section 12.2.1. Further, except for maintenance work expressly listed as the County's responsibilities in Section 12.2.2 (which shall be at County's sole cost and expense), it shall be Lessee's responsibility, at Lessee's sole cost and expense, to continually keep and maintain the Premises and all improvements, systems, and equipment located thereon (whether constructed by Lessee or County) clean and neat, free of waste material and debris, in good condition and repair and in a fully operational condition and to make all necessary and appropriate preventive maintenance, repairs and replacements. One restroom shall be kept open to the public at all times during business hours, and the Lessee shall be responsible for its cleaning and upkeep.

County and Lessee have agreed on the following division of responsibilities regarding maintenance of the Premises.

#### 12.2.1 Lessee Responsibilities

- a) Non-Structural portions of the interior of premises of the building including windows, doors, carpets, tile, ceilings, floors and floor coverings.
- b) Janitorial services for and general upkeep of restrooms including restroom supplies.
- c) Interior electrical panels, including power from main electrical panel throughout the Premises, conduit and wiring, subpanels, power outlets and switches.
- d) Exterior of structures including roofs, sidings, gutters, drains, walkways, exterior doors, exterior painting.
- e) Asbestos Management
- f) Mold Remediation
- g) Termite and Rodent Infestation
- h) Fire systems, including sprinklers (heads and piping) and fire suppression equipment and devices.
- i) Interior and exterior light lamps, including wiring, light fixtures and light bulbs.
- j) Fixed Base Operator signs and directories.
- k) Interior of structures including ceilings, walls, floors and waterproofing and sealing of floor penetrations.
- l) Interior locks.
- m) Hot water heater and refrigeration units.
- n) Common areas to be kept free and clear of debris.
- o) Landscaping
- p) Cleaning exterior of building, including rain gutters, sidewalks, vehicular parking lot and aircraft parking ramp.
- q) Interior and exterior fire extinguishers
- r) Telephone system
- s) Internet
- t) Communication and information technology
- u) Graffiti Abatement
- v) Pick up and disposal of Hazardous Waste, E-waste, Battery and Universal Waste
- w) Modifications in public use areas required to meet the Americans with Disabilities (ADA) standards.
- x) Heating, air condition, ventilation systems and associated controls.

12.2.2 Lessor Responsibilities

- a) Building identification and directory
- b) Exterior perimeter fence and gates

**13. Limitation of Liability and Indemnity**

- 13.1 Except to the extent of Claims (defined below) directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, Lessee agrees to protect, defend (with counsel reasonably acceptable to County) and hold County and County's lenders, partners, members, property management company (if other than County), agents, directors, officers, employees, representatives, contractors, successors and assigns and each of their respective partners, members, directors, officers, employees, representatives, agents, contractors, heirs, successors and assigns (collectively, the "County Affiliates") harmless and indemnify the County and County Affiliates from, for and against all liabilities, damages, demands, penalties, costs, claims, losses, judgments, charges arising from Lessee's and Lessee Affiliates' use of the Premises and/or Lessee's failure to perform any covenant or obligation of Lessee under this Lease. Lessee agrees that the obligations of Lessee herein shall survive the expiration or earlier termination of this Lease.
- 13.2 Except to the extent of Claims directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, to the fullest extent permitted by law, Lessee agrees that neither County nor any of the County Affiliates shall at any time or to any extent whatsoever be liable, responsible or in any way accountable for any loss, liability, injury, death or damage to persons or property which at any time may be suffered or sustained by Lessee or by any person(s) whomsoever who may at any time be using, occupying or visiting the Premises, including, but not limited to, any acts, errors or omissions of any sublessees, subtenants, guests, invitees or occupants of the Premises. Lessee shall not, in any event or circumstance, be permitted to offset or otherwise credit against any payments of Rent required herein for matters for which County may be liable hereunder.
- 13.3 Notwithstanding any provision to the contrary contained in this Lease, at no time shall County be responsible or liable to the Lessee or the Lessee Affiliates for any lost profits, lost economic opportunities, punitive damages or any form of consequential damage of any kind or nature. Except as otherwise allowed or permissible by any other term or condition of this Lease including but not limited to Section 7 of this Lease, at no time shall Lessee be responsible or liable to the County for any lost profits or lost economic opportunities or punitive damages

resulting from any actual or alleged breach by Lessee of its obligations under this Lease, provided that in no event shall County be precluded from exercising its remedies under Section 17 or any other provision of this Lease.

**14. Assignment and Subletting**

- 14.1 Lessee shall not assign, sublet, license or otherwise transfer or encumber all or any part or Lessee's interest in this Lease, the Premises or the Property without Lessor's prior written consent. Any attempted assignment, sublease or other transfer without Lessor's consent shall be void and of no force and effect, and shall, at the Lessors election, constitute an event of default hereunder.
- 14.2 Lessee shall submit the proposed written agreement between Lessee and the sublessee to County for review and evaluation. County may require that an application be completed and all relevant and applicable information relating to the requested sublease be provided to County for review and evaluation.
- 14.3 Sublessee may not occupy the Premises before County consents to the sublease in writing.

**15. Quiet Enjoyment**

So long as Lessee successfully complies at all times with all terms and conditions of this Lease, including the timely payment of all Rent, costs and fees when due, Lessee will be entitled to quiet enjoyment of the Premises.

**16. Right of Entry**

County or its authorized representatives shall have the right to enter the Premises during regular business hours.

**17. Default and Remedies/Termination**

In addition to any other right to terminate this Lease, any of the following events or occurrences shall constitute a material breach of this Lease by Lessee, and shall be deemed an event of default upon the expiration of any stated period to cure said breach, at which time County may terminate this Lease and shall have all remedies available at law or in equity:

- 17.1. The failure by Lessee to make any timely payment required by this Lease in full within ten (10) business days after written notice from the County;
- 17.2. The failure by Lessee to observe or perform any covenant, condition or provision of this Lease when such failure continues beyond thirty (30) days after County gives Lessee written notice of breach; provided, however, that if the nature of such failure reasonably requires longer than thirty (30) days to cure, Lessee shall



not be in default if it begins such cure in good faith and with due diligence within thirty (30) days of the notice of breach, and thereafter prosecutes such cure to completion in good faith and with due diligence, or as otherwise determined by County, in County's reasonable discretion. County reserves the right, however, to make a commercially reasonable determination that Lessee is or will be unable to satisfactorily comply with any term or condition of this Lease, and to deem any failure under this paragraph to be an event of default at the expiration of the thirty (30) day cure period (or longer as required herein);

- 17.3. Any attempted conveyance, assignment, mortgage or subletting of any or all of this Lease, the Premises or the Property, in which case there shall be no cure period;
- 17.4. Violation by Lessee of any applicable law, rule or regulation with respect to Lessee's use of the Property or the Premises beyond a ten (10) business cure period shall be a default of this Lease; intentional violation of any applicable law, rule or regulation by Lessee shall have no cure period;
- 17.5. Any of the following: a general assignment by Lessee for the benefit of Lessee's creditors; any voluntary filing, petition, or application by Lessee under any law relating to insolvency or bankruptcy, whether for a declaration of bankruptcy, a reorganization, an arrangement, or otherwise; the abandonment of the Premises by Lessee without County's prior written consent (after Lessee's notice and opportunity to cure); or the dispossession of Lessee from the Property or the Premises (other than by County) by process of law, in which case there shall be no cure period;
- 17.6. Lessee's failure to comply with any term, condition or provision of the Lease, beyond any applicable cure period;
- 17.7. The appointment of a trustee or receiver to take possession of all or substantially all of Lessee's assets; or the attachment, execution or other judicial seizure of all or substantially all of Lessee's assets located at the Property or of Lessee's interest in this Lease, unless the appointment or attachment, execution, or seizure is discharged within thirty (30) days; or a petition for reorganization or arrangement of Lessee under any law relating to insolvency or bankruptcy, unless, in the case of any involuntary filing, it is dismissed within one hundred twenty (120) days. There shall be no cure period;
- 17.8. Lessee's absence from the Premises for thirty (30) consecutive calendar days, without prior written notice to County, during which time rent or other charges are delinquent, shall be deemed abandonment of the Premises. Such abandonment will be deemed cause for immediate termination without notice. County shall thereupon be authorized to enter and take possession and to remove and dispose of the property of Lessee or its guests without any liability whatsoever to County.

**18. Audit**

Lessee shall maintain for a period of at least three (3) years following the end of each calendar or tax fiscal year to which they pertain, complete and accurate books and records relating to Lessee's use of the Premises, compliance with the Lease terms, Improvements, Lessee improvements and Tax Expenses. Such books and records shall be kept at the location where Lessee customarily maintains its books and records however such location shall be within the County of Santa Clara, State of California. After delivery to County of at least thirty (30) days prior written notice, County, at its sole cost and expense, or through any accountant designated by it, shall have the right to examine and/or audit the books and records evidencing such expenses for any of the previous three (3) calendar years, during County's reasonable business hours but not more frequently than once during any calendar year. Lessee shall fully cooperate with County or its representatives in such audits and shall promptly resolve any discrepancies between County and Lessee in the accounting of such expenses.

**19. Taxes**

19.1 Lessee shall pay and shall be liable and responsible for any and all Tax Expenses (as defined below) applicable to the Premises or its use. Prior to delinquency, Lessee shall pay any and all taxes and assessments levied upon the Premises, including, without limitation, (i) any and all taxes and assessments resulting from or relating to any increase in real property taxes attributable to any and all Improvements, fixtures, equipment or other improvements of any kind whatsoever placed or existing in, on or about the Premises and (ii) taxes and assessments levied or assessed upon or with respect to the possession, operation, use or occupancy of the Premises during the Lease Term. "Tax Expenses" means, without limitation, any form of tax and assessment (general, special, supplemental, ordinary or extraordinary), commercial rental tax, payments under any improvement bond or bonds, license fees, license tax, business license fee, rental tax, transaction tax or levy imposed by any authority having the direct or indirect power of tax (including any governmental, school, agricultural, lighting or other improvement district) as against any legal or equitable interest in the Premises or any other tax, fee, or excise, however described, including, but not limited to, any tax imposed in substitution (partially or totally) of any tax previously included within the definition of Tax Expenses and any cost and/or fee (including without limit attorneys' and appraisers' fees and court costs) incurred in calculating, contesting or negotiating any such taxes or assessments.

**19.2 Possessory Interest Tax.**

Lessee acknowledges that its interest in and/or use of the Premises may be subject to possessory interest taxation and that such taxation shall be Lessee's sole responsibility and liability.

**20. Notices**

Any notices which are required to be given hereunder, or which either party may wish to give to the other, shall be in writing and shall be effective for all purposes on any business day before 5:00 PM local time and on the next business day if received after 5:00 PM or on other than a business day, including without limitation, upon (i) receipt or refusal of receipt, in the case of personal delivery, (ii) the next business day after depositing notice with a reputable overnight courier, and (iii) three (3) days after depositing notice in with the United States Post Office for delivery by first class certified or registered mail, postage prepaid, and addressed as follows:

To COUNTY: County of Santa Clara  
2500 Cunningham Ave.  
San Jose, CA 95148

Or to such other place as COUNTY may designate by written notice.

To LESSEE: Amelia Reid Aviation DBA Aerodynamic Aviation  
2650 Robert Fowler Way  
San Jose, CA 95148

Or to such other place as LESSEE may designate by written notice.

**21. Miscellaneous**

**21.1 Waiver**

The failure of County to insist upon strict performance of any of the terms, covenants, or conditions of this Lease shall not be deemed a waiver of any right or remedy that County may have, and shall not be deemed a waiver of County's right to require strict performance of all terms, covenants, and conditions thereafter, nor a waiver of any remedy for the subsequent breach of any of the terms, covenants, or conditions.

**21.2 Severability and Governing Law**

Any non-material provision of this Lease which shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect. This Lease, and all the rights and duties of the parties arising from or relating in any way to the subject

matter of this Lease, shall be enforced, governed by and construed in accordance with the laws of the State of California (excluding any conflict of laws provisions that would refer to and apply the substantive laws of another jurisdiction). Lessee expressly agrees that any and all disputes, lawsuits or proceedings arising out of, relating to or in connection with this Lease, including any and all mediation or other alternative dispute resolution proceedings or settlements or negotiations, shall be brought, disputed and litigated only in the Superior Court of the State of California in the County of Santa Clara or the United States District Court, Northern District of California, San Jose Division (and in no other), and Lessee hereby consents to the exclusive personal jurisdiction and venue of said court.

21.3 Entire Agreement

It is understood and agreed that there are no oral agreements between the parties hereto affecting this Lease and this Lease (including all exhibits and addenda) supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by County to Lessee with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. This Lease and any separate agreement executed by County and Lessee in connection with this Lease and dated of even date herewith (a) contain all of the terms, covenants, conditions, warranties and agreements of the parties relating in any manner to the rental, use and occupancy of the Premises, and (b) shall be considered to be the only agreement between the parties hereto and their representatives and agents. This Lease may not be modified, deleted or added to except by a writing signed by the parties hereto. All negotiations and oral agreements have been merged into and are included herein. There are no other representations or warranties between the parties, and all reliance with respect to representations is based totally upon the representations and agreements contained in this Lease. The parties acknowledge that (i) each party and/or its counsel have reviewed and revised this Lease, and (ii) no rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall be employed in the interpretation or enforcement of this Lease or any amendments or exhibits to this Lease or any document executed and delivered by either party in connection with this Lease.

21.4 Warranty of Authority

Lessor and Lessee each represent that the person executing this Lease on behalf of such party (i) is duly and validly authorized to do so on behalf of the entity it purports to so bind, and (ii) has full right and authority to enter into this Lease. Each party hereby warrants that this Lease is legal, valid and binding upon such party and enforceable against such party in accordance with its terms.

21.5 Joint and Several; Covenants and Conditions

If Lessee consists of more than one person or entity, the obligations of all such persons or entities shall be joint and several. Each provision to be performed by Lessee hereunder shall be deemed to be both a covenant and a condition.

21.6 California Public Records Act

The County is a public agency subject to the disclosure requirements of the California Public Records Act (“CPRA”). If Lessee’s proprietary information is contained in documents submitted to County, and Lessee claims that such information falls within one or more CPRA exemptions, then Lessee must clearly mark such information “CONFIDENTIAL AND PROPRIETARY,” and identify the specific lines containing the information. In the event of a request for such information, the County will use reasonable efforts to provide notice to Lessee prior to such disclosure. If Lessee contends that any documents are exempt from the CPRA and wishes to prevent disclosure, it is required, at its sole cost, liability and expense, to obtain a protective order, injunctive relief or other appropriate remedy from a court of law in Santa Clara County before the County’s deadline for responding to the CPRA request. If Lessee fails to obtain such remedy within County’s deadline for responding to the CPRA request, County may disclose the requested information even if marked “CONFIDENTIAL AND PROPRIETARY” without any liability or obligation to Lessee or any third parties.

21.7 Waiver of Jury Trial

To the extent permitted by applicable law, the parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other on any matters whatsoever arising out of or in any way related to this Lease, the relationship of County and Lessee, Lessee's use or occupancy of the Premises and/or any claim of injury, loss or damage.

21.8 Headings

Section headings shall not be used in construing this Lease.

21.9 Conflict of Interest

Lessee represents, warrants and agrees that it shall comply, and require its employees, agents, representatives, contractors, consultants, sub-consultants and subcontractors (collectively, “Lessee Affiliates”) to comply, with all applicable (i) requirements governing avoidance of impermissible client conflicts; and (ii) federal, state and local conflict of interest laws and regulations including, without limitation, California Government Code section 1090 et. seq., the California Political Reform Act (California Government Code section 87100 et. seq.) and the regulations of the Fair Political Practices Commission concerning disclosure and

disqualification (2 California Code of Regulations section 18700 et. seq.). Failure to do so constitutes a material breach of this Lease and is grounds for immediate termination of this Lease by the County.

21.10 Relationship of Parties

The parties acknowledge and agree that nothing set forth in this Lease shall be deemed or construed to render the parties as joint venturers, partners, associations, master-servant, agents, a joint enterprise, employer-employee, lender-borrower or contractor. Lessee shall have no authority to employ any person as employee or agent on behalf of County for any purpose. Neither Lessee nor any person using or involved in or participating in any actions or inactions relating to the Premises or this Lease shall be deemed an employee or agent of County, nor shall any such person or entity represent himself, herself or itself to others as an employee or agent of County. Lessee's status, as well as the status of its officers, agents or employees, including personnel in the administration and performance of services under this Lease, shall be in an independent capacity and not as an employee or agent of the County.

21.11 No Third-Party Rights

This Lease shall not be construed as nor deemed to be an agreement for the benefit of any third party or parties, and no third party or parties shall have any right of action herein for any cause whatsoever.

21.12 Signs

All signs and graphics of every kind visible in or from public view shall be subject to (i) County's prior written approval, and (ii), and in compliance with, all applicable Laws, Development Documents, Recorded Matters, Rules and Regulations, and County's sign criteria ("Sign Criteria") as same may exist from time to time.

21.13 Brokerage Commission

Lessee represents and warrants for the benefit of County that it has had no dealings with any real estate broker, agent or finder in connection with the Premises and/or the negotiation of this Lease, and that it knows of no other real estate broker, agent or finder who is or might be entitled to a real estate brokerage commission or finder's fee in connection with this Lease or otherwise based upon contacts between the claimant and Lessee.

21.14 OFAC

Lessee represents and warrants to County that: (i) Lessee is not acting, and shall not act, directly or indirectly, for or on behalf of any person, group, entity, or nation named by any Executive Order or the United States Treasury Department

as a terrorist, “Specially Designated National and Blocked Person,” or other banned or blocked person, entity, nation, or transaction pursuant to any law, order, rule or regulation enforced or administered by the federal Office of Foreign Assets Control; and (ii) Lessee is not engaged in this transaction, directly or indirectly, on behalf of, or instigating or facilitating this transaction, directly or indirectly, on behalf of any such person, group, entity, or nation.

21.15 Non-Discrimination

Lessee and Lessee Affiliates shall each comply with all applicable federal, state and local laws and regulations including the County of Santa Clara’s policies concerning nondiscrimination and equal opportunity in contracting. Such laws include but are not limited to the following: Title VII of the Civil Rights Act of 1964, as amended; Americans with Disabilities Act of 1990; The Rehabilitation Act of 1973 (Sections 503 and 504); California Fair Employment and Housing Act (Government Code Sections 12900 et sea.); California Labor Code sections 1101 and 1102. Lessee and each of the Lessee Affiliates shall not discriminate against any subcontractor, employee, or applicant for employment because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organization affiliations, or marital status in the recruitment, selection for training including apprenticeship, hiring, employment, utilization, promotion, layoff, rates of pay or other forms of compensation. Nor shall Lessee or any of the Lessee Affiliates discriminate in the provision of services provided under this Lease because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organizational affiliations, or marital status.

21.16 No Relocation Assistance

It is understood that this Lease is intended to give Lessee a temporary conditional use of the Premises and that Lessee shall not be entitled to relocation benefits, assistance, damages (liquidated or otherwise), costs, claims or fees from County upon expiration, termination or cancellation of this Lease, except as expressly provided for elsewhere in this Lease.

21.17 Prevailing Wage

If the work to be performed by Lessee or any of its contractors hereunder is a public work as defined in California Labor Code Section 1720 et seq., then Lessee and its contractors must comply with the payment of prevailing wages and the employment of apprentices as set forth in Section 1770, et al. and following of the Labor Code. Lessee is solely liable for failing to comply with prevailing wage laws.

21.18 Wage Theft Prevention

These provisions are in relation to any work performed by Lessee or Lessee Affiliates under the terms or conditions of the Lease only.

Compliance with Wage and Hour Laws. Lessee and the Lessee Affiliates who are involved in the work must comply with all applicable federal, state, and local wage and hour laws. Applicable laws may include, but are not limited to, the Federal Fair Labor Standards Act, the California Labor Code, and any local Minimum Wage Ordinance or Living Wage Ordinance.

21.18.1 Final Judgments, Decisions, and Orders. For purposes of this Section, a “final judgment, decision, or order” refers to one for which all appeals have been exhausted. Relevant investigatory government agencies include: the federal Department of Labor, the California Division of Labor Standards Enforcement, a local enforcement agency, or any other government entity tasked with the investigation and enforcement of wage and hour laws.

21.18.2 Prior Judgments against Lessee and/or its contractors. BY SIGNING THIS LEASE, LESSEE AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS, OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY FINDING—IN THE FIVE YEARS PRIOR TO EXECUTING THIS LEASE—THAT LESSEE OR ANY OF THE LESSEE AFFILIATES HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS.

21.18.3 LESSEE FURTHER AFFIRMS THAT IT AND/OR THE LESSEE AFFILIATES HAVE SATISFIED AND COMPLIED WITH—OR HAS REACHED LEASE WITH THE COUNTY REGARDING THE MANNER IN WHICH IT WILL SATISFY—ANY SUCH JUDGMENTS, DECISIONS, OR ORDERS.

21.18.4 Judgments During Term of Lease. If at any time during the Term of this Lease, a court or investigatory government agency issues a final judgment, decision, or order finding that Lessee or any contractor it uses to perform work under this Lease has violated any applicable wage and hour law, or Lessee learns of such a judgment, decision, or order that was not previously disclosed, Lessee must inform the Office of the County Executive-Office of Countywide Contracting Management (OCCM), no more than 15 days after the judgment, decision, or order becomes final or of learning of the final judgment, decision, or order. Lessee and its contractors shall promptly satisfy and comply with any such judgment, decision, or order, and shall provide the Office of the County Executive-OCCM with documentary evidence of compliance with the final judgment, decision, or order within 5 days of satisfying the final judgment, decision, or order. The County reserves the right to require Lessee to enter into an agreement



with the County regarding the manner in which any such final judgment, decision, or order will be satisfied.

- 21.18.5 **County's Right to Withhold Payment.** Where Lessee or any contractor it employs to perform work under this Lease has been found in violation of any applicable wage and hour law by a final judgment, decision, or order of a court or government agency, the County reserves the right to withhold payment to Lessee until such judgment, decision, or order has been satisfied in full.
- 21.18.6 **Material Breach.** Failure to comply with any part of this Section constitutes a material breach of the Lease. Such breach may serve as a basis for termination of this Lease and/or any other remedies available under this Lease and/or law.
- 21.18.7 **Notice to County Related to Wage Theft Prevention.** Notice provided to the Office of the County Executive as required under this Section shall be addressed to: Office of the County Executive—OCCM; 70 West Hedding Street; East Wing, 11th Floor; San José, CA 95110. The Notice provisions of this Section are separate from any other notice provisions in this Lease and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.

21.19 Counterparts

This Lease, and any amendments thereto, may be executed in several counterparts, and all of such counterparts so executed together shall be deemed to constitute one and the same agreement, and each such counterpart shall be deemed to be an original. Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of this agreement, or an electronically signed agreement, has the same force and legal effect as the agreement executed with an original ink signature. The term "electronic copy of this agreement" refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of the original signed agreement in a portable document format. The term "electronically signed agreement" means the agreement that is executed by applying an electronic signature using technology approved by the County.

21.20 County Sustainability Policies

In performing any work on the Premises, Lessee will use best efforts to substantially comply with Lessor's Sustainability policies found in Board of Supervisors Policy Manual 8.1 through and including 8.4, as amended from time to time by Lessor, and Lessor's Green Cleaning Policy Administrative Guidelines, as amended from time to time by Lessor.

21.21 Integrated Pest Management Ordinance

When conducting or allowing the performance of any pest management practices or pesticide uses, Lessee, its contractors, employees, agents and representatives,

will use best efforts to substantially comply with and require any pest management service providers to comply with the County Integrated Pest Management ordinance.

21.22 County No-Smoking Policy

Lessee and Lessee Affiliates, guests and invitees, shall not smoke on, in or around the Property or Premises unless expressly allowed by applicable smoking laws.

21.23 Liens

Except as expressly authorized in a term or condition found elsewhere in this Lease, Lessee shall keep the Premises free and clear of all liens and encumbrances. If, because of any act or omission of Lessee or any of its employees, officers, agents, representatives or volunteers, any mechanic's lien or other lien, charge or order for the payment of money are filed against any portion of the Premises, structures, or Alterations, Lessee shall at its own expense, cause the same to be discharged of record within thirty (30) days after written notice from Lessor; and, Lessee shall indemnify, defend and save harmless Lessor against all resulting costs, liabilities, suits, claims and demands, including legal fees and court costs.

21.24 Prohibition of Alcohol and Controlled Substances

Sale, promotion or advertising of any type of alcohol or controlled substances are strictly prohibited on, in or near the Premises.

21.25 Timing

In the event the time for performance of any obligation under this Lease shall fall on a Saturday, Sunday or court holiday, such time for performance shall be extended to the next business day. "Business day" means days other than Saturdays, Sundays, and federal and state legal holidays in the state of California.

21.26 Survival

Those provisions which by their nature should survive termination, cancellation or expiration of this Lease, shall so survive.

21.27 Recitals and Exhibits

The Recitals stated above, and all Exhibits referenced in this Lease, are incorporated herein and made a part of this Lease by this reference.

**22. FAA Assurance**

Should Lessee provide any service to the public, including subleasing, at the airport, Lessee shall:

- 22.1 Furnish said services on a fair, equal, and not unjustly discriminatory to all users thereof; and
- 22.2 Charge fair, reasonable, and not unjustly discriminatory prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.


IN WITNESS WHEREOF, the parties hereto have executed this Lease as follows:

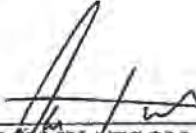
**LESSOR:**

**LESSEE:**

**County of Santa Clara, a political  
subdivision of the State of California**

**Amelia Reid Aviation dba Aerodynamic  
Aviation**


DocuSigned by:  
  
 \_\_\_\_\_  
 6DC28984CB2D46D...  
**HARRY FREITAS**  
 Director, Roads and Airports Department

  
 \_\_\_\_\_  
**JOSH WATSON**  
 Title: Owner


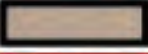

Date: 1/3/2022

Date: 12/30/2021

APPROVED AS TO FORM AND  
LEGALITY:

DocuSigned by:  
  
 \_\_\_\_\_  
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**Christopher R. Cheleden**  
 Lead Deputy County Counsel



-  Leasehold Boundary
-  Lessor Easement Boundary
-  UST Location Excluded From Leasehold

 REV 11-13-2021	<b>Exhibit A</b>
	<b>Aerodynamic Aviation Leasehold</b>
COUNTY OF SANTA CLARA	

EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

EXHIBIT B-8

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and

## EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

### 10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

### 11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

### E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

### F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County



EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit A.3

**LEASE AGREEMENT  
BETWEEN COUNTY OF SANTA CLARA AND  
CALIFORNIA IN NICE DBA NICE AIR**

This Lease Agreement (“Lease”) is entered into by and between the COUNTY OF SANTA CLARA, a political subdivision of the State of California (referred to interchangeably as “COUNTY” or “Lessor”) and California In Nice DBA Nice Air (“Lessee”), effective as of January 1, 2022 (the “Effective Date”).

**RECITALS**

- A. COUNTY is the owner of Reid-Hillview Airport (“Airport”).
- B. Lessee desires to lease from Lessor and Lessor desires to lease to Lessee a portion of the Airport located at 2575 Robert Fowler Way, San Jose, California, San José California for the purpose of engaging in certain Commercial Aeronautical Activities, as defined below (the “Premises”). The Premises is as generally described on the attached Exhibit A that is incorporated herein by this reference.

**AGREEMENT**

**NOW THEREFORE**, for and in consideration of the mutual promises, covenants and conditions set forth below, COUNTY and LESSEE agree to the foregoing and as follows:

**1. Premises**

COUNTY agrees to lease to LESSEE and LESSEE agrees to lease from COUNTY the Premises, subject to the terms and conditions of this Lease.

1.1 The Premises consists of the following:

- 1.1.1 Land space of approximately 44,469 square feet that consists of a commercial hangar and office space, a storage shed, aircraft parking ramp and vehicle parking lot as shown as Area 1 on Exhibit A;

**2. Term**

2.1 The term of this Agreement is one-year commencing on January 1, 2022. (“Term”).

**3. Monthly Rent**

- 3.1 The monthly “Rent” or initial Base Rent shall be \$2,774.07 due and payable in advance on the first day of each month of the Term.
- 3.2 A monthly rent discount of \$787.50 shall be applied to this lease. The discount period shall expire on December 31, 2022.
- 3.3 If this Lease is still in effect, beginning on July 1, 2023, and on each July 1 of each subsequent year, the Base Rent for the ensuing twelve (12) months shall be adjusted in the same percentage proportion that the January Consumer Price Index (CPI) of the San Francisco-Oakland-Hayward area of the United State Department of Labor, Bureau of Labor Statistics, increase or decreases over the January CPI of the base year of 2022. The annual CPI adjustment shall not exceed 2.5%.
- 3.4 All Rent shall be made payable to the “County of Santa Clara”, in the form of a company check, certified check, money order or wire transfer, due and payable on the first day of each month without exception, and delivered by hand delivery, by courier or by U.S. Mail (first class, postage prepaid) to the following address, or such other address as designated by COUNTY in writing:
- County of Santa Clara  
2500 Cunningham Ave  
San Jose, CA 95148
- 3.5 A Security Deposit of \$2,774.07 (equivalent to one-months’ rent) shall be payable by Lessee upon full execution of this Lease as security for the return of the Premises at the expiration of the term of the Lease in as good condition as when Lessee took possession of the Premises, normal wear and tear excepted, as well as the faithful, timely, and complete performance of all other terms, conditions, and covenants of this Lease. The Security Deposit may also be used in the event of termination of this Lease to apply to unpaid back due rent. The Parties agree that the Security Deposit may be used to cure any default or breach of this Lease without prejudice to any other remedies available to County and that County may increase the Security Deposit in the event of default or breach.
- 3.6 Late Charge as defined in the *Airports Schedule of Fees and Charges* as updated from time-to-time shall be automatically added to any rent, fee, or other charges not received by the County by the close of the business fifteen calendar days after due and owing. Lessee shall also pay interest on said unpaid balance at a rate of ten percent (10%) simple interest per annum, from the date said payment was due

and payable until paid in full.

3.7 Other Fee

Lessee shall pay Lessor the following fees in addition to Monthly Rent

3.7.1 10% of any rent received from non-aviation subtenants who shall be approved in writing by Lessor.

Lessor may perform a quarterly audit of Lessee's accounts pertaining to automobile rentals and all sub tenancies to verify amounts due. In the event such an audit discloses a discrepancy of \$1,000.00 or more owing to County in any given fiscal year, Lessee shall bear the audit expenses.

4. Use of Premises

4.1 This Lease grants Lessee the right and privilege to use the Premises for the purpose of operating a Fixed Based Operation (FBO) and shall be restricted to the uses listed herein ("Permitted Uses" or "Commercial Aeronautical Activities"). The Premises may not be used for any other purpose without County's prior written consent, which consent may be withheld in the sole discretion of County.

4.1.1 Throughout the term of this Lease, Lessee agrees that Lessee shall use the premises to provide the following Commercial Aeronautical Activities. Lessee shall be actively involved in providing these services and may not sublet or otherwise authorize another service provider to provide them, without the County's prior written consent, which consent shall not be withheld within the sole but reasonable discretion of County.

- a) Aircraft Maintenance and Repair;
- b) Aircraft Rental;
- c) Pilot Training; and
- d) Ground School for Flight Training

4.1.2 The following services may be provided by the Lessee or a secondary service provider. Use of a secondary service provider shall require written approval of the County:

- a) Aircraft Washing & Detailing;
- b) Aircraft Upholstery;
- c) Sale and/or Lease of New and Used Aircraft;
- d) Sale of New and/or Used Aircraft Parts, Supplies, Instruments and Accessories Avionics;

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- e) Special Flight Services including Aerial Sightseeing, Aerial Advertising and Aerial Photography;
  - f) Air Taxi/Charter;
  - g) Vehicular Rental
- 4.1.3 To the extent required by applicable Laws, Lessee shall employ sufficient personnel who are appropriately rated by the Federal Aviation Administration (“FAA”) for the work being performed and who hold airframe, power plant, or aircraft inspection ratings.
- 4.1.4 If Lessee desires to provide additional services, written approval of the County prior to commencement of such service is required.
- 4.1.5 Lessee agrees not to wash vehicles on the Premises in such a manner as to allow any cleaning detergent or water to reach the surface of the ground.
- 4.1.6 Fueling
- 4.1.6.1 Lessee is authorized to operate its own fuel truck for the sole purpose of fueling its own aircraft used in the course of its daily flight training and aircraft rental business, provided Lessee obtains a Commercial Self Fueling Permit.
  - 4.1.6.2 If authorized in writing by the County separately from this lease to conduct retail fueling operations, Lessee must obtain an approved Permit for Retail Sale or Distribution of Fuel and Lubricants from Lessor prior to exercises of its privilege of retail fuel sales.
  - 4.1.6.3 All fueling on the Premises conducted under the above sections or otherwise subject to all applicable federal, state, and local laws and regulations.
- 4.1.7 Licensee shall use the premises for legal commercial business purposes only. No residential use is permitted. Licensee action of non-compliance shall constitute an Agreement violation.
- 4.2 A Fee Schedule describing all charges and hourly rates for services for airport patrons shall be posted at the Premises by the Lessee in plain view and kept up to date. All rates and charges shall be reasonable and fairly applied to all users of Lessee’s services.
- 4.3 Business Hours.  
Except during reasonable periods for repairing, cleaning, decorating and planned

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closures (i.e. vacations, training, etc.), planned closures shall require prior written authorization of the Lessor. Lessee shall keep the Premises open for business during the days and hours listed below. During all operational hours, Lessee shall have at the Premises adequate and competent personnel necessary for the operation of Lessee's business.

4.3.1 Minimum business hours shall be Monday through Friday 9:00 A.M. to 5:00 P.M, Saturday 9:00 A.M. to 4:00 P.M. provided however, the aircraft maintenance and repair shall be entitled to set its business hours and days in Lessee's reasonable discretion

4.3.2 During non-operating hours, Lessee shall post or make otherwise known a telephone number or other contact provisions to permit an emergency call out.

4.3.3 Lessee is authorized to close during all County-recognized holidays.

4.4 Identification and Periodic Reporting of Stored Aircraft

Lessee shall, at all times, maintain a current list of all aircraft permanently based, hangered, either inside or outside the Premises (excluding such other areas of the Airport which are not part of the Premises), and containing for each aircraft the name and address of the aircraft owner, the aircraft type (make, model, year, if known), and the aircraft registration number. Starting on the Effective Date, the Lessee shall provide the County with a copy of such a list on the first day of every other month, and at any other time the County reasonably requests same.

4.5 Accident Reports

Lessee agrees to report any accidents at the Airport, including but not limited to, involving Lessee, or Lessee's guests which occur at the Airport to the Lessor in writing within 24 hours of Lessee's learning of such. Lessee is also responsible for notifying any federal, state or local authorities, as required by law.

4.6 Airport Access and Security

Security of the Premises must be maintained at all times. Lessee shall maintain secured controlled access at all entrances to the Premises to prevent unauthorized access onto Airport property. Lessee shall ensure the control of all movement of Lessee's operations and those of their guests/customers, including all deliveries. Lessee shall escort all guests, vendors and delivery personnel at all times. Lessee is responsible for the actions of its guests and delivery personnel until they exit the Airport. Accessible areas to the Airport from the Premises shall be controlled by the Lessee and all gate codes shall be kept confidential and shared with authorized individuals only, as appropriate. For clarity purposes, Lessee shall not

have the duty nor the responsibility for general Airport security, as such general Airport security shall remain the sole responsibility and obligation of Lessor.

4.7 Compliance with Laws.

The use of the Premises by Lessee and this Lease shall be subject to, and at all times be in compliance with, and/or subordinate to: (a) County Airports Rules and Regulations; (b) Airport Sponsor Grant Assurances and all other federal laws or FAA regulations, obligations, or guidance; (c) any and all applicable local, state and federal laws, rules, codes, ordinances, statutes, orders and regulations as same exist from time to time throughout the Term (collectively, "Laws"), including without limitation, the requirements of the Americans with Disabilities Act, a federal law codified at 42 U.S.C. 12101 et seq., including, but not limited to Title III thereof, all regulations and guidelines related thereto and all requirements of Title 24 of the State of California (collectively, the "ADA"); (d) any and all instruments, licenses, restrictions, easements or similar instruments, conveyances or encumbrances which are at any time made by or given by County relating to the Premises or the Property and/or the construction, from time to time, of any additional improvements on the Property (collectively, "Development Documents"), and (e) any and all documents, easements, covenants, conditions and restrictions, and similar instruments, together with any and all amendments and supplements thereto made, from time to time, each of which has been or hereafter is recorded in any official or public records with respect to the Premises or the Property (collectively, "Recorded Matters"), provided no such Development Documents or recorded Matters made or given after the date of this Lease shall (otherwise expand Lessee's obligations under this Lease, including but not limited to, Lessee's financial obligations.

4.8 Nonexclusive Rights

Lessee is allowed to use the Airport and its appurtenances together with all public areas and facilities, in common with others, on a non-exclusive basis and subject to the terms and conditions of this lease. Nothing in this Lease shall be construed to grant to Lessee any exclusive right to conduct any aeronautical activity at the Airport except of for the Premises.

4.9 Vehicle Parking and Storage

The premises may not be used for the maintenance or long-term storage of any vehicle not actively used in the day-to-day operations of the Lessees authorized use of premises. Any vehicle parked or stored on the premises must be fully operational, with the exception of short periods of time while the vehicle is waiting for service, in compliance with applicable Legal Requirements, and have current registration and insurance, as required.



For the purposes of this part, long-term storage is defined as any vehicle parked or stored on the premises for more than 14-days.

The Lessee has 14-days from the execution of this agreement to come into compliance with this requirement after which time, any vehicles parked on the premises in violation of this requirement may be towed and stored at the Lessee or vehicle owners expense.

#### 4.10 Housekeeping

Lessee agrees to keep Premises, including the exterior and interior portions of all windows, doors and all other glass and signs, orderly, neat, safe and clean and free from rubbish or dirt at all times. Lessee agrees not to store parts, supplies, tires, batteries, engine, oil outdoors. Trash and garbage shall only be kept in area designated by Lessor for such storage and covered at all times.

Lessee agrees to ensure that all operations on the Premises will be in accordance with the Lessors current Storm Water Pollution Prevention Program (SWPPP) and associated Best Business Practices.

### 5. Expenses

Lessee shall pay for all expenses related to Lessee's use and occupancy of the Premises including, but not limited to, electric, telephone, cable, internet, water, sewer, gas, trash collection, HVAC, possessory interest and related personal property taxes, and insurance. County shall cooperate with Lessee to the extent necessary to establish accounts in Lessee's name to facilitate Lessee's payment of expenses.

### 6. Indemnification and Insurance

Lessee shall comply with and provide insurance as set forth in Exhibit B-8 attached hereto.

### 7. Condition of Property

#### 7.1 Condition for Occupancy.

LESSEE accepts the Premises in an "as is", "with all faults" condition having first inspected the Airport and Premises at its own cost and expense. County makes no representations or warranties whatsoever concerning the legal, physical, environmental or any other condition of the Premises including improvements, facilities or utilities.

As required by Section 1938(a) of the California Civil Code, County discloses to Lessee that the Premises have not undergone inspection by a certified access

specialist (“CASp”). As required by Section 1938(e) of the California Civil Code, County also states that:

“A CASp can inspect the Premises and determine whether the Premises complies with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the Premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the Premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Premises.”

In furtherance of the foregoing, County and Lessee agree that any CASp inspection elected to be conducted by Lessee shall be done at Lessee’s sole cost and expense, and to the extent that a CASp inspection identifies any necessary repairs to correct violations of construction-related accessibility standards, the other provisions of this Lease shall govern which party has the responsibility to correct such violations.

## 7.2 Condition of Premises upon Surrender.

At the expiration of the Term or earlier termination or cancellation of this Lease, Lessee shall immediately vacate the Premises and remove all personal property to which Lessee or Lessee Affiliates hold proper and legal title and shall remove all trash and debris from the Premises associated with or related to Lessee’s use of the Premises. Should Lessee or Lessee Affiliates fail to remove or dispose of the personal property as provided, County may consider the property abandoned and may claim proper title to it or dispose of it at Lessee’s expense. However, under no circumstances shall County become or be considered the owner or operator of any Hazardous Material left on the Premises by Lessee or any of the Lessee Affiliates or others, regardless of whether County elects to initiate clean up or disposal of such Hazardous Material. Lessee and the Lessee Affiliates represent, warrant and agree that at all times, including after termination of this Lease, Lessee and the Lessee Affiliates shall be solely responsible and liable, as the owner and operator, for all Hazardous Material brought onto or generated on the Premises by Lessee or Lessee Affiliates during the Term.

## 7.3 Hazardous Materials.

### 7.3.1 Definition of Hazardous Materials.

"Hazardous Materials" means, but is not limited to, (a) any hazardous,

toxic or regulated wastes, materials or substances, and other pollutants or contaminants, which are or become regulated by any Environmental Laws, including but not limited to regulations pertaining to storage, labeling, handling, recordkeeping, reporting, transportation, use, disposal, handling or shipment; (b) petroleum, petroleum by products, gasoline, diesel fuel, crude oil or any fraction thereof; (c) asbestos and asbestos containing material, in any form, whether friable or nonfriable; (d) polychlorinated biphenyls; (e) radioactive materials; (f) lead and lead-containing materials; (g) any other material, waste or substance displaying toxic, reactive, ignitable or corrosive characteristics, as all such terms are used in their broadest sense, and are defined or become defined by any Environmental Law (defined below); (h) any materials which cause or threatens to cause a nuisance upon or waste to any portion of the Premises or any surrounding property; (i) any materials which pose or threaten to pose a hazard to the health or safety of persons on the Premises or any surrounding property; (j) any substances, ingredients, materials or products containing or that may contain blood borne pathogens, living or dead organisms, human remains or by-product, bio-waste or medical waste.

#### 7.3.2 Prohibition; Environmental Laws.

Lessee shall not be entitled to generate, manufacture, store, handle, transport to or from, use, dispose of, or ship to or from, any Hazardous Materials on, in, under or about any portion of the interior or exterior of the Premises or the Property ("Use") without, in each instance, obtaining County's prior written consent thereto. If County, in its sole discretion, consents to any Use then Lessee shall be permitted to engage in such Use only for those Hazardous Materials and in such quantities (A) that are necessary for Lessee's business, (B) to the extent disclosed in connection with County's approval, (C) expressly approved by County in writing, and (D) only to the extent that such Use fully and completely complies with all applicable Laws and only to the extent Lessee is at all times solely responsible and liable for such Use. Lessee warrants and represents that in all events such Use will be at all times, at Lessee's sole expense, cost and liability, in full and complete compliance with any and all applicable local, state and federal environmental, health, consumer safety, medical and safety-related laws, statutes, orders, standards, courts' decisions, ordinances, rules and regulations (as interpreted by judicial or administrative decisions), decrees, directives, guidelines, permits or permit conditions, currently existing and as amended, enacted, issued or adopted in the future (collectively, the "Environmental Laws"). Lessee warrants and represents that any changes to the type and/or quantities of Hazardous

Materials specified in the most recent HazMat Certificate may be implemented only with the prior written consent of County, which consent may be given or withheld in County's sole discretion. Lessee shall not be entitled nor permitted to install any tanks under, on or about the Premises for the storage of Hazardous Materials without the express written consent of County, which may be given or withheld in County's sole discretion. County shall have the right at all times during the Term to (i) inspect the Premises, (ii) conduct tests and investigations to determine whether Lessee is in compliance with this Section 7 or to determine if Hazardous Materials are present in, on or about the Premises, and (iii) request lists of all Hazardous Materials in use on, under or about any portion of the Premises. The cost of all such inspections, tests and investigations (collectively, "Inspections") shall be borne solely by Lessee, if Lessee or any of the Lessee Affiliates are responsible, by action or inaction, for the use or the presence of any contamination, release, emission, or source revealed by such Inspections. The aforementioned rights granted herein to County and its representatives shall not create (a) a duty on County's part to perform Inspections, monitor or otherwise observe the Premises or Lessee's and Lessee Affiliates' activities or Use with respect to Hazardous Materials, including without limitation, Lessee's operation or any remediation related thereto, or (b) liability on the part of County and its representatives for any Use, use or any Release, it being understood that Lessee shall be solely responsible for all liability in connection therewith. Lessor hereby consents to the use by Lessee of ordinary household cleaners, office supplies and janitorial supplies that may be used by Lessee in connection with maintaining the Premises as required under this Agreement.

### 7.3.3 Lessee's Environmental Obligations.

Lessee shall give to County immediate verbal and follow-up written notice of any contamination, exposure, deaths, injuries, illnesses, spills, releases, discharges, disposals, emissions, migrations, removals, shipments or transportation of, from or relating to Hazardous Materials on, under or about any portion of the Premises (collectively, a "Release"), provided that Lessee knows or reasonably should know of such Release. Lessee, at its sole cost and expense, covenants, warrants and represents to promptly investigate, remedy, clean up, remove, decontaminate, restore respond to, otherwise fully remediate, and resolve any and all claims relating to (including, without limitation, preparation of any feasibility studies or reports and the performance of any and all closures) any Release of Hazardous Materials caused by, arising from or related to the acts of

Lessee or the Lessee Affiliates such that the affected portions of the Premises are returned to the condition existing prior to the Release of such Hazardous Materials (the "Remediation"). Any such Remediation shall only be performed after Lessee has obtained County's prior written consent, which consent may not be unreasonably withheld so long as such actions would not potentially have a material adverse long-term or short-term effect on any portion of the Premises. Notwithstanding the foregoing, Lessee shall be entitled to respond immediately to an emergency at its sole cost, expense and liability, without first obtaining County's prior written consent. Lessee, at its sole cost and expense, shall conduct and perform, or cause to be conducted and performed, all Remediation as required by any Environmental Laws or any agencies or other governmental authorities having jurisdiction thereof. If Lessee fails to so promptly complete the Remediation, County may, but without obligation to do so, take any and all steps necessary to rectify the same and Lessee shall promptly reimburse County, upon written demand, for all costs and expenses to County of performing the Remediation. All such Remediation, as required herein, shall be performed in such a manner so as to enable County to make full economic use of the Premises and the other portions of the Premises after the satisfactory completion of such Remediation. County acknowledges that Lessee shall have no obligation or liability with respect to Hazardous Materials existing in the Premises prior to the Delivery Date so long as Lessee or the Lessee Affiliates, invitees or guests have not, by action or inaction, disturbed or caused the disturbance or Release of said existing Hazardous Materials. Lessee shall ensure that all necessary monitoring, safekeeping and security of and for the Premises be sufficient to ensure other parties do not, cannot and are prohibited from causing or contributing to any Release or Use not allowed herein.

#### 7.3.4 Environmental Indemnity.

Lessee shall protect, indemnify, defend (with legal counsel acceptable to County) and hold County and the County Affiliates (as defined in Section 13 herein below) harmless from and against any and all Claims (including, without limitation, diminution in value of any portion of the Premises and damages for the loss of or restriction on the use of rentable or usable space within the Premises) arising at any time during or after the Term in connection with, resulting from or related to, directly or indirectly, any and all Use, use, Release or Remediation arising out of, relating to or resulting from (directly or indirectly) any act or omission of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees.

Neither the written consent of County to any Use, use, Release or Remediation, in whole or in part, nor the strict compliance by Lessee with any or all Environmental Laws shall excuse Lessee from its obligations of indemnification pursuant hereto. Lessee shall not be relieved of its indemnification obligations under the provisions of this Section 7 due to County's status as either an "owner" or "operator" under any Environmental Laws. Lessee shall, at its sole cost and expense, promptly observe, perform, and comply with any and all Laws relating to the activities of Lessee. Lessee shall, protect, indemnify, defend (with counsel acceptable to County) and hold County and the other County Affiliates harmless from and against any and all Claims arising at any time during or after the Term in connection with or related to the use, presence or release of Hazardous Materials on, in or about any portion of the Premises resulting from or related to the acts or omissions of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees.

- 7.3.5 Lessee shall immediately deliver to County complete copies of all written notices, demands, or other written communications in a party's possession from any governmental or quasi-governmental authority, or any insurance company or board of fire underwriters or like or similar entities, regarding any Release on, to, about, upon, under, at, in, or from the Premises or the Property. Lessee shall immediately, upon receiving notice thereof, inform County in writing (and orally in the event of a Release or other emergency) of (1) any and all enforcement or Remediation, or other governmental, regulatory, or judicial acts or orders instituted, contemplated, or threatened pursuant to any Law affecting Hazardous Materials in, on, upon, over or under the Premises or the Property; and (2) all claims made or threatened by any third party relating to damage, contribution, cost recovery, compensation, loss or injury resulting from any actual, proposed, or threatened Use, use, Remediation or Release on, in, upon, at, under, from, to, or about the Premises.

## **8. Repairs and Maintenance**

- 8.1 Lessee's Repairs and Maintenance Obligations. Except for and subject to the Lessor's responsibilities as set forth in Section 12, Lessee shall, at its sole cost and expense, keep, manage, operate, and maintain all parts of the Premises in good, clean and safe condition and repair, promptly making all necessary repairs and replacements, all of the foregoing in accordance with the applicable provisions of this Lease, and to the reasonable satisfaction of the County including, but not limited to, repairing any damage (and replacing any property so

damaged if necessary) whether caused by Lessee and/or Lessee Affiliates or visitors, and restoring the Premises substantially to the condition existing prior to the occurrence of such damage. Without limiting any of the foregoing, Lessee shall be solely responsible for promptly maintaining, repairing and replacing, (a) all Lessee signage (b) all partitions, fixtures, equipment of the Premises and every part. All work within the scope of Lessee's qualified, insured staff shall be completed by said staff, which shall be subject to County's final approval. All work within the scope of a contractor or subcontractors, shall be completed by licensed, qualified, insured and bonded contractors and subcontractors reasonably approved by County. Additionally, Lessee shall be solely responsible for the performance of the regular removal of trash and debris on or about the Premises, and otherwise as needed or required by any Law.

- 8.2 If Lessee refuses or neglects to repair and maintain the Premises properly as required by this Lease and to the reasonable satisfaction of County, then upon not less than thirty (30) days written notice to Lessee (except in the event of an emergency), (i) County may, but without obligation to do so, at any time make such repairs or maintenance without County having any liability to Lessee for any loss or damage that may accrue to Lessee's property or to Lessee's business by reason thereof, except to the extent any damage is directly caused by the willful misconduct or gross negligence of County or its authorized agents and representatives and (ii) Lessee shall pay to County all of County's reasonable costs and expenses incurred therefor within thirty (30) days upon demand. Lessee's obligations under this Section 8 shall survive the expiration of the Term or earlier termination thereof. Lessee hereby waives any right to repair at the expense of County under any applicable Laws now or hereafter in effect.
- 8.3 Lessee expressly waives any and all claims against Lessor for compensation or damage for any and all loss, cost or expense sustained by reason of any defect, deficiency or impairment of any utility system, water supply system, draining or sewer system, heating or gas system, electrical apparatus or wires serving the premises, or the use or operation thereof.

## **9. Alterations**

- 9.1 Lessee may make alterations or improvements to the Premises only with the prior written consent of the County which may be granted or withheld in County's sole and absolute discretion. Upon expiration or termination of this Lease, any permitted alteration or improvements shall become the property of the County; provided, however, if County consents in its sole and absolute discretion, Lessee

may be permitted to remove its alterations and improvements but shall repair any and all damage caused by such installation and removal.

- 9.2 Lessee shall be responsible for and shall promptly repair any damage or destruction of the Property and the Premises caused by Lessee or Lessee's officers, agents, employees, contractors, invitees or licensees, reasonable wear and tear and casualty excepted.

**10. Damage or Condemnation**

If the Premises are materially damaged or destroyed by any cause or condemned, it is specifically acknowledged and agreed that County shall have no affirmative obligation to restore or replace the Premises, nor shall County have the obligation to contribute any funds to be used for such restoration or replacement. Lessee shall be responsible for the repair and restoration of its improvements, alterations and Lessee's property. If County elects not to restore or replace the Premises or portion thereof, Lessee or County may elect to terminate this Lease. Unless this Lease is terminated, in the case of material damage or destruction to the Premises (other than by any direct or indirect act(s) or omission(s) of Lessee or any of the Lessee Affiliates), a proportionate amount of the rent shall abate (calculated based on the portion of the Premises that are destroyed or damaged beyond use) until the Premises shall be so restored.

**11. Hazardous Materials Permit and Spill Plan**

Lessee shall comply with the requirements of the County's Hazardous Materials Permit and Storm Water Pollution Prevention Program (SWPPP).

Lessee shall prepare and maintain a written Spill Prevention Contingency and Control Plan (SPCC). The SPCC shall be reviewed and approved by the appropriate agency(s). The approved SPCC shall be kept current and a copy of the most current version shall be submitted to the County to be kept on file.

**12. Responsibilities**

12.1 Lessee Responsibilities

12.1.1 Report to County any suspected inappropriate activities at the Airport.

12.1.2 Monitor and report all safety concerns to County.

12.1.3 Keep Premises open during normal business hours.

12.1.4 Make available after-hours phone number for emergency issues that occur onsite and require Lessee's attention.



12.1.5 Maintain at least one restroom that is available for Lessee's clients during business hours.

## 12.2 Operations and Maintenance Responsibilities

The Lessee has the primary responsibility for the daily upkeep and maintenance of items related to the leasing of the Premises including any repairs or maintenance necessitated by the negligent or intentional acts or omissions of the Lessee or the employees, agents, or contractors of Lessee. Lessee shall perform the items designated as the responsibility of the Lessee in Section 12.2.1. Further, except for maintenance work expressly listed as the County's responsibilities in Section 12.2.2 (which shall be at County's sole cost and expense), it shall be Lessee's responsibility, at Lessee's sole cost and expense, to continually keep and maintain the Premises and all improvements, systems, and equipment located thereon (whether constructed by Lessee or County) clean and neat, free of waste material and debris, in good condition and repair and in a fully operational condition and to make all necessary and appropriate preventive maintenance, repairs and replacements. One restroom shall be kept open to the Lessee's clients at all times during business hours, and the Lessee shall be responsible for its cleaning and upkeep.

County and Lessee have agreed on the following division of responsibilities regarding maintenance of the Premises.

### 12.2.1 Lessee Responsibilities

- a) Non-Structural portions of the interior of premises of the building including windows, doors, carpets, tile, ceilings, floors and floor coverings.
- b) Janitorial services for and general upkeep of restrooms including restroom supplies.
- c) Interior electrical panels, including power from main electrical panel throughout the Premises, conduit and wiring, subpanels, power outlets and switches.
- d) Exterior of structures including roofs, sidings, gutters, drains, walkways, exterior doors, exterior painting.
- e) Asbestos Management
- f) Mold Remediation
- g) Termite and Rodent Infestation
- h) Fire systems, including sprinklers (heads and piping) and fire suppression equipment and devices.
- i) Interior and exterior light lamps, including wiring, light fixtures and light bulbs.

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- j) Fixed Base Operator signs and directories.
- k) Interior of structures including ceilings, walls, floors and waterproofing and sealing of floor penetrations.
- l) Interior locks.
- m) Hot water heater and refrigeration units.
- n) Common areas to be kept free and clear of debris.
- o) Landscaping
- p) Cleaning exterior of building, including rain gutters, sidewalks, vehicular parking lot and aircraft parking ramp.
- q) Interior and exterior fire extinguishers
- r) Telephone system
- s) Internet
- t) Communication and information technology
- u) Graffiti Abatement
- v) Pick up and disposal of Hazardous Waste, E-waste, Battery and Universal Waste
- w) Modifications in public use areas required to meet the Americans with Disabilities (ADA) standards.
- x) Heating, air condition, ventilation systems and associated controls.

**12.2.2 Lessor Responsibilities**

- a) Building identification and directory
- b) Exterior perimeter fence and gates

**13. Limitation of Liability and Indemnity**

13.1 Except to the extent of Claims (defined below) directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, Lessee agrees to protect, defend (with counsel reasonably acceptable to County) and hold County and County's lenders, partners, members, property management company (if other than County), agents, directors, officers, employees, representatives, contractors, successors and assigns and each of their respective partners, members, directors, officers, employees, representatives, agents, contractors, heirs, successors and assigns (collectively, the "County Affiliates") harmless and indemnify the County and County Affiliates from, for and against all liabilities, damages, demands, penalties, costs, claims, losses, judgments, charges arising from Lessee's and Lessee Affiliates' use of the Premises and/or Lessee's failure to perform any covenant or obligation of Lessee under this Lease. Lessee agrees that the obligations of Lessee herein shall survive the expiration or earlier termination of this Lease.

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- 13.2 Except to the extent of Claims directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, to the fullest extent permitted by law, Lessee agrees that neither County nor any of the County Affiliates shall at any time or to any extent whatsoever be liable, responsible or in any way accountable for any loss, liability, injury, death or damage to persons or property which at any time may be suffered or sustained by Lessee or by any person(s) whomsoever who may at any time be using, occupying or visiting the Premises, including, but not limited to, any acts, errors or omissions of any sublessees, subtenants, guests, invitees or occupants of the Premises. Lessee shall not, in any event or circumstance, be permitted to offset or otherwise credit against any payments of Rent required herein for matters for which County may be liable hereunder.
- 13.3 Notwithstanding any provision to the contrary contained in this Lease, at no time shall County be responsible or liable to the Lessee or the Lessee Affiliates for any lost profits, lost economic opportunities, punitive damages or any form of consequential damage of any kind or nature. Except as otherwise allowed or permissible by any other term or condition of this Lease including but not limited to Section 7 of this Lease, at no time shall Lessee be responsible or liable to the County for any lost profits or lost economic opportunities or punitive damages resulting from any actual or alleged breach by Lessee of its obligations under this Lease, provided that in no event shall County be precluded from exercising its remedies under Section 17 or any other provision of this Lease.

**14. Assignment and Subletting**

- 14.1 Lessee shall not assign, sublet, license or otherwise transfer or encumber all or any part or Lessee's interest in this Lease, the Premises or the Property without Lessor's prior written consent. Any attempted assignment, sublease or other transfer without Lessor's consent shall be void and of no force and effect, and shall, at the Lessors election, constitute an event of default hereunder.
- 14.2 Lessee shall submit the proposed written agreement between Lessee and the sublessee to County for review and evaluation. County may require that an application be completed and all relevant and applicable information relating to the requested sublease be provided to County for review and evaluation.
- 14.3 Sublessee may not occupy the Premises before County consents to the sublease in writing.

**15. Quiet Enjoyment**

So long as Lessee successfully complies at all times with all terms and conditions of this Lease, including the timely payment of all Rent, costs and fees when due, Lessee will be entitled to quiet enjoyment of the Premises.

**16. Right of Entry**

County or its authorized representatives shall have the right to enter the Premises during all business hours.

**17. Default and Remedies/Termination**

In addition to any other right to terminate this Lease, any of the following events or occurrences shall constitute a material breach of this Lease by Lessee, and shall be deemed an event of default upon the expiration of any stated period to cure said breach, at which time County may terminate this Lease and shall have all remedies available at law or in equity:

- 17.1. The failure by Lessee to make any timely payment required by this Lease in full within ten (10) business days after written notice from the County;
- 17.2. The failure by Lessee to observe or perform any covenant, condition or provision of this Lease when such failure continues beyond thirty (30) days after County gives Lessee written notice of breach; provided, however, that if the nature of such failure reasonably requires longer than thirty (30) days to cure, Lessee shall not be in default if it begins such cure in good faith and with due diligence within thirty (30) days of the notice of breach, and thereafter prosecutes such cure to completion in good faith and with due diligence, or as otherwise determined by County, in County's reasonable discretion. County reserves the right, however, to make a commercially reasonable determination that Lessee is or will be unable to satisfactorily comply with any term or condition of this Lease, and to deem any failure under this paragraph to be an event of default at the expiration of the thirty (30) day cure period (or longer as required herein);
- 17.3. Any attempted conveyance, assignment, mortgage or subletting of any or all of this Lease, the Premises or the Property, in which case there shall be no cure period;
- 17.4. Violation by Lessee of any applicable law, rule or regulation with respect to Lessee's use of the Property or the Premises beyond a ten (10) business cure period shall be a default of this Lease; intentional violation of any applicable law, rule or regulation by Lessee shall have no cure period;
- 17.5. Any of the following: a general assignment by Lessee for the benefit of Lessee's creditors; any voluntary filing, petition, or application by Lessee under any law relating to insolvency or bankruptcy, whether for a declaration of bankruptcy, a

reorganization, an arrangement, or otherwise; the abandonment of the Premises by Lessee without County's prior written consent (after Lessee's notice and opportunity to cure); or the dispossession of Lessee from the Property or the Premises (other than by County) by process of law, in which case there shall be no cure period;

- 17.6. Lessee's failure to comply with any term, condition or provision of the Lease, beyond any applicable cure period;
- 17.7. The appointment of a trustee or receiver to take possession of all or substantially all of Lessee's assets; or the attachment, execution or other judicial seizure of all or substantially all of Lessee's assets located at the Property or of Lessee's interest in this Lease, unless the appointment or attachment, execution, or seizure is discharged within thirty (30) days; or a petition for reorganization or arrangement of Lessee under any law relating to insolvency or bankruptcy, unless, in the case of any involuntary filing, it is dismissed within one hundred twenty (120) days. There shall be no cure period;
- 17.8. Lessee's absence from the Premises for thirty (30) consecutive calendar days, without prior written notice to County, during which time rent or other charges are delinquent, shall be deemed abandonment of the Premises. Such abandonment will be deemed cause for immediate termination without notice. County shall thereupon be authorized to enter and take possession and to remove and dispose of the property of Lessee or its guests without any liability whatsoever to County.

## **18. Audit**

Lessee shall maintain for a period of at least three (3) years following the end of each calendar or tax fiscal year to which they pertain, complete and accurate books and records relating to Lessee's use of the Premises, compliance with the Lease terms, Improvements, Lessee improvements and Tax Expenses. Such books and records shall be kept at the location where Lessee customarily maintains its books and records however such location shall be within the County of Santa Clara, State of California. After delivery to County of at least thirty (30) days prior written notice, County, at its sole cost and expense, or through any accountant designated by it, shall have the right to examine and/or audit the books and records evidencing such expenses for any of the previous three (3) calendar years, during County's reasonable business hours but not more frequently than once during any calendar year. Lessee shall fully cooperate with County or its representatives in such audits and shall promptly resolve any discrepancies between County and Lessee in the accounting of such expenses.

**19. Taxes**

19.1 Lessee shall pay and shall be liable and responsible for any and all Tax Expenses (as defined below) applicable to the Premises or its use. Prior to delinquency, Lessee shall pay any and all taxes and assessments levied upon the Premises, including, without limitation, (i) any and all taxes and assessments resulting from or relating to any increase in real property taxes attributable to any and all Improvements, fixtures, equipment or other improvements of any kind whatsoever placed or existing in, on or about the Premises and (ii) taxes and assessments levied or assessed upon or with respect to the possession, operation, use or occupancy of the Premises during the Lease Term. "Tax Expenses" means, without limitation, any form of tax and assessment (general, special, supplemental, ordinary or extraordinary), commercial rental tax, payments under any improvement bond or bonds, license fees, license tax, business license fee, rental tax, transaction tax or levy imposed by any authority having the direct or indirect power of tax (including any governmental, school, agricultural, lighting or other improvement district) as against any legal or equitable interest in the Premises or any other tax, fee, or excise, however described, including, but not limited to, any tax imposed in substitution (partially or totally) of any tax previously included within the definition of Tax Expenses and any cost and/or fee (including without limit attorneys' and appraisers' fees and court costs) incurred in calculating, contesting or negotiating any such taxes or assessments.

**19.2 Possessory Interest Tax.**

Lessee acknowledges that its interest in and/or use of the Premises may be subject to possessory interest taxation and that such taxation shall be Lessee's sole responsibility and liability.

**20. Notices**

Any notices which are required to be given hereunder, or which either party may wish to give to the other, shall be in writing and shall be effective for all purposes on any business day before 5:00 PM local time and on the next business day if received after 5:00 PM or on other than a business day, including without limitation, upon (i) receipt or refusal of receipt, in the case of personal delivery, (ii) the next business day after depositing notice with a reputable overnight courier, and (iii) three (3) days after depositing notice in with the United States Post Office for delivery by first class certified or registered mail, postage prepaid, and addressed as follows:

To COUNTY: County of Santa Clara  
2500 Cunningham Ave.  
San Jose, CA 95148

Or to such other place as COUNTY may designate by written notice.

To LESSEE: California In Nice dba Nice Air  
2575 Robert Fowler Way  
San Jose, CA 95148

Or to such other place as LESSEE may designate by written notice.

**21. Miscellaneous**

21.1 Waiver

The failure of County to insist upon strict performance of any of the terms, covenants, or conditions of this Lease shall not be deemed a waiver of any right or remedy that County may have, and shall not be deemed a waiver of County's right to require strict performance of all terms, covenants, and conditions thereafter, nor a waiver of any remedy for the subsequent breach of any of the terms, covenants, or conditions.

21.2 Severability and Governing Law

Any non-material provision of this Lease which shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect. This Lease, and all the rights and duties of the parties arising from or relating in any way to the subject matter of this Lease, shall be enforced, governed by and construed in accordance with the laws of the State of California (excluding any conflict of laws provisions that would refer to and apply the substantive laws of another jurisdiction). Lessee expressly agrees that any and all disputes, lawsuits or proceedings arising out of, relating to or in connection with this Lease, including any and all mediation or other alternative dispute resolution proceedings or settlements or negotiations,

shall be brought, disputed and litigated only in the Superior Court of the State of California in the County of Santa Clara or the United States District Court, Northern District of California, San Jose Division (and in no other), and Lessee hereby consents to the exclusive personal jurisdiction and venue of said court.

21.3 Entire Agreement

It is understood and agreed that there are no oral agreements between the parties hereto affecting this Lease and this Lease (including all exhibits and addenda) supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by County to Lessee with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. This Lease and any separate agreement executed by County and Lessee in connection with this Lease and dated of even date herewith (a) contain all of the terms, covenants, conditions, warranties and agreements of the parties relating in any manner to the rental, use and occupancy of the Premises, and (b) shall be considered to be the only agreement between the parties hereto and their representatives and agents. This Lease may not be modified, deleted or added to except by a writing signed by the parties hereto. All negotiations and oral agreements have been merged into and are included herein. There are no other representations or warranties between the parties, and all reliance with respect to representations is based totally upon the representations and agreements contained in this Lease. The parties acknowledge that (i) each party and/or its counsel have reviewed and revised this Lease, and (ii) no rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall be employed in the interpretation or enforcement of this Lease or any amendments or exhibits to this Lease or any document executed and delivered by either party in connection with this Lease.

21.4 Warranty of Authority

Lessor and Lessee each represent that the person executing this Lease on behalf of such party (i) is duly and validly authorized to do so on behalf of the entity it purports to so bind, and (ii) has full right and authority to enter into this Lease. Each party hereby warrants that this Lease is legal, valid and binding upon such party and enforceable against such party in accordance with its terms.

21.5 Joint and Several; Covenants and Conditions

If Lessee consists of more than one person or entity, the obligations of all such persons or entities shall be joint and several. Each provision to be performed by Lessee hereunder shall be deemed to be both a covenant and a condition.

21.6 California Public Records Act

The County is a public agency subject to the disclosure requirements of the



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California Public Records Act (“CPRA”). If Lessee’s proprietary information is contained in documents submitted to County, and Lessee claims that such information falls within one or more CPRA exemptions, then Lessee must clearly mark such information “CONFIDENTIAL AND PROPRIETARY,” and identify the specific lines containing the information. In the event of a request for such information, the County will use reasonable efforts to provide notice to Lessee prior to such disclosure. If Lessee contends that any documents are exempt from the CPRA and wishes to prevent disclosure, it is required, at its sole cost, liability and expense, to obtain a protective order, injunctive relief or other appropriate remedy from a court of law in Santa Clara County before the County’s deadline for responding to the CPRA request. If Lessee fails to obtain such remedy within County’s deadline for responding to the CPRA request, County may disclose the requested information even if marked “CONFIDENTIAL AND PROPRIETARY” without any liability or obligation to Lessee or any third parties.

21.7 Waiver of Jury Trial

To the extent permitted by applicable law, the parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other on any matters whatsoever arising out of or in any way related to this Lease, the relationship of County and Lessee, Lessee's use or occupancy of the Premises and/or any claim of injury, loss or damage.

21.8 Headings

Section headings shall not be used in construing this Lease.

21.9 Conflict of Interest

Lessee represents, warrants and agrees that it shall comply, and require its employees, agents, representatives, contractors, consultants, sub-consultants and subcontractors (collectively, “Lessee Affiliates”) to comply, with all applicable (i) requirements governing avoidance of impermissible client conflicts; and (ii) federal, state and local conflict of interest laws and regulations including, without limitation, California Government Code section 1090 et. seq., the California Political Reform Act (California Government Code section 87100 et. seq.) and the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations section 18700 et. seq.). Failure to do so constitutes a material breach of this Lease and is grounds for immediate termination of this Lease by the County.

21.10 Relationship of Parties

The parties acknowledge and agree that nothing set forth in this Lease shall be deemed or construed to render the parties as joint venturers, partners, associations,

master-servant, agents, a joint enterprise, employer-employee, lender-borrower or contractor. Lessee shall have no authority to employ any person as employee or agent on behalf of County for any purpose. Neither Lessee nor any person using or involved in or participating in any actions or inactions relating to the Premises or this Lease shall be deemed an employee or agent of County, nor shall any such person or entity represent himself, herself or itself to others as an employee or agent of County. Lessee's status, as well as the status of its officers, agents or employees, including personnel in the administration and performance of services under this Lease, shall be in an independent capacity and not as an employee or agent of the County.

21.11 No Third-Party Rights

This Lease shall not be construed as nor deemed to be an agreement for the benefit of any third party or parties, and no third party or parties shall have any right of action herein for any cause whatsoever.

21.12 Signs

All signs and graphics of every kind visible in or from public view shall be subject to (i) County's prior written approval, and (ii), and in compliance with, all applicable Laws, Development Documents, Recorded Matters, Rules and Regulations, and County's sign criteria ("Sign Criteria") as same may exist from time to time.

21.13 Brokerage Commission

Lessee represents and warrants for the benefit of County that it has had no dealings with any real estate broker, agent or finder in connection with the Premises and/or the negotiation of this Lease, and that it knows of no other real estate broker, agent or finder who is or might be entitled to a real estate brokerage commission or finder's fee in connection with this Lease or otherwise based upon contacts between the claimant and Lessee.

21.14 OFAC

Lessee represents and warrants to County that: (i) Lessee is not acting, and shall not act, directly or indirectly, for or on behalf of any person, group, entity, or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially Designated National and Blocked Person," or other banned or blocked person, entity, nation, or transaction pursuant to any law, order, rule or regulation enforced or administered by the federal Office of Foreign Assets Control; and (ii) Lessee is not engaged in this transaction, directly or indirectly, on behalf of, or instigating or facilitating this transaction, directly or indirectly, on behalf of any such person, group, entity, or nation.

#### 21.15 Non-Discrimination

Lessee and Lessee Affiliates shall each comply with all applicable federal, state and local laws and regulations including the County of Santa Clara's policies concerning nondiscrimination and equal opportunity in contracting. Such laws include but are not limited to the following: Title VII of the Civil Rights Act of 1964, as amended; Americans with Disabilities Act of 1990; The Rehabilitation Act of 1973 (Sections 503 and 504); California Fair Employment and Housing Act (Government Code Sections 12900 et seq.); California Labor Code sections 1101 and 1102. Lessee and each of the Lessee Affiliates shall not discriminate against any subcontractor, employee, or applicant for employment because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organization affiliations, or marital status in the recruitment, selection for training including apprenticeship, hiring, employment, utilization, promotion, layoff, rates of pay or other forms of compensation. Nor shall Lessee or any of the Lessee Affiliates discriminate in the provision of services provided under this Lease because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organizational affiliations, or marital status.

#### 21.16 No Relocation Assistance

It is understood that this Lease is intended to give Lessee a temporary conditional use of the Premises and that Lessee shall not be entitled to relocation benefits, assistance, damages (liquidated or otherwise), costs, claims or fees from County upon expiration, termination or cancellation of this Lease, except as expressly provided for elsewhere in this Lease.

#### 21.17 Prevailing Wage

If the work to be performed by Lessee or any of its contractors hereunder is a public work as defined in California Labor Code Section 1720 et seq., then Lessee and its contractors must comply with the payment of prevailing wages and the employment of apprentices as set forth in Section 1770, et al. and following of the Labor Code. Lessee is solely liable for failing to comply with prevailing wage laws.

#### 21.18 Wage Theft Prevention

These provisions are in relation to any work performed by Lessee or Lessee Affiliates under the terms or conditions of the Lease only.

Compliance with Wage and Hour Laws. Lessee and the Lessee Affiliates who are involved in the work must comply with all applicable federal, state, and local wage and hour laws. Applicable laws may include, but are not limited to, the

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Federal Fair Labor Standards Act, the California Labor Code, and any local Minimum Wage Ordinance or Living Wage Ordinance.

- 21.18.1 Final Judgments, Decisions, and Orders. For purposes of this Section, a “final judgment, decision, or order” refers to one for which all appeals have been exhausted. Relevant investigatory government agencies include: the federal Department of Labor, the California Division of Labor Standards Enforcement, a local enforcement agency, or any other government entity tasked with the investigation and enforcement of wage and hour laws.
- 21.18.2 Prior Judgments against Lessee and/or its contractors. BY SIGNING THIS LEASE, LESSEE AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS, OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY FINDING—IN THE FIVE YEARS PRIOR TO EXECUTING THIS LEASE—THAT LESSEE OR ANY OF THE LESSEE AFFILIATES HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS.
- 21.18.3 LESSEE FURTHER AFFIRMS THAT IT AND/OR THE LESSEE AFFILIATES HAVE SATISFIED AND COMPLIED WITH—OR HAS REACHED LEASE WITH THE COUNTY REGARDING THE MANNER IN WHICH IT WILL SATISFY—ANY SUCH JUDGMENTS, DECISIONS, OR ORDERS.
- 21.18.4 Judgments During Term of Lease. If at any time during the Term of this Lease, a court or investigatory government agency issues a final judgment, decision, or order finding that Lessee or any contractor it uses to perform work under this Lease has violated any applicable wage and hour law, or Lessee learns of such a judgment, decision, or order that was not previously disclosed, Lessee must inform the Office of the County Executive-Office of Countywide Contracting Management (OCCM), no more than 15 days after the judgment, decision, or order becomes final or of learning of the final judgment, decision, or order. Lessee and its contractors shall promptly satisfy and comply with any such judgment, decision, or order, and shall provide the Office of the County Executive-OCCM with documentary evidence of compliance with the final judgment, decision, or order within 5 days of satisfying the final judgment, decision, or order. The County reserves the right to require Lessee to enter into an agreement with the County regarding the manner in which any such final judgment, decision, or order will be satisfied.
- 21.18.5 County’s Right to Withhold Payment. Where Lessee or any contractor it employs to perform work under this Lease has been found in violation of any applicable wage and hour law by a final judgment,

**LEASE AGREEMENT BETWEEN SHERIDAN COUNTY OF SANTA CLARA AND  
CALIFORNIA IN NICE DBA NICE AIR**

decision, or order of a court or government agency, the County reserves the right to withhold payment to Lessee until such judgment, decision, or order has been satisfied in full.

- 21.18.6 **Material Breach.** Failure to comply with any part of this Section constitutes a material breach of the Lease. Such breach may serve as a basis for termination of this Lease and/or any other remedies available under this Lease and/or law.
- 21.18.7 **Notice to County Related to Wage Theft Prevention.** Notice provided to the Office of the County Executive as required under this Section shall be addressed to: Office of the County Executive—OCCM; 70 West Hedding Street; East Wing, 11th Floor; San José, CA 95110. The Notice provisions of this Section are separate from any other notice provisions in this Lease and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.

21.19 Counterparts

This Lease, and any amendments thereto, may be executed in several counterparts, and all of such counterparts so executed together shall be deemed to constitute one and the same agreement, and each such counterpart shall be deemed to be an original. Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of this agreement, or an electronically signed agreement, has the same force and legal effect as the agreement executed with an original ink signature. The term “electronic copy of this agreement” refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of the original signed agreement in a portable document format. The term “electronically signed agreement” means the agreement that is executed by applying an electronic signature using technology approved by the County.

21.20 County Sustainability Policies

In performing any work on the Premises, Lessee will use best efforts to substantially comply with Lessor's Sustainability policies found in Board of Supervisors Policy Manual 8.1 through and including 8.4, as amended from time to time by Lessor, and Lessor's Green Cleaning Policy Administrative Guidelines, as amended from time to time by Lessor.

21.21 Integrated Pest Management Ordinance

When conducting or allowing the performance of any pest management practices or pesticide uses, Lessee, its contractors, employees, agents and representatives, will use best efforts to substantially comply with and require any pest management service providers to comply with the County Integrated Pest Management ordinance.

21.22 County No-Smoking Policy

Lessee and Lessee Affiliates, guests and invitees, shall not smoke on, in or around the Property or Premises unless expressly allowed by applicable smoking laws.

### 21.23 Liens

Except as expressly authorized in a term or condition found elsewhere in this Lease, Lessee shall keep the Premises free and clear of all liens and encumbrances. If, because of any act or omission of Lessee or any of its employees, officers, agents, representatives or volunteers, any mechanic's lien or other lien, charge or order for the payment of money are filed against any portion of the Premises, structures, or Alterations, Lessee shall at its own expense, cause the same to be discharged of record within thirty (30) days after written notice from Lessor; and, Lessee shall indemnify, defend and save harmless Lessor against all resulting costs, liabilities, suits, claims and demands, including legal fees and court costs.

### 21.24 Prohibition of Alcohol and Controlled Substances

Sale, promotion or advertising of any type of alcohol or controlled substances are strictly prohibited on, in or near the Premises.

### 21.25 Timing

In the event the time for performance of any obligation under this Lease shall fall on a Saturday, Sunday or court holiday, such time for performance shall be extended to the next business day. "Business day" means days other than Saturdays, Sundays, and federal and state legal holidays in the state of California.

### 21.26 Survival

Those provisions which by their nature should survive termination, cancellation or expiration of this Lease, shall so survive.

### 21.27 Recitals and Exhibits

The Recitals stated above, and all Exhibits referenced in this Lease, are incorporated herein and made a part of this Lease by this reference.

## 22. FAA Assurance

Should Lessee provide any service to the public, including subleasing, at the airport, Lessee shall:

- 22.1 Furnish said services on a fair, equal, and not unjustly discriminatory to all users thereof; and
- 22.2 Charge fair, reasonable, and not unjustly discriminatory prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

LEASE AGREEMENT BETWEEN COUNTY OF SANTA CLARA AND CALIFORNIA IN NICE DBA NICE AIR

IN WITNESS WHEREOF, the parties hereto have executed this Lease as follows:

LESSOR:

LESSEE:

County of Santa Clara, a political subdivision of the State of California

California in Nice DBA Nice Air

DocuSigned by: Harry Freitas  
6DC28984CB2D46D...  
HARRY FREITAS  
Director, Roads and Airports Department

  
HIROYASU TAKAI  
Title: president

Date: 1/3/2022

Date: 12/31/2021

APPROVED AS TO FORM AND LEGALITY:

DocuSigned by: Chris Cheloden  
B179ECE83EEF431...  
Christopher R. Cheloden  
Lead Deputy County Counsel




 Leasehold Boundary



EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

EXHIBIT B-8

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and

EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County

EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit A.4

**LEASE AGREEMENT  
BETWEEN COUNTY OF SANTA CLARA AND  
SKYWORKS AVIATION DBA TRADEWINDS AVIATION**

This Lease Agreement (“Lease”) is entered into by and between the COUNTY OF SANTA CLARA, a political subdivision of the State of California (referred to interchangeably as “COUNTY” or “Lessor”) and Skyworks Aviation DBA Tradewinds Aviation (“Lessee”), effective as of January 1, 2022 (the “Effective Date”).

**RECITALS**

- A. COUNTY is the owner of Reid-Hillview Airport (“Airport”).
- B. Lessee desires to lease from Lessor and Lessor desires to lease to Lessee a portion of the Airport located at 2505 East Cunningham Avenue, San Jose, California, San José California for the purpose of engaging in certain Commercial Aeronautical Activities, as defined below (the “Premises”). The Premises is as generally described on the attached Exhibit A that is incorporated herein by this reference.

**AGREEMENT**

**NOW THEREFORE**, for and in consideration of the mutual promises, covenants and conditions set forth below, COUNTY and LESSEE agree to the foregoing and as follows:

**1. Premises**

COUNTY agrees to lease to LESSEE and LESSEE agrees to lease from COUNTY the Premises, subject to the terms and conditions of this Lease.

1.1 The Premises consists of the following:

1.1.1 Land space of approximately 104,108 square feet that consists of a commercial hangar and office space, a storage shed, aircraft parking ramp and vehicle parking lot as shown as Area 1 on Exhibit A;

**2. Term**

2.1 The term of this Agreement is one-year commencing on January 1, 2022. (“Term”).

**3. Monthly Rent**

3.1 The monthly “Rent” or initial Base Rent shall be \$6,639.72 due and payable in advance on the first day of each month of the Term.

3.2 A monthly rent discount of \$1,923.08 shall be applied to this lease. The discount period shall expire on December 31, 2022.

- 3.3 If this Lease is still in effect, beginning on July 1, 2023, and on each July 1 of each subsequent year, the Base Rent for the ensuing twelve (12) months shall be adjusted in the same percentage proportion that the January Consumer Price Index (CPI) of the San Francisco-Oakland-Hayward area of the United State Department of Labor, Bureau of Labor Statistics, increase or decreases over the January CPI of the base year of 2022. The annual CPI adjustment shall not exceed 2.5%.
- 3.4 All Rent shall be made payable to the "County of Santa Clara", in the form of a company check, certified check, money order or wire transfer, due and payable on the first day of each month without exception, and delivered by hand delivery, by courier or by U.S. Mail (first class, postage prepaid) to the following address, or such other address as designated by COUNTY in writing:

County of Santa Clara  
2500 Cunningham Ave  
San Jose, CA 95148

- 3.5 A Security Deposit of \$6,639.72 (equivalent to one-months' rent) shall be payable by Lessee upon full execution of this Lease as security for the return of the Premises at the expiration of the term of the Lease in as good condition as when Lessee took possession of the Premises, normal wear and tear excepted, as well as the faithful, timely, and complete performance of all other terms, conditions, and covenants of this Lease. The Security Deposit may also be used in the event of termination of this Lease to apply to unpaid back due rent. The Parties agree that the Security Deposit may be used to cure any default or breach of this Lease without prejudice to any other remedies available to County and that County may increase the Security Deposit in the event of default or breach.
- 3.6 Late Charge as defined in the *Airports Schedule of Fees and Charges* as updated from time-to-time shall be automatically added to any rent, fee, or other charges not received by the County by the close of the business fifteen calendar days after due and owing. Lessee shall also pay interest on said unpaid balance at a rate of ten percent (10%) simple interest per annum, from the date said payment was due and payable until paid in full.

3.7 Other Fee

Lessee shall pay Lessor the following fees in addition to Monthly Rent

- 3.7.1 10% of any rent received from non-aviation subtenants who shall be approved in writing by Lessor.

Lessor may perform a quarterly audit of Lessee's accounts pertaining to automobile rentals and all sub tenancies to verify amounts due. In the event such



an audit discloses a discrepancy of \$1,000.00 or more owing to County in any given fiscal year, Lessee shall bear the audit expenses.

#### **4. Use of Premises**

4.1 This Lease grants Lessee the right and privilege to use the Premises for the purpose of operating a Fixed Based Operation (FBO) and shall be restricted to the uses listed herein (“Permitted Uses” or “Commercial Aeronautical Activities”). The Premises may not be used for any other purpose without County’s prior written consent, which consent may be withheld in the sole discretion of County.

4.1.1 Throughout the term of this Lease, Lessee agrees that Lessee shall use the premises to provide the following Commercial Aeronautical Activities. Lessee shall be actively involved in providing these services and may not sublet or otherwise authorize another service provider to provide them, without the County’s prior written consent, which consent shall not be withheld within the sole but reasonable discretion of County.

- a) Aircraft Maintenance and Repair;
- b) Aircraft Rental;
- c) Pilot Training; and
- d) Ground School for Flight Training

4.1.2 The following services may be provided by the Lessee or a secondary service provider. Use of a secondary service provider shall require written approval of the County:

- a) Aircraft Washing & Detailing;
- b) Aircraft Upholstery;
- c) Sale and/or Lease of New and Used Aircraft;
- d) Sale of New and/or Used Aircraft Parts, Supplies, Instruments and Accessories Avionics;
- e) Special Flight Services including Aerial Sightseeing, Aerial Advertising and Aerial Photography;
- f) Air Taxi/Charter;
- g) Vehicular Rental

4.1.3 To the extent required by applicable Laws, Lessee shall employ sufficient personnel who are appropriately rated by the Federal Aviation Administration (“FAA”) for the work being performed and who hold airframe, power plant, or aircraft inspection ratings.

4.1.4 If Lessee desires to provide additional services, written approval of the County prior to commencement of such service is required.

- 4.1.5 Lessee agrees not to wash vehicles on the Premises in such a manner as to allow any cleaning detergent or water to reach the surface of the ground.
- 4.1.6 Fueling
- 4.1.6.1 Lessee is authorized to operate its own fuel truck for the sole purpose of fueling its own aircraft used in the course of its daily flight training and aircraft rental business, provided Lessee obtains a Commercial Self Fueling Permit.
- 4.1.6.2 If authorized in writing by the County separately from this lease to conduct retail fueling operations, Lessee must obtain an approved Permit for Retail Sale or Distribution of Fuel and Lubricants from Lessor prior to exercises of its privilege of retail fuel sales.
- 4.1.6.3 All fueling on the Premises conducted under the above sections or otherwise subject to all applicable federal, state, and local laws and regulations.
- 4.1.7 Licensee shall use the premises for legal commercial business purposes only. No residential use is permitted. Licensee action of non-compliance shall constitute an Agreement violation.
- 4.2 A Fee Schedule describing all charges and hourly rates for services for airport patrons shall be posted at the Premises by the Lessee in plain view and kept up to date. All rates and charges shall be reasonable and fairly applied to all users of Lessee's services.
- 4.3 Identification and Periodic Reporting of Stored Aircraft  
Lessee shall, at all times, maintain a current list of all aircraft permanently based, hangered, either inside or outside the Premises (excluding such other areas of the Airport which are not part of the Premises), and containing for each aircraft the name and address of the aircraft owner, the aircraft type (make, model, year, if known), and the aircraft registration number. Starting on the Effective Date, the Lessee shall provide the County with a copy of such a list on the first day of every other month, and at any other time the County reasonably requests same.
- 4.4 Accident Reports  
Lessee agrees to report any accidents at the Airport, including but not limited to, involving Lessee, or Lessee's guests which occur at the Airport to the Lessor in writing within 24 hours of Lessee's learning of such. Lessee is also responsible for notifying any federal, state or local authorities, as required by law.

#### 4.5 Airport Access and Security

Security of the Premises must be maintained at all times. Lessee shall maintain secured controlled access at all entrances to the Premises to prevent unauthorized access onto Airport property. Lessee shall ensure the control of all movement of Lessee's operations and those of their guests/customers, including all deliveries. Lessee shall escort all guests, vendors and delivery personnel at all times. Lessee is responsible for the actions of its guests and delivery personnel until they exit the Airport. Accessible areas to the Airport from the Premises shall be controlled by the Lessee and all gate codes shall be kept confidential and shared with authorized individuals only, as appropriate. For clarity purposes, Lessee shall not have the duty nor the responsibility for general Airport security, as such general Airport security shall remain the sole responsibility and obligation of Lessor.

#### 4.6 Compliance with Laws.

The use of the Premises by Lessee and this Lease shall be subject to, and at all times be in compliance with, and/or subordinate to: (a) County Airports Rules and Regulations; (b) Airport Sponsor Grant Assurances and all other federal laws or FAA regulations, obligations, or guidance; (c) any and all applicable local, state and federal laws, rules, codes, ordinances, statutes, orders and regulations as same exist from time to time throughout the Term (collectively, "Laws"), including without limitation, the requirements of the Americans with Disabilities Act, a federal law codified at 42 U.S.C. 12101 et seq., including, but not limited to Title III thereof, all regulations and guidelines related thereto and all requirements of Title 24 of the State of California (collectively, the "ADA"); (d) any and all instruments, licenses, restrictions, easements or similar instruments, conveyances or encumbrances which are at any time made by or given by County relating to the Premises or the Property and/or the construction, from time to time, of any additional improvements on the Property (collectively, "Development Documents"), and (e) any and all documents, easements, covenants, conditions and restrictions, and similar instruments, together with any and all amendments and supplements thereto made, from time to time, each of which has been or hereafter is recorded in any official or public records with respect to the Premises or the Property (collectively, "Recorded Matters"), provided no such Development Documents or recorded Matters made or given after the date of this Lease shall (otherwise expand Lessee's obligations under this Lease, including but not limited to, Lessee's financial obligations.

#### 4.7 Nonexclusive Rights

Lessee is allowed to use the Airport and its appurtenances together with all public areas and facilities, in common with others, on a non-exclusive basis and subject to the terms and conditions of this lease. Nothing in this Lease shall be construed to grant to Lessee any exclusive right to conduct any aeronautical activity at the Airport except of for the Premises.

#### 4.8 Vehicle Parking and Storage

The premises may not be used for the maintenance or long-term storage of any vehicle not actively used in the day-to-day operations of the Lessees authorized use of premises. Any vehicle parked or stored on the premises must be fully operational, with the exception of short periods of time while the vehicle is waiting for service, in compliance with applicable Legal Requirements, and have current registration and insurance, as required.

For the purposes of this part, long-term storage is defined as any vehicle parked or stored on the premises for more than 14-days.

The Lessee has 14-days from the execution of this agreement to come into compliance with this requirement after which time, any vehicles parked on the premises in violation of this requirement may be towed and stored at the Lessee or vehicle owners expense.

#### 4.9 Housekeeping

Lessee agrees to keep Premises, including the exterior and interior portions of all windows, doors and all other glass and signs, orderly, neat, safe and clean and free from rubbish or dirt at all times. Lessee agrees not to store parts, supplies, tires, batteries, engine, oil outdoors. Trash and garbage shall only be kept in area designated by Lessor for such storage and covered at all times.

Lessee agrees to ensure that all operations on the Premises will be in accordance with the Lessors current Storm Water Pollution Prevention Program (SWPPP) and associated Best Business Practices.

### 5. Expenses

Lessee shall pay for all expenses related to Lessee's use and occupancy of the Premises including, but not limited to, electric, telephone, cable, internet, water, sewer, gas, trash collection, HVAC, possessory interest and related personal property taxes, and insurance. County shall cooperate with Lessee to the extent necessary to establish accounts in Lessee's name to facilitate Lessee's payment of expenses.

### 6. Indemnification and Insurance

Lessee shall comply with and provide insurance as set forth in Exhibit B attached hereto.

### 7. Condition of Property

#### 7.1 Condition for Occupancy.

LESSEE accepts the Premises in an "as is", "with all faults" condition having first inspected the Airport and Premises at its own cost and expense. County makes no representations or warranties whatsoever concerning the legal, physical,

environmental or any other condition of the Premises including improvements, facilities or utilities.

As required by Section 1938(a) of the California Civil Code, County discloses to Lessee that the Premises have not undergone inspection by a certified access specialist (“CASp”). As required by Section 1938(e) of the California Civil Code, County also states that:

“A CASp can inspect the Premises and determine whether the Premises complies with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the Premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the Premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Premises.”

In furtherance of the foregoing, County and Lessee agree that any CASp inspection elected to be conducted by Lessee shall be done at Lessee’s sole cost and expense, and to the extent that a CASp inspection identifies any necessary repairs to correct violations of construction-related accessibility standards, the other provisions of this Lease shall govern which party has the responsibility to correct such violations.

7.2 Condition of Premises upon Surrender.

At the expiration of the Term or earlier termination or cancellation of this Lease, Lessee shall immediately vacate the Premises and remove all personal property to which Lessee or Lessee Affiliates hold proper and legal title and shall remove all trash and debris from the Premises associated with or related to Lessee’s use of the Premises. Should Lessee or Lessee Affiliates fail to remove or dispose of the personal property as provided, County may consider the property abandoned and may claim proper title to it or dispose of it at Lessee’s expense. However, under no circumstances shall County become or be considered the owner or operator of any Hazardous Material left on the Premises by Lessee or any of the Lessee Affiliates or others, regardless of whether County elects to initiate clean up or disposal of such Hazardous Material. Lessee and the Lessee Affiliates represent, warrant and agree that at all times, including after termination of this Lease, Lessee and the Lessee Affiliates shall be solely responsible and liable, as the owner and operator, for all Hazardous Material brought onto or generated on the Premises by Lessee or Lessee Affiliates during the Term.

### 7.3 Hazardous Materials.

#### 7.3.1 Definition of Hazardous Materials.

"Hazardous Materials" means, but is not limited to, (a) any hazardous, toxic or regulated wastes, materials or substances, and other pollutants or contaminants, which are or become regulated by any Environmental Laws, including but not limited to regulations pertaining to storage, labeling, handling, recordkeeping, reporting, transportation, use, disposal, handling or shipment; (b) petroleum, petroleum by products, gasoline, diesel fuel, crude oil or any fraction thereof; (c) asbestos and asbestos containing material, in any form, whether friable or nonfriable; (d) polychlorinated biphenyls; (e) radioactive materials; (f) lead and lead-containing materials; (g) any other material, waste or substance displaying toxic, reactive, ignitable or corrosive characteristics, as all such terms are used in their broadest sense, and are defined or become defined by any Environmental Law (defined below); (h) any materials which cause or threatens to cause a nuisance upon or waste to any portion of the Premises or any surrounding property; (i) any materials which pose or threaten to pose a hazard to the health or safety of persons on the Premises or any surrounding property; (j) any substances, ingredients, materials or products containing or that may contain blood borne pathogens, living or dead organisms, human remains or by-product, bio-waste or medical waste.

#### 7.3.2 Prohibition; Environmental Laws.

Lessee shall not be entitled to generate, manufacture, store, handle, transport to or from, use, dispose of, or ship to or from, any Hazardous Materials on, in, under or about any portion of the interior or exterior of the Premises or the Property ("Use") without, in each instance, obtaining County's prior written consent thereto. If County, in its sole discretion, consents to any Use then Lessee shall be permitted to engage in such Use only for those Hazardous Materials and in such quantities (A) that are necessary for Lessee's business, (B) to the extent disclosed in connection with County's approval, (C) expressly approved by County in writing, and (D) only to the extent that such Use fully and completely complies with all applicable Laws and only to the extent Lessee is at all times solely responsible and liable for such Use. Lessee warrants and represents that in all events such Use will be at all times, at Lessee's sole expense, cost and liability, in full and complete compliance with any and all applicable local, state and federal environmental, health, consumer safety, medical and safety-related laws, statutes, orders, standards, courts' decisions, ordinances, rules and regulations (as interpreted by judicial or administrative decisions), decrees, directives, guidelines, permits or permit conditions, currently existing and as amended, enacted, issued or adopted

in the future (collectively, the "Environmental Laws"). Lessee warrants and represents that any changes to the type and/or quantities of Hazardous Materials specified in the most recent HazMat Certificate may be implemented only with the prior written consent of County, which consent may be given or withheld in County's sole discretion. Lessee shall not be entitled nor permitted to install any tanks under, on or about the Premises for the storage of Hazardous Materials without the express written consent of County, which may be given or withheld in County's sole discretion. County shall have the right at all times during the Term to (i) inspect the Premises, (ii) conduct tests and investigations to determine whether Lessee is in compliance with this Section 7 or to determine if Hazardous Materials are present in, on or about the Premises, and (iii) request lists of all Hazardous Materials in use on, under or about any portion of the Premises. The cost of all such inspections, tests and investigations (collectively, "Inspections") shall be borne solely by Lessee, if Lessee or any of the Lessee Affiliates are responsible, by action or inaction, for the use or the presence of any contamination, release, emission, or source revealed by such Inspections. The aforementioned rights granted herein to County and its representatives shall not create (a) a duty on County's part to perform Inspections, monitor or otherwise observe the Premises or Lessee's and Lessee Affiliates' activities or Use with respect to Hazardous Materials, including without limitation, Lessee's operation or any remediation related thereto, or (b) liability on the part of County and its representatives for any Use, use or any Release, it being understood that Lessee shall be solely responsible for all liability in connection therewith. Lessor hereby consents to the use by Lessee of ordinary household cleaners, office supplies and janitorial supplies that may be used by Lessee in connection with maintaining the Premises as required under this Agreement.

### 7.3.3 Lessee's Environmental Obligations.

Lessee shall give to County immediate verbal and follow-up written notice of any contamination, exposure, deaths, injuries, illnesses, spills, releases, discharges, disposals, emissions, migrations, removals, shipments or transportation of, from or relating to Hazardous Materials on, under or about any portion of the Premises (collectively, a "Release"), provided that Lessee knows or reasonably should know of such Release. Lessee, at its sole cost and expense, covenants, warrants and represents to promptly investigate, remedy, clean up, remove, decontaminate, restore respond to, otherwise fully remediate, and resolve any and all claims relating to (including, without limitation, preparation of any feasibility studies or reports and the performance of any and all closures) any Release of

Hazardous Materials caused by, arising from or related to the acts of Lessee or the Lessee Affiliates such that the affected portions of the Premises are returned to the condition existing prior to the Release of such Hazardous Materials (the "Remediation"). Any such Remediation shall only be performed after Lessee has obtained County's prior written consent, which consent may not be unreasonably withheld so long as such actions would not potentially have a material adverse long-term or short-term effect on any portion of the Premises. Notwithstanding the foregoing, Lessee shall be entitled to respond immediately to an emergency at its sole cost, expense and liability, without first obtaining County's prior written consent. Lessee, at its sole cost and expense, shall conduct and perform, or cause to be conducted and performed, all Remediation as required by any Environmental Laws or any agencies or other governmental authorities having jurisdiction thereof. If Lessee fails to so promptly complete the Remediation, County may, but without obligation to do so, take any and all steps necessary to rectify the same and Lessee shall promptly reimburse County, upon written demand, for all costs and expenses to County of performing the Remediation. All such Remediation, as required herein, shall be performed in such a manner so as to enable County to make full economic use of the Premises and the other portions of the Premises after the satisfactory completion of such Remediation. County acknowledges that Lessee shall have no obligation or liability with respect to Hazardous Materials existing in the Premises prior to the Delivery Date so long as Lessee or the Lessee Affiliates, invitees or guests have not, by action or inaction, disturbed or caused the disturbance or Release of said existing Hazardous Materials. Lessee shall ensure that all necessary monitoring, safekeeping and security of and for the Premises be sufficient to ensure other parties do not, cannot and are prohibited from causing or contributing to any Release or Use not allowed herein.

#### 7.3.4 Environmental Indemnity.

Lessee shall protect, indemnify, defend (with legal counsel acceptable to County) and hold County and the County Affiliates (as defined in Section 13 herein below) harmless from and against any and all Claims (including, without limitation, diminution in value of any portion of the Premises and damages for the loss of or restriction on the use of rentable or usable space within the Premises) arising at any time during or after the Term in connection with, resulting from or related to, directly or indirectly, any and all Use, use, Release or Remediation arising out of, relating to or resulting from (directly or indirectly) any act or omission of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees.



Neither the written consent of County to any Use, use, Release or Remediation, in whole or in part, nor the strict compliance by Lessee with any or all Environmental Laws shall excuse Lessee from its obligations of indemnification pursuant hereto. Lessee shall not be relieved of its indemnification obligations under the provisions of this Section 7 due to County's status as either an "owner" or "operator" under any Environmental Laws. Lessee shall, at its sole cost and expense, promptly observe, perform, and comply with any and all Laws relating to the activities of Lessee. Lessee shall, protect, indemnify, defend (with counsel acceptable to County) and hold County and the other County Affiliates harmless from and against any and all Claims arising at any time during or after the Term in connection with or related to the use, presence or release of Hazardous Materials on, in or about any portion of the Premises resulting from or related to the acts or omissions of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees.

7.3.5 Lessee shall immediately deliver to County complete copies of all written notices, demands, or other written communications in a party's possession from any governmental or quasi-governmental authority, or any insurance company or board of fire underwriters or like or similar entities, regarding any Release on, to, about, upon, under, at, in, or from the Premises or the Property. Lessee shall immediately, upon receiving notice thereof, inform County in writing (and orally in the event of a Release or other emergency) of (1) any and all enforcement or Remediation, or other governmental, regulatory, or judicial acts or orders instituted, contemplated, or threatened pursuant to any Law affecting Hazardous Materials in, on, upon, over or under the Premises or the Property; and (2) all claims made or threatened by any third party relating to damage, contribution, cost recovery, compensation, loss or injury resulting from any actual, proposed, or threatened Use, use, Remediation or Release on, in, upon, at, under, from, to, or about the Premises.

## **8. Repairs and Maintenance**

8.1 Lessee's Repairs and Maintenance Obligations. Except for and subject to the Lessor's responsibilities as set forth in Section 12, Lessee shall, at its sole cost and expense, keep, manage, operate, and maintain all parts of the Premises in good, clean and safe condition and repair, promptly making all necessary repairs and replacements, all of the foregoing in accordance with the applicable provisions of this Lease, and to the reasonable satisfaction of the County including, but not limited to, repairing any damage (and replacing any property so damaged if necessary) whether caused by Lessee and/or Lessee Affiliates or

visitors, and restoring the Premises substantially to the condition existing prior to the occurrence of such damage. Without limiting any of the foregoing, Lessee shall be solely responsible for promptly maintaining, repairing and replacing, (a) all Lessee signage (b) all partitions, fixtures, equipment of the Premises and every part. All work within the scope of Lessee's qualified, insured staff shall be completed by said staff, which shall be subject to County's final approval. All work within the scope of a contractor or subcontractors, shall be completed by licensed, qualified, insured and bonded contractors and subcontractors reasonably approved by County. Additionally, Lessee shall be solely responsible for the performance of the regular removal of trash and debris on or about the Premises, and otherwise as needed or required by any Law.

- 8.2 If Lessee refuses or neglects to repair and maintain the Premises properly as required by this Lease and to the reasonable satisfaction of County, then upon not less than thirty (30) days written notice to Lessee (except in the event of an emergency), (i) County may, but without obligation to do so, at any time make such repairs or maintenance without County having any liability to Lessee for any loss or damage that may accrue to Lessee's property or to Lessee's business by reason thereof, except to the extent any damage is directly caused by the willful misconduct or gross negligence of County or its authorized agents and representatives and (ii) Lessee shall pay to County all of County's reasonable costs and expenses incurred therefor within thirty (30) days upon demand. Lessee's obligations under this Section 8 shall survive the expiration of the Term or earlier termination thereof. Lessee hereby waives any right to repair at the expense of County under any applicable Laws now or hereafter in effect.
- 8.3 Lessee expressly waives any and all claims against Lessor for compensation or damage for any and all loss, cost or expense sustained by reason of any defect, deficiency or impairment of any utility system, water supply system, draining or sewer system, heating or gas system, electrical apparatus or wires serving the premises, or the use or operation thereof.

## **9. Alterations**

- 9.1 Lessee may make alterations or improvements to the Premises only with the prior written consent of the County which may be granted or withheld in County's sole and absolute discretion. Upon expiration or termination of this Lease, any permitted alteration or improvements shall become the property of the County; provided, however, if County consents in its sole and absolute discretion, Lessee may be permitted to remove its alterations and improvements but shall repair any and all damage caused by such installation and removal.

9.2 Lessee shall be responsible for and shall promptly repair any damage or destruction of the Property and the Premises caused by Lessee or Lessee's officers, agents, employees, contractors, invitees or licensees, reasonable wear and tear and casualty excepted.

**10. Damage or Condemnation**

If the Premises are materially damaged or destroyed by any cause or condemned, it is specifically acknowledged and agreed that County shall have no affirmative obligation to restore or replace the Premises, nor shall County have the obligation to contribute any funds to be used for such restoration or replacement. Lessee shall be responsible for the repair and restoration of its improvements, alterations and Lessee's property. If County elects not to restore or replace the Premises or portion thereof, Lessee or County may elect to terminate this Lease. Unless this Lease is terminated, in the case of material damage or destruction to the Premises (other than by any direct or indirect act(s) or omission(s) of Lessee or any of the Lessee Affiliates), a proportionate amount of the rent shall abate (calculated based on the portion of the Premises that are destroyed or damaged beyond use) until the Premises shall be so restored.

**11. Hazardous Materials Permit and Spill Plan**

Lessee shall comply with the requirements of the County's Hazardous Materials Permit and Storm Water Pollution Prevention Program (SWPPP).

Lessee shall prepare and maintain a written Spill Prevention Contingency and Control Plan (SPCC). The SPCC shall be reviewed and approved by the appropriate agency(s). The approved SPCC shall be kept current and a copy of the most current version shall be submitted to the County to be kept on file.

**12. Responsibilities**

**12.1 Lessee Responsibilities**

12.1.1 Report to County any suspected inappropriate activities at the Airport.

12.1.2 Monitor and report all safety concerns to County.

12.1.3 Keep Premises open during normal business hours.

12.1.4 Make available after-hours phone number for emergency issues that occur onsite and require Lessee's attention.

12.1.5 Maintain at least one restroom that is available for your clients during business hours.

**12.2 Operations and Maintenance Responsibilities**

The Lessee has the primary responsibility for the daily upkeep and maintenance of items related to the leasing of the Premises including any repairs or maintenance necessitated by the negligent or intentional acts or omissions of the Lessee or the employees, agents, or contractors of Lessee. Lessee shall perform the items designated as the responsibility of the Lessee in Section 12.2.1. Further, except for maintenance work expressly listed as the County's responsibilities in Section 12.2.2 (which shall be at County's sole cost and expense), it shall be Lessee's responsibility, at Lessee's sole cost and expense, to continually keep and maintain the Premises and all improvements, systems, and equipment located thereon (whether constructed by Lessee or County) clean and neat, free of waste material and debris, in good condition and repair and in a fully operational condition and to make all necessary and appropriate preventive maintenance, repairs and replacements. One restroom shall be kept open to Lessee's clients at all times during business hours, and the Lessee shall be responsible for its cleaning and upkeep.

County and Lessee have agreed on the following division of responsibilities regarding maintenance of the Premises.

#### 12.2.1 Lessee Responsibilities

- a) Non-Structural portions of the interior of premises of the building including windows, doors, carpets, tile, ceilings, floors and floor coverings.
- b) Janitorial services for and general upkeep of restrooms including restroom supplies.
- c) Interior electrical panels, including power from main electrical panel throughout the Premises, conduit and wiring, subpanels, power outlets and switches.
- d) Exterior of structures including roofs, sidings, gutters, drains, walkways, exterior doors, exterior painting.
- e) Asbestos Management
- f) Mold Remediation
- g) Termite and Rodent Infestation
- h) Fire systems, including sprinklers (heads and piping) and fire suppression equipment and devices.
- i) Interior and exterior light lamps, including wiring, light fixtures and light bulbs.
- j) Fixed Base Operator signs and directories.
- k) Interior of structures including ceilings, walls, floors and waterproofing and sealing of floor penetrations.
- l) Interior locks.
- m) Hot water heater and refrigeration units.

- n) Common areas to be kept free and clear of debris.
- o) Landscaping
- p) Cleaning exterior of building, including rain gutters, sidewalks, vehicular parking lot and aircraft parking ramp.
- q) Interior and exterior fire extinguishers
- r) Telephone system
- s) Internet
- t) Communication and information technology
- u) Graffiti Abatement
- v) Pick up and disposal of Hazardous Waste, E-waste, Battery and Universal Waste
- w) Modifications in public use areas required to meet the Americans with Disabilities (ADA) standards.
- x) Heating, air condition, ventilation systems and associated controls.

#### 12.2.2 Lessor Responsibilities

- a) Building identification and directory
- b) Exterior perimeter fence and gates

### 13. **Limitation of Liability and Indemnity**

- 13.1 Except to the extent of Claims (defined below) directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, Lessee agrees to protect, defend (with counsel reasonably acceptable to County) and hold County and County's lenders, partners, members, property management company (if other than County), agents, directors, officers, employees, representatives, contractors, successors and assigns and each of their respective partners, members, directors, officers, employees, representatives, agents, contractors, heirs, successors and assigns (collectively, the "County Affiliates") harmless and indemnify the County and County Affiliates from, for and against all liabilities, damages, demands, penalties, costs, claims, losses, judgments, charges arising from Lessee's and Lessee Affiliates' use of the Premises and/or Lessee's failure to perform any covenant or obligation of Lessee under this Lease. Lessee agrees that the obligations of Lessee herein shall survive the expiration or earlier termination of this Lease.
- 13.2 Except to the extent of Claims directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, to the fullest extent permitted by law, Lessee agrees that neither County nor any of the County Affiliates shall at any time or to any extent whatsoever be liable, responsible or in any way accountable for any loss, liability, injury, death or damage to persons or property which at any time may be suffered or sustained by Lessee or by any person(s) whomsoever who may at any time be using, occupying or visiting the

Premises, including, but not limited to, any acts, errors or omissions of any sublessees, subtenants, guests, invitees or occupants of the Premises. Lessee shall not, in any event or circumstance, be permitted to offset or otherwise credit against any payments of Rent required herein for matters for which County may be liable hereunder.

- 13.3 Notwithstanding any provision to the contrary contained in this Lease, at no time shall County be responsible or liable to the Lessee or the Lessee Affiliates for any lost profits, lost economic opportunities, punitive damages or any form of consequential damage of any kind or nature. Except as otherwise allowed or permissible by any other term or condition of this Lease including but not limited to Section 7 of this Lease, at no time shall Lessee be responsible or liable to the County for any lost profits or lost economic opportunities or punitive damages resulting from any actual or alleged breach by Lessee of its obligations under this Lease, provided that in no event shall County be precluded from exercising its remedies under Section 17 or any other provision of this Lease.

**14. Assignment and Subletting**

- 14.1 Lessee shall not assign, sublet, license or otherwise transfer or encumber all or any part or Lessee's interest in this Lease, the Premises or the Property without Lessor's prior written consent. Any attempted assignment, sublease or other transfer without Lessor's consent shall be void and of no force and effect, and shall, at the Lessors election, constitute an event of default hereunder.
- 14.2 Lessee shall submit the proposed written agreement between Lessee and the sublessee to County for review and evaluation. County may require that an application be completed and all relevant and applicable information relating to the requested sublease be provided to County for review and evaluation.
- 14.3 Sublessee may not occupy the Premises before County consents to the sublease in writing.

**15. Quiet Enjoyment**

So long as Lessee successfully complies at all times with all terms and conditions of this Lease, including the timely payment of all Rent, costs and fees when due, Lessee will be entitled to quiet enjoyment of the Premises.

**16. Right of Entry**

County or its authorized representatives shall have the right to enter the Premises at all reasonable times.

**17. Default and Remedies/Termination**

In addition to any other right to terminate this Lease, any of the following events or occurrences shall constitute a material breach of this Lease by Lessee, and shall be deemed an event of default upon the expiration of any stated period to cure said breach, at which time County may terminate this Lease and shall have all remedies available at law or in equity:

- 17.1. The failure by Lessee to make any timely payment required by this Lease in full within ten (10) business days after written notice from the County;
- 17.2. The failure by Lessee to observe or perform any covenant, condition or provision of this Lease when such failure continues beyond thirty (30) days after County gives Lessee written notice of breach; provided, however, that if the nature of such failure reasonably requires longer than thirty (30) days to cure, Lessee shall not be in default if it begins such cure in good faith and with due diligence within thirty (30) days of the notice of breach, and thereafter prosecutes such cure to completion in good faith and with due diligence, or as otherwise determined by County, in County's reasonable discretion. County reserves the right, however, to make a commercially reasonable determination that Lessee is or will be unable to satisfactorily comply with any term or condition of this Lease, and to deem any failure under this paragraph to be an event of default at the expiration of the thirty (30) day cure period (or longer as required herein);
- 17.3. Any attempted conveyance, assignment, mortgage or subletting of any or all of this Lease, the Premises or the Property, in which case there shall be no cure period;
- 17.4. Violation by Lessee of any applicable law, rule or regulation with respect to Lessee's use of the Property or the Premises beyond a ten (10) business cure period shall be a default of this Lease; intentional violation of any applicable law, rule or regulation by Lessee shall have no cure period;
- 17.5. Any of the following: a general assignment by Lessee for the benefit of Lessee's creditors; any voluntary filing, petition, or application by Lessee under any law relating to insolvency or bankruptcy, whether for a declaration of bankruptcy, a reorganization, an arrangement, or otherwise; the abandonment of the Premises by Lessee without County's prior written consent (after Lessee's notice and opportunity to cure); or the dispossession of Lessee from the Property or the Premises (other than by County) by process of law, in which case there shall be no cure period;
- 17.6. Lessee's failure to comply with any term, condition or provision of the Lease, beyond any applicable cure period;
- 17.7. The appointment of a trustee or receiver to take possession of all or substantially all of Lessee's assets; or the attachment, execution or other judicial seizure of all or substantially all of Lessee's assets located at the Property or of Lessee's interest in this Lease, unless the appointment or attachment, execution, or seizure

is discharged within thirty (30) days; or a petition for reorganization or arrangement of Lessee under any law relating to insolvency or bankruptcy, unless, in the case of any involuntary filing, it is dismissed within one hundred twenty (120) days. There shall be no cure period;

- 17.8. Lessee's absence from the Premises for thirty (30) consecutive calendar days, without prior written notice to County, during which time rent or other charges are delinquent, shall be deemed abandonment of the Premises. Such abandonment will be deemed cause for immediate termination without notice. County shall thereupon be authorized to enter and take possession and to remove and dispose of the property of Lessee or its guests without any liability whatsoever to County.

## **18. Audit**

Lessee shall maintain for a period of at least three (3) years following the end of each calendar or tax fiscal year to which they pertain, complete and accurate books and records relating to Lessee's use of the Premises, compliance with the Lease terms, Improvements, Lessee improvements and Tax Expenses. Such books and records shall be kept at the location where Lessee customarily maintains its books and records however such location shall be within the County of Santa Clara, State of California. After delivery to County of at least thirty (30) days prior written notice, County, at its sole cost and expense, or through any accountant designated by it, shall have the right to examine and/or audit the books and records evidencing such expenses for any of the previous three (3) calendar years, during County's reasonable business hours but not more frequently than once during any calendar year. Lessee shall fully cooperate with County or its representatives in such audits and shall promptly resolve any discrepancies between County and Lessee in the accounting of such expenses.

## **19. Taxes**

- 19.1 Lessee shall pay and shall be liable and responsible for any and all Tax Expenses (as defined below) applicable to the Premises or its use. Prior to delinquency, Lessee shall pay any and all taxes and assessments levied upon the Premises, including, without limitation, (i) any and all taxes and assessments resulting from or relating to any increase in real property taxes attributable to any and all Improvements, fixtures, equipment or other improvements of any kind whatsoever placed or existing in, on or about the Premises and (ii) taxes and assessments levied or assessed upon or with respect to the possession, operation, use or occupancy of the Premises during the Lease Term. "Tax Expenses" means, without limitation, any form of tax and assessment (general, special, supplemental, ordinary or extraordinary), commercial rental tax, payments under any improvement bond or bonds, license fees, license tax, business license fee, rental tax, transaction tax or levy imposed by any authority having the direct or



indirect power of tax (including any governmental, school, agricultural, lighting or other improvement district) as against any legal or equitable interest in the Premises or any other tax, fee, or excise, however described, including, but not limited to, any tax imposed in substitution (partially or totally) of any tax previously included within the definition of Tax Expenses and any cost and/or fee (including without limit attorneys' and appraisers' fees and court costs) incurred in calculating, contesting or negotiating any such taxes or assessments.

## 19.2 Possessory Interest Tax.

Lessee acknowledges that its interest in and/or use of the Premises may be subject to possessory interest taxation and that such taxation shall be Lessee's sole responsibility and liability.

## 20. Notices

Any notices which are required to be given hereunder, or which either party may wish to give to the other, shall be in writing and shall be effective for all purposes on any business day before 5:00 PM local time and on the next business day if received after 5:00 PM or on other than a business day, including without limitation, upon (i) receipt or refusal of receipt, in the case of personal delivery, (ii) the next business day after depositing notice with a reputable overnight courier, and (iii) three (3) days after depositing notice in with the United States Post Office for delivery by first class certified or registered mail, postage prepaid, and addressed as follows:

To COUNTY: County of Santa Clara  
2500 Cunningham Ave.  
San Jose, CA 95148

Or to such other place as COUNTY may designate by written notice.

To LESSEE: Skyworks Aviation dba Tradewinds Aviation  
2505 Cunningham Avenue  
San Jose, CA 95148

Or to such other place as LESSEE may designate by written notice.

## 21. Miscellaneous

### 21.1 Waiver

The failure of County to insist upon strict performance of any of the terms, covenants, or conditions of this Lease shall not be deemed a waiver of any right or remedy that County may have, and shall not be deemed a waiver of County's right to require strict performance of all terms, covenants, and conditions

thereafter, nor a waiver of any remedy for the subsequent breach of any of the terms, covenants, or conditions.

21.2 Severability and Governing Law

Any non-material provision of this Lease which shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect. This Lease, and all the rights and duties of the parties arising from or relating in any way to the subject matter of this Lease, shall be enforced, governed by and construed in accordance with the laws of the State of California (excluding any conflict of laws provisions that would refer to and apply the substantive laws of another jurisdiction). Lessee expressly agrees that any and all disputes, lawsuits or proceedings arising out of, relating to or in connection with this Lease, including any and all mediation or other alternative dispute resolution proceedings or settlements or negotiations, shall be brought, disputed and litigated only in the Superior Court of the State of California in the County of Santa Clara or the United States District Court, Northern District of California, San Jose Division (and in no other), and Lessee hereby consents to the exclusive personal jurisdiction and venue of said court.

21.3 Entire Agreement

It is understood and agreed that there are no oral agreements between the parties hereto affecting this Lease and this Lease (including all exhibits and addenda) supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by County to Lessee with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. This Lease and any separate agreement executed by County and Lessee in connection with this Lease and dated of even date herewith (a) contain all of the terms, covenants, conditions, warranties and agreements of the parties relating in any manner to the rental, use and occupancy of the Premises, and (b) shall be considered to be the only agreement between the parties hereto and their representatives and agents. This Lease may not be modified, deleted or added to except by a writing signed by the parties hereto. All negotiations and oral agreements have been merged into and are included herein. There are no other representations or warranties between the parties, and all reliance with respect to representations is based totally upon the representations and agreements contained in this Lease. The parties acknowledge that (i) each party and/or its counsel have reviewed and revised this Lease, and (ii) no rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall be employed in the interpretation or enforcement of this Lease or any amendments or exhibits to this Lease or any document executed and delivered by either party in connection with this Lease.

21.4 Warranty of Authority

Lessor and Lessee each represent that the person executing this Lease on behalf of such party (i) is duly and validly authorized to do so on behalf of the entity it purports to so bind, and (ii) has full right and authority to enter into this Lease. Each party hereby warrants that this Lease is legal, valid and binding upon such party and enforceable against such party in accordance with its terms.

21.5 Joint and Several; Covenants and Conditions

If Lessee consists of more than one person or entity, the obligations of all such persons or entities shall be joint and several. Each provision to be performed by Lessee hereunder shall be deemed to be both a covenant and a condition.

21.6 California Public Records Act

The County is a public agency subject to the disclosure requirements of the California Public Records Act ("CPRA"). If Lessee's proprietary information is contained in documents submitted to County, and Lessee claims that such information falls within one or more CPRA exemptions, then Lessee must clearly mark such information "CONFIDENTIAL AND PROPRIETARY," and identify the specific lines containing the information. In the event of a request for such information, the County will use reasonable efforts to provide notice to Lessee prior to such disclosure. If Lessee contends that any documents are exempt from the CPRA and wishes to prevent disclosure, it is required, at its sole cost, liability and expense, to obtain a protective order, injunctive relief or other appropriate remedy from a court of law in Santa Clara County before the County's deadline for responding to the CPRA request. If Lessee fails to obtain such remedy within County's deadline for responding to the CPRA request, County may disclose the requested information even if marked "CONFIDENTIAL AND PROPRIETARY" without any liability or obligation to Lessee or any third parties.

21.7 Waiver of Jury Trial

To the extent permitted by applicable law, the parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other on any matters whatsoever arising out of or in any way related to this Lease, the relationship of County and Lessee, Lessee's use or occupancy of the Premises and/or any claim of injury, loss or damage.

21.8 Headings

Section headings shall not be used in construing this Lease.

21.9 Conflict of Interest

Lessee represents, warrants and agrees that it shall comply, and require its employees, agents, representatives, contractors, consultants, sub-consultants and subcontractors (collectively, "Lessee Affiliates") to comply, with all applicable (i)

requirements governing avoidance of impermissible client conflicts; and (ii) federal, state and local conflict of interest laws and regulations including, without limitation, California Government Code section 1090 et. seq., the California Political Reform Act (California Government Code section 87100 et. seq.) and the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations section 18700 et. seq.). Failure to do so constitutes a material breach of this Lease and is grounds for immediate termination of this Lease by the County.

21.10 Relationship of Parties

The parties acknowledge and agree that nothing set forth in this Lease shall be deemed or construed to render the parties as joint venturers, partners, associations, master-servant, agents, a joint enterprise, employer-employee, lender-borrower or contractor. Lessee shall have no authority to employ any person as employee or agent on behalf of County for any purpose. Neither Lessee nor any person using or involved in or participating in any actions or inactions relating to the Premises or this Lease shall be deemed an employee or agent of County, nor shall any such person or entity represent himself, herself or itself to others as an employee or agent of County. Lessee's status, as well as the status of its officers, agents or employees, including personnel in the administration and performance of services under this Lease, shall be in an independent capacity and not as an employee or agent of the County.

21.11 No Third-Party Rights

This Lease shall not be construed as nor deemed to be an agreement for the benefit of any third party or parties, and no third party or parties shall have any right of action herein for any cause whatsoever.

21.12 Signs

All signs and graphics of every kind visible in or from public view shall be subject to (i) County's prior written approval, and (ii), and in compliance with, all applicable Laws, Development Documents, Recorded Matters, Rules and Regulations, and County's sign criteria ("Sign Criteria") as same may exist from time to time.

21.13 Brokerage Commission

Lessee represents and warrants for the benefit of County that it has had no dealings with any real estate broker, agent or finder in connection with the Premises and/or the negotiation of this Lease, and that it knows of no other real estate broker, agent or finder who is or might be entitled to a real estate brokerage commission or finder's fee in connection with this Lease or otherwise based upon contacts between the claimant and Lessee.

#### 21.14 OFAC

Lessee represents and warrants to County that: (i) Lessee is not acting, and shall not act, directly or indirectly, for or on behalf of any person, group, entity, or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially Designated National and Blocked Person," or other banned or blocked person, entity, nation, or transaction pursuant to any law, order, rule or regulation enforced or administered by the federal Office of Foreign Assets Control; and (ii) Lessee is not engaged in this transaction, directly or indirectly, on behalf of, or instigating or facilitating this transaction, directly or indirectly, on behalf of any such person, group, entity, or nation.

#### 21.15 Non-Discrimination

Lessee and Lessee Affiliates shall each comply with all applicable federal, state and local laws and regulations including the County of Santa Clara's policies concerning nondiscrimination and equal opportunity in contracting. Such laws include but are not limited to the following: Title VII of the Civil Rights Act of 1964, as amended; Americans with Disabilities Act of 1990; The Rehabilitation Act of 1973 (Sections 503 and 504); California Fair Employment and Housing Act (Government Code Sections 12900 et sea.); California Labor Code sections 1101 and 1102. Lessee and each of the Lessee Affiliates shall not discriminate against any subcontractor, employee, or applicant for employment because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organization affiliations, or marital status in the recruitment, selection for training including apprenticeship, hiring, employment, utilization, promotion, layoff, rates of pay or other forms of compensation. Nor shall Lessee or any of the Lessee Affiliates discriminate in the provision of services provided under this Lease because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organizational affiliations, or marital status.

#### 21.16 No Relocation Assistance

It is understood that this Lease is intended to give Lessee a temporary conditional use of the Premises and that Lessee shall not be entitled to relocation benefits, assistance, damages (liquidated or otherwise), costs, claims or fees from County upon expiration, termination or cancellation of this Lease, except as expressly provided for elsewhere in this Lease.

#### 21.17 Prevailing Wage

If the work to be performed by Lessee or any of its contractors hereunder is a public work as defined in California Labor Code Section 1720 et seq., then Lessee and its contractors must comply with the payment of prevailing wages and the employment of apprentices as set forth in Section 1770, et al. and following of the

Labor Code. Lessee is solely liable for failing to comply with prevailing wage laws.

21.18 Wage Theft Prevention

These provisions are in relation to any work performed by Lessee or Lessee Affiliates under the terms or conditions of the Lease only.

Compliance with Wage and Hour Laws. Lessee and the Lessee Affiliates who are involved in the work must comply with all applicable federal, state, and local wage and hour laws. Applicable laws may include, but are not limited to, the Federal Fair Labor Standards Act, the California Labor Code, and any local Minimum Wage Ordinance or Living Wage Ordinance.

- 21.18.1 Final Judgments, Decisions, and Orders. For purposes of this Section, a “final judgment, decision, or order” refers to one for which all appeals have been exhausted. Relevant investigatory government agencies include: the federal Department of Labor, the California Division of Labor Standards Enforcement, a local enforcement agency, or any other government entity tasked with the investigation and enforcement of wage and hour laws.
- 21.18.2 Prior Judgments against Lessee and/or its contractors. BY SIGNING THIS LEASE, LESSEE AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS, OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY FINDING—IN THE FIVE YEARS PRIOR TO EXECUTING THIS LEASE—THAT LESSEE OR ANY OF THE LESSEE AFFILIATES HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS.
- 21.18.3 LESSEE FURTHER AFFIRMS THAT IT AND/OR THE LESSEE AFFILIATES HAVE SATISFIED AND COMPLIED WITH—OR HAS REACHED LEASE WITH THE COUNTY REGARDING THE MANNER IN WHICH IT WILL SATISFY—ANY SUCH JUDGMENTS, DECISIONS, OR ORDERS.
- 21.18.4 Judgments During Term of Lease. If at any time during the Term of this Lease, a court or investigatory government agency issues a final judgment, decision, or order finding that Lessee or any contractor it uses to perform work under this Lease has violated any applicable wage and hour law, or Lessee learns of such a judgment, decision, or order that was not previously disclosed, Lessee must inform the Office of the County Executive-Office of Countywide Contracting Management (OCCM), no more than 15 days after the judgment, decision, or order becomes final or of learning of the final judgment, decision, or order. Lessee and its contractors shall promptly satisfy and comply with any such judgment, decision, or order, and shall provide the Office of the County Executive-OCCM with documentary evidence of compliance with the final judgment, decision, or order within 5 days of satisfying the final judgment, decision, or order. The

County reserves the right to require Lessee to enter into an agreement with the County regarding the manner in which any such final judgment, decision, or order will be satisfied.

- 21.18.5 **County's Right to Withhold Payment.** Where Lessee or any contractor it employs to perform work under this Lease has been found in violation of any applicable wage and hour law by a final judgment, decision, or order of a court or government agency, the County reserves the right to withhold payment to Lessee until such judgment, decision, or order has been satisfied in full.
- 21.18.6 **Material Breach.** Failure to comply with any part of this Section constitutes a material breach of the Lease. Such breach may serve as a basis for termination of this Lease and/or any other remedies available under this Lease and/or law.
- 21.18.7 **Notice to County Related to Wage Theft Prevention.** Notice provided to the Office of the County Executive as required under this Section shall be addressed to: Office of the County Executive—OCCM; 70 West Hedding Street; East Wing, 11th Floor; San José, CA 95110. The Notice provisions of this Section are separate from any other notice provisions in this Lease and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.

21.19 Counterparts

This Lease, and any amendments thereto, may be executed in several counterparts, and all of such counterparts so executed together shall be deemed to constitute one and the same agreement, and each such counterpart shall be deemed to be an original. Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of this agreement, or an electronically signed agreement, has the same force and legal effect as the agreement executed with an original ink signature. The term "electronic copy of this agreement" refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of the original signed agreement in a portable document format. The term "electronically signed agreement" means the agreement that is executed by applying an electronic signature using technology approved by the County.

21.20 County Sustainability Policies

In performing any work on the Premises, Lessee will use best efforts to substantially comply with Lessor's Sustainability policies found in Board of Supervisors Policy Manual 8.1 through and including 8.4, as amended from time to time by Lessor, and Lessor's Green Cleaning Policy Administrative Guidelines, as amended from time to time by Lessor.

21.21 Integrated Pest Management Ordinance

When conducting or allowing the performance of any pest management practices or pesticide uses, Lessee, its contractors, employees, agents and representatives, will use best efforts to substantially comply with and require any pest

management service providers to comply with the County Integrated Pest Management ordinance.

21.22 County No-Smoking Policy

Lessee and Lessee Affiliates, guests and invitees, shall not smoke on, in or around the Property or Premises unless expressly allowed by applicable smoking laws.

21.23 Liens

Except as expressly authorized in a term or condition found elsewhere in this Lease, Lessee shall keep the Premises free and clear of all liens and encumbrances. If, because of any act or omission of Lessee or any of its employees, officers, agents, representatives or volunteers, any mechanic's lien or other lien, charge or order for the payment of money are filed against any portion of the Premises, structures, or Alterations, Lessee shall at its own expense, cause the same to be discharged of record within thirty (30) days after written notice from Lessor; and, Lessee shall indemnify, defend and save harmless Lessor against all resulting costs, liabilities, suits, claims and demands, including legal fees and court costs.

21.24 Prohibition of Alcohol and Controlled Substances

Sale, promotion or advertising of any type of alcohol or controlled substances are strictly prohibited on, in or near the Premises.

21.25 Timing

In the event the time for performance of any obligation under this Lease shall fall on a Saturday, Sunday or court holiday, such time for performance shall be extended to the next business day. "Business day" means days other than Saturdays, Sundays, and federal and state legal holidays in the state of California.

21.26 Survival

Those provisions which by their nature should survive termination, cancellation or expiration of this Lease, shall so survive.

21.27 Recitals and Exhibits

The Recitals stated above, and all Exhibits referenced in this Lease, are incorporated herein and made a part of this Lease by this reference.

**22. FAA Assurance**

Should Lessee provide any service to the public, including subleasing, at the airport, Lessee shall:

- 22.1 Furnish said services on a fair, equal, and not unjustly discriminatory to all users thereof; and



LEASE AGREEMENT BETWEEN COUNTY OF SANTA CLARA AND  
SKYWORKS AVIATION DBA TRADEWINDS AVIATION

22.2 Charge fair, reasonable, and not unjustly discriminatory prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.


IN WITNESS WHEREOF, the parties hereto have executed this Lease as follows:


**LESSOR:**

**LESSEE:**

**County of Santa Clara, a political  
subdivision of the State of California**

**Skyworks Aviation dba Tradewinds  
Aviation**


DocuSigned by:  
  
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**HARRY FREITAS**  
Director, Roads and Airports Department

DocuSigned by:  
  
4DEAF9EF4F32432...  
**Walter Gyger**  
President/CEO

Date: 12/30/2021

Date: 12/30/2021

APPROVED AS TO FORM AND  
LEGALITY:

DocuSigned by:  
  
B179ECE83EEF431...  
**Christopher K. Cheleden**  
Lead Deputy County Counsel

- Attachments  
Exhibit A – Premises  
Exhibit B – Insurance Requirements



EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

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C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

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“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and

EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County

EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit B



**LEASE AGREEMENT  
BETWEEN COUNTY OF SANTA CLARA AND  
SAN MARTIN AVIATION**

This Lease Agreement (“Lease”) is entered into by and between the COUNTY OF SANTA CLARA, a political subdivision of the State of California (referred to interchangeably as “COUNTY” or “Lessor”) and San Martin Aviation, a California Corporation (“Lessee”), effective as of December 12, 2020 (the “Effective Date”).

**RECITALS**

- A. COUNTY is the owner of San Martin Airport (“Airport”).
- B. Lessee desires to lease from Lessor and Lessor desires to lease to Lessee a portion of the Airport located at 13025 Murphy Avenue, San Martin California for the purpose of engaging in certain Commercial Aeronautical Activities, as defined below (the “Premises”). The Premises is as generally described on the attached Exhibit A that is incorporated herein by this reference.
- C. California Government Code § 25536 authorizes the Board of Supervisors, upon a four-fifths vote, to enter into leases devoted to airport purposes, without complying with otherwise applicable competitive bidding requirements.

**AGREEMENT**

**NOW THEREFORE**, for and in consideration of the mutual promises, covenants and conditions set forth below, COUNTY and LESSEE agree to the foregoing and as follows:

**1. Premises**

COUNTY agrees to lease to LESSEE and LESSEE agrees to lease from COUNTY the Premises, subject to the terms and conditions of this Lease.

1.1 The Premises consists of the following:

1.1.1 Land space of approximately 2 acres that consists of a commercial hangar and office space, aircraft parking ramp and vehicle parking lot as shown as Area 1 on Exhibit A;

1.1.2 Approximately 1,500 square feet of land adjacent to the fuel ramp for the storage of aircraft refueling vehicles, shown as Area 2 on Exhibit A. The Lessor reserves the right to modify, with (10) days written notice to Lessee, the location for aircraft refueling vehicle storage area depicted as Area 2 to

Approved: 1/1/17/2020

another suitable location due to construction, maintenance, or for other reasonable cause;

1.1.3 Four (4) additional tiedowns as shown on Exhibit A, Area 3 and Area 4. The Lessor reserves the right to temporarily modify, with (10) days written notice to Lessee, the location of the (4) tiedowns to another suitable location due to construction, maintenance, or for other reasonable cause.

**2. Term**

- 2.1 The term of this Agreement is for seven years and twenty days, commencing on December 12, 2020 and ending on December 31, 2027. (“Term”).
- 2.2 Provided Lessee submits a written renewal notice to the County at least 180 days prior to the expiration of each term, the lease may be extended by up to three (3) additional one-year terms by written mutual agreement of the parties and the County Roads and Airport Director shall be delegated authority to grant the extensions.
- 2.3 Any renewal term shall be based on the same terms, covenants and conditions provided in this Lease, except for modifications mutually agreed upon in writing by both parties.

**3. Monthly Rent**

- 3.1 The monthly “Rent” or initial Base Rent shall be **Six-Thousand Dollars (\$6,000)** due and payable in advance on the first day of each month of the Term.
- 3.2 Beginning on July 1, 2023, and on each July 1 of each subsequent year, the Base Rent for the ensuing twelve (12) months shall be adjusted upward in the same percentage proportion that the January Consumer Price Index (CPI) of the San Francisco-Oakland-Hayward area of the United State Department of Labor, Bureau of Labor Statistics, increase over the January CPI of the base year of 2022. In the case of a CPI decrease the rate will remain the same. The annual CPI escalation shall not exceed 2.5%.
- 3.3 All Rent shall be made payable to the “County of Santa Clara”, in the form of a company check, certified check, money order or wire transfer, due and payable on the first day of each month without exception, and delivered by hand delivery, by courier or by U.S. Mail (first class, postage prepaid) to the following address, or such other address as designated by COUNTY in writing:

County of Santa Clara  
2500 Cunningham Ave  
San Jose, CA 95148

3.4 A Security Deposit of **Six-Thousand Dollars (\$6,000)** shall be payable by Lessee upon full execution of this Lease as security for the return of the Premises at the expiration of the term of the Lease in as good condition as when Lessee took possession of the Premises, normal wear and tear excepted, as well as the faithful, timely, and complete performance of all other terms, conditions, and covenants of this Lease. The Security Deposit may also be used in the event of termination of this Lease to apply to unpaid back due rent. The Parties agree that the Security Deposit may be used to cure any default or breach of this Lease without prejudice to any other remedies available to County and that County may increase the Security Deposit in the event of default or breach.

3.5 Late Charge as defined in the *Airports Schedule of Fees and Charges* as updated from time-to-time shall be automatically added to any rent, fee, or other charges not received by the County by the close of the business fifteen calendar days after due and owing. Lessee shall also pay interest on said unpaid balance at a rate of ten percent (10%) simple interest per annum, from the date said payment was due and payable until paid in full.

3.6 Other Fee

Lessee shall pay Lessor the following fees in addition to Monthly Rent

3.6.1 10% of automobile rental revenue.

3.6.2 10% of any rent received from non-aviation subtenants who shall be approved by Lessor.

Lessor may perform a quarterly audit of Lessee's accounts pertaining to automobile rentals and all sub tenancies to verify amounts due. In the event such an audit discloses a discrepancy of \$1,000.00 or more owing to County in any given fiscal year, Lessee shall bear the audit expenses.

**4. Use of Premises**

4.1 This Lease grants Lessee the right and privilege to use the Premises for the purpose of operating a Fixed Based Operation (FBO) and shall be restricted to the uses listed herein ("Permitted Uses" or "Commercial Aeronautical Activities"). The Premises may not be used for any other purpose without County's prior written consent, which consent may be withheld in the sole but reasonable discretion of County.

4.1.1 Throughout the term of this Lease, Lessee agrees that Lessee shall use the premises to provide the following Commercial Aeronautical Activities. Lessee shall be actively involved in providing these services and may not sublet or otherwise authorize another service provider to provide them, without the County's prior written consent, which consent shall not be withheld within the sole but reasonable discretion of County.

Aircraft Maintenance and Repair;

- a) Aircraft Ramp Services;
- b) Tiedown Rental Management;
- c) Pilot Amenities and Facilities;  
This shall include customary accommodations for the convenience of Airport users, such as a pilot lounge equipped with vending machines for food and beverages, study area for student pilots, appropriate furniture for quiet resting and reading, and informational services.
- d) Aircraft Recovery and Removal;  
Removal from the Airport Operations Area of disabled aircraft. Lessee shall perform such removal services as needed. As used in this lease agreement, "Airport Operations Area" shall mean those portions of the Airport provided and made available by Lessor for aircraft and airport related operations, and shall include aircraft runways, taxiways, ramps, aprons and parking spaces which are not leased by Lessee or any other tenant on the Airport; and
- e) Aircraft Fueling.

4.1.2 Throughout the term of this Lease, Lessee shall use the Premises to provide the services listed in this section. These services may be subcontracted to a secondary service provider with written consent of the County.

- a) Aircraft Rental;
- b) Pilot Training; and
- c) Ground School for Flight Training.

4.1.3 The following services may be provided by the Lessee or a secondary service provider. Use of a secondary service provider shall require written approval of the County:

- a) Aircraft Washing & Detailing;
- b) Aircraft Upholstery;
- c) Sale and/or Lease of New and Used Aircraft;

- d) Sale of New and/or Used Aircraft Parts, Supplies, Instruments and Accessories Avionics;
- e) Special Flight Services including Aerial Sightseeing, Aerial Advertising and Aerial Photography;
- f) Air Taxi/Charter;
- g) Vehicular Rental

4.1.4 To the extent required by applicable Laws, Lessee shall employ sufficient personnel who are appropriately rated by the Federal Aviation Administration (“FAA”) for the work being performed and who hold airframe, power plant, or aircraft inspection ratings.

4.1.5 If Lessee desires to provide additional services, written approval of the County prior to commencement of such service is required.

4.1.6 Fueling Facility

Lessee is authorized to operate the aviation fueling facility at the Airport under a separate Fueling Permit. Lessee shall at all times have the appropriate aviation fuels, as determined by the County and Lessee, available for sale and shall be solely responsible for the safe operation of the fueling facility and for procuring fuel for operation of the fuel facility.

4.2 A Fee Schedule describing all charges and hourly rates for services for airport patrons shall be posted at the Premises by the Lessee in plain view and kept up to date. All rates and charges shall be reasonable and fairly applied to all users of Lessee’s services.

4.3 Business Hours.

Except during reasonable periods for repairing, cleaning, decorating and planned closures (i.e. vacations, training, etc.), planned closures shall require prior written authorization of the Lessor. Lessee shall keep the Premises open for business during the days and hours listed below. During all operational hours, Lessee shall have at the Premises adequate and competent personnel necessary for the operation of Lessee’s business.

4.3.1 Minimum business hours shall be Monday through Friday 9:00 A.M. to 5:00 P.M, Saturday 9:00 A.M. to 4:00 P.M.provided however, the aircraft maintenance and repair shall be entitled to set its business hours and days in Lessee’s reasonable discretion

4.3.2 During non-operating hours, Lessee shall post or make otherwise known a telephone number or other contact provisions to permit an emergency call out.

4.3.3 Lessee is authorized to close during all County-recognized holidays.

4.4 Identification and Periodic Reporting of Stored Aircraft

Lessee shall, at all times, maintain a current list of all aircraft permanently based, hangered, either inside or outside the Premises (excluding such other areas of the Airport which are not part of the Premises), and containing for each aircraft the name and address of the aircraft owner, the aircraft type (make, model, year, if known), and the aircraft registration number. Starting in January 2021, the Lessee shall provide the County with a copy of such a list on the first day of every other month, and at any other time the County reasonably requests same.

4.5 Accident Reports

Lessee agrees to report any accidents at the Airport, including but not limited to, involving Lessee, or Lessee's guests which occur at the Airport to the Lessor in writing within 24 hours of Lessee's learning of such. Lessee is also responsible for notifying any federal, state or local authorities, as required by law.

4.6 Airport Access and Security

Security of the Premises must be maintained at all times. Lessee shall maintain secured controlled access at all entrances to the Premises, including pedestrian gates, to prevent unauthorized access onto Airport property. Lessee shall ensure the control of all movement of Lessee's operations and those of their guests/customers, including all deliveries. Lessee shall escort all guests, vendors and delivery personnel at all times. Lessee is responsible for the actions of its guests and delivery personnel until they exit the Airport. Accessible areas to the Airport from the Premises shall be controlled by the Lessee and all gate codes shall be kept confidential and shared with authorized individuals only, as appropriate. For clarity purposes, Lessee shall not have the duty nor the responsibility for general Airport security, as such general Airport security shall remain the sole responsibility and obligation of Lessor.

4.7 Compliance with Laws.

The use of the Premises by Lessee and this Lease shall be subject to, and at all times be in compliance with, and/or subordinate to: (a) County Airports Rules and Regulations; (b) Airport Sponsor Grant Assurances and all other federal laws or FAA regulations, obligations, or guidance; (c) any and all applicable local, state and federal laws, rules, codes, ordinances, statutes, orders and regulations as same exist from time to time throughout the Term (collectively, "Laws"), including without limitation, the requirements of the Americans with Disabilities Act, a federal law codified at 42 U.S.C. 12101 et seq., including, but not limited to Title III thereof, all regulations and guidelines related thereto and all requirements of Title 24 of the State of California (collectively, the "ADA"); (d) any and all

instruments, licenses, restrictions, easements or similar instruments, conveyances or encumbrances which are at any time made by or given by County relating to the Premises or the Property and/or the construction, from time to time, of any additional improvements on the Property (collectively, "Development Documents"), and (e) any and all documents, easements, covenants, conditions and restrictions, and similar instruments, together with any and all amendments and supplements thereto made, from time to time, each of which has been or hereafter is recorded in any official or public records with respect to the Premises or the Property (collectively, "Recorded Matters"), provided no such Development Documents or recorded Matters made or given after the date of this Lease shall (otherwise expand Lessee's obligations under this Lease, including but not limited to, Lessee's financial obligations.

4.8 Nonexclusive Rights

Lessee is allowed to use the Airport and its appurtenances together with all public areas and facilities, in common with others, on a non-exclusive basis and subject to the terms and conditions of this lease. Nothing in this Lease shall be construed to grant to Lessee any exclusive right to conduct any aeronautical activity at the Airport except of for the Premises.

5. Expenses

Lessee shall pay for all expenses related to Lessee's use and occupancy of the Premises including, but not limited to, electric, telephone, cable, internet, water, sewer, gas, trash collection, HVAC, possessory interest and related personal property taxes, and insurance. County shall cooperate with Lessee to the extent necessary to establish accounts in Lessee's name to facilitate Lessee's payment of expenses.

6. Indemnification and Insurance

Lessee shall comply with and provide insurance as set forth in Exhibit B attached hereto.

7. Condition of Property

7.1 Condition for Occupancy.

LESSEE accepts the Premises in an "as is", "with all faults" condition having first inspected the Airport and Premises at its own cost and expense. County makes no representations or warranties whatsoever concerning the legal, physical, environmental or any other condition of the Premises including improvements, facilities or utilities.

As required by Section 1938(a) of the California Civil Code, County discloses to Lessee that the Premises have not undergone inspection by a certified access

specialist (“CASp”). As required by Section 1938(e) of the California Civil Code, County also states that:

“A CASp can inspect the Premises and determine whether the Premises complies with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the Premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the Premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Premises.”

In furtherance of the foregoing, County and Lessee agree that any CASp inspection elected to be conducted by Lessee shall be done at Lessee’s sole cost and expense, and to the extent that a CASp inspection identifies any necessary repairs to correct violations of construction-related accessibility standards, the other provisions of this Lease shall govern which party has the responsibility to correct such violations.

7.2 Condition of Premises upon Surrender.

At the expiration of the Term or earlier termination or cancellation of this Lease, Lessee shall immediately vacate the Premises and remove all personal property to which Lessee or Lessee Affiliates hold proper and legal title and shall remove all trash and debris from the Premises associated with or related to Lessee’s use of the Premises. Should Lessee or Lessee Affiliates fail to remove or dispose of the personal property as provided, County may consider the property abandoned and may claim proper title to it or dispose of it at Lessee’s expense. However, under no circumstances shall County become or be considered the owner or operator of any Hazardous Material left on the Premises by Lessee or any of the Lessee Affiliates or others, regardless of whether County elects to initiate clean up or disposal of such Hazardous Material. Lessee and the Lessee Affiliates represent, warrant and agree that at all times, including after termination of this Lease, Lessee and the Lessee Affiliates shall be solely responsible and liable, as the owner and operator, for all Hazardous Material brought onto or generated on the Premises by Lessee or Lessee Affiliates during the Term.

7.3 Hazardous Materials.

7.3.1 Definition of Hazardous Materials.

"Hazardous Materials" means, but is not limited to, (a) any hazardous,



toxic or regulated wastes, materials or substances, and other pollutants or contaminants, which are or become regulated by any Environmental Laws, including but not limited to regulations pertaining to storage, labeling, handling, recordkeeping, reporting, transportation, use, disposal, handling or shipment; (b) petroleum, petroleum by products, gasoline, diesel fuel, crude oil or any fraction thereof; (c) asbestos and asbestos containing material, in any form, whether friable or nonfriable; (d) polychlorinated biphenyls; (e) radioactive materials; (f) lead and lead-containing materials; (g) any other material, waste or substance displaying toxic, reactive, ignitable or corrosive characteristics, as all such terms are used in their broadest sense, and are defined or become defined by any Environmental Law (defined below); (h) any materials which cause or threatens to cause a nuisance upon or waste to any portion of the Premises or any surrounding property; (i) any materials which pose or threaten to pose a hazard to the health or safety of persons on the Premises or any surrounding property; (j) any substances, ingredients, materials or products containing or that may contain blood borne pathogens, living or dead organisms, human remains or by-product, bio-waste or medical waste.

7.3.2 Prohibition; Environmental Laws.

Lessee shall not be entitled to generate, manufacture, store, handle, transport to or from, use, dispose of, or ship to or from, any Hazardous Materials on, in, under or about any portion of the interior or exterior of the Premises or the Property (“Use”) without, in each instance, obtaining County's prior written consent thereto. If County, in its sole discretion, consents to any Use then Lessee shall be permitted to engage in such Use only for those Hazardous Materials and in such quantities (A) that are necessary for Lessee's business, (B) to the extent disclosed in connection with County's approval, (C) expressly approved by County in writing, and (D) only to the extent that such Use fully and completely complies with all applicable Laws and only to the extent Lessee is at all times solely responsible and liable for such Use. Lessee warrants and represents that in all events such Use will be at all times, at Lessee's sole expense, cost and liability, in full and complete compliance with any and all applicable local, state and federal environmental, health, consumer safety, medical and safety-related laws, statutes, orders, standards, courts' decisions, ordinances, rules and regulations (as interpreted by judicial or administrative decisions), decrees, directives, guidelines, permits or permit conditions, currently existing and as amended, enacted, issued or adopted in the future (collectively, the

"Environmental Laws"). Lessee warrants and represents that any changes to the type and/or quantities of Hazardous Materials specified in the most recent HazMat Certificate may be implemented only with the prior written consent of County, which consent may be given or withheld in County's sole discretion. Lessee shall not be entitled nor permitted to install any tanks under, on or about the Premises for the storage of Hazardous Materials without the express written consent of County, which may be given or withheld in County's sole discretion. County shall have the right at all times during the Term to (i) inspect the Premises, (ii) conduct tests and investigations to determine whether Lessee is in compliance with this Section 7 or to determine if Hazardous Materials are present in, on or about the Premises, and (iii) request lists of all Hazardous Materials in use on, under or about any portion of the Premises. The cost of all such inspections, tests and investigations (collectively, "Inspections") shall be borne solely by Lessee, if Lessee or any of the Lessee Affiliates are responsible, by action or inaction, for the use or the presence of any contamination, release, emission, or source revealed by such Inspections. The aforementioned rights granted herein to County and its representatives shall not create (a) a duty on County's part to perform Inspections, monitor or otherwise observe the Premises or Lessee's and Lessee Affiliates' activities or Use with respect to Hazardous Materials, including without limitation, Lessee's operation or any remediation related thereto, or (b) liability on the part of County and its representatives for any Use, use or any Release, it being understood that Lessee shall be solely responsible for all liability in connection therewith. Lessor hereby consents to the use by Lessee of ordinary household cleaners, office supplies and janitorial supplies that may be used by Lessee in connection with maintaining the Premises as required under this Agreement.

### 7.3.3 Lessee's Environmental Obligations.

Lessee shall give to County immediate verbal and follow-up written notice of any contamination, exposure, deaths, injuries, illnesses, spills, releases, discharges, disposals, emissions, migrations, removals, shipments or transportation of, from or relating to Hazardous Materials on, under or about any portion of the Premises (collectively, a "Release"), provided that Lessee knows or reasonably should know of such Release. Lessee, at its sole cost and expense, covenants, warrants and represents to promptly investigate, remedy, clean up, remove, decontaminate, restore respond to, otherwise fully remediate, and resolve any and all claims relating to (including, without limitation,

preparation of any feasibility studies or reports and the performance of any and all closures) any Release of Hazardous Materials caused by, arising from or related to the acts of Lessee or the Lessee Affiliates such that the affected portions of the Premises are returned to the condition existing prior to the Release of such Hazardous Materials (the "Remediation"). Any such Remediation shall only be performed after Lessee has obtained County's prior written consent, which consent may not be unreasonably withheld so long as such actions would not potentially have a material adverse long-term or short-term effect on any portion of the Premises. Notwithstanding the foregoing, Lessee shall be entitled to respond immediately to an emergency at its sole cost, expense and liability, without first obtaining County's prior written consent. Lessee, at its sole cost and expense, shall conduct and perform, or cause to be conducted and performed, all Remediation as required by any Environmental Laws or any agencies or other governmental authorities having jurisdiction thereof. If Lessee fails to so promptly complete the Remediation, County may, but without obligation to do so, take any and all steps necessary to rectify the same and Lessee shall promptly reimburse County, upon written demand, for all costs and expenses to County of performing the Remediation. All such Remediation, as required herein, shall be performed in such a manner so as to enable County to make full economic use of the Premises and the other portions of the Premises after the satisfactory completion of such Remediation. County acknowledges that Lessee shall have no obligation or liability with respect to Hazardous Materials existing in the Premises prior to the Delivery Date so long as Lessee or the Lessee Affiliates, invitees or guests have not, by action or inaction, disturbed or caused the disturbance or Release of said existing Hazardous Materials. Lessee shall ensure that all necessary monitoring, safekeeping and security of and for the Premises be sufficient to ensure other parties do not, cannot and are prohibited from causing or contributing to any Release or Use not allowed herein.

#### 7.3.4 Environmental Indemnity.

Lessee shall protect, indemnify, defend (with legal counsel acceptable to County) and hold County and the County Affiliates (as defined in Section 13 herein below) harmless from and against any and all Claims (including, without limitation, diminution in value of any portion of the Premises and damages for the loss of or restriction on the use of rentable or usable space within the Premises) arising at any time during or after the Term in connection with, resulting from or related to, directly or

indirectly, any and all Use, use, Release or Remediation arising out of, relating to or resulting from (directly or indirectly) any act or omission of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees. Neither the written consent of County to any Use, use, Release or Remediation, in whole or in part, nor the strict compliance by Lessee with any or all Environmental Laws shall excuse Lessee from its obligations of indemnification pursuant hereto. Lessee shall not be relieved of its indemnification obligations under the provisions of this Section 7 due to County's status as either an "owner" or "operator" under any Environmental Laws. Lessee shall, at its sole cost and expense, promptly observe, perform, and comply with any and all Laws relating to the activities of Lessee. Lessee shall, protect, indemnify, defend (with counsel acceptable to County) and hold County and the other County Affiliates harmless from and against any and all Claims arising at any time during or after the Term in connection with or related to the use, presence or release of Hazardous Materials on, in or about any portion of the Premises resulting from or related to the acts or omissions of Lessee or any of the Lessee Affiliates or their respective guests, customers or invitees.

- 7.3.5 Lessee shall immediately deliver to County complete copies of all written notices, demands, or other written communications in a party's possession from any governmental or quasi-governmental authority, or any insurance company or board of fire underwriters or like or similar entities, regarding any Release on, to, about, upon, under, at, in, or from the Premises or the Property. Lessee shall immediately, upon receiving notice thereof, inform County in writing (and orally in the event of a Release or other emergency) of (1) any and all enforcement or Remediation, or other governmental, regulatory, or judicial acts or orders instituted, contemplated, or threatened pursuant to any Law affecting Hazardous Materials in, on, upon, over or under the Premises or the Property; and (2) all claims made or threatened by any third party relating to damage, contribution, cost recovery, compensation, loss or injury resulting from any actual, proposed, or threatened Use, use, Remediation or Release on, in, upon, at, under, from, to, or about the Premises.
- 7.3.6 **Phase 1 Environmental Review**  
County and Lessee acknowledge that Lessee has been provided a copy of a Phase 1 Environmental Site Assessment (Phase 1) completed by KMEA that includes the Premises. County recognizes that the site

conditions identified in the Phase 1 predate Lessee's occupancy of the Premises. The provisions of this Section 7 applicable to Lessee shall not apply with regard to those site conditions identified in the Phase 1.

## **8. Repairs and Maintenance**

- 8.1 Lessee's Repairs and Maintenance Obligations. Except for and subject to the Lessor's responsibilities as set forth in Section 12, Lessee shall, at its sole cost and expense, keep, manage, operate, and maintain all parts of the Premises in good, clean and safe condition and repair, promptly making all necessary repairs and replacements, all of the foregoing in accordance with the applicable provisions of this Lease, and to the reasonable satisfaction of the County including, but not limited to, repairing any damage (and replacing any property so damaged if necessary) whether caused by Lessee and/or Lessee Affiliates or visitors, and restoring the Premises substantially to the condition existing prior to the occurrence of such damage. Without limiting any of the foregoing, Lessee shall be solely responsible for promptly maintaining, repairing and replacing, (a) all Lessee signage (b) all partitions, fixtures, equipment of the Premises and every part. All work within the scope of Lessee's qualified, insured staff shall be completed by said staff, which shall be subject to County's final approval. All work within the scope of a contractor or subcontractors, shall be completed by licensed, qualified, insured and bonded contractors and subcontractors reasonably approved by County. Additionally, Lessee shall be solely responsible for the performance of the regular removal of trash and debris on or about the Premises, and otherwise as needed or required by any Law.
- 8.2 If Lessee refuses or neglects to repair and maintain the Premises properly as required by this Lease and to the reasonable satisfaction of County, then upon not less than thirty (30) days written notice to Lessee (except in the event of an emergency), (i) County may, but without obligation to do so, at any time make such repairs or maintenance without County having any liability to Lessee for any loss or damage that may accrue to Lessee's property or to Lessee's business by reason thereof, except to the extent any damage is directly caused by the willful misconduct or gross negligence of County or its authorized agents and representatives and (ii) Lessee shall pay to County all of County's reasonable costs and expenses incurred therefor within thirty (30) days upon demand. Lessee's obligations under this Section 8 shall survive the expiration of the Term or earlier termination thereof. Lessee hereby waives any right to repair at the expense of County under any applicable Laws now or hereafter in effect.

**9. Alterations**

9.1 Lessee may make alterations or improvements to the Premises only with the prior written consent of the County which may be granted or withheld in County's sole and absolute discretion. Upon expiration or termination of this Lease, any permitted alteration or improvements shall become the property of the County; provided, however, if County consents in its sole and absolute discretion, Lessee may be permitted to remove its alterations and improvements but shall repair any and all damage caused by such installation and removal.

9.2 Lessee shall be responsible for and shall promptly repair any damage or destruction of the Property and the Premises caused by Lessee or Lessee's officers, agents, employees, contractors, invitees or licensees, reasonable wear and tear and casualty excepted.

**10. Damage or Condemnation**

If the Premises are materially damaged or destroyed by any cause or condemned, it is specifically acknowledged and agreed that County shall have no affirmative obligation to restore or replace the Premises, nor shall County have the obligation to contribute any funds to be used for such restoration or replacement. Lessee shall be responsible for the repair and restoration of its improvements, alterations and Lessee's property. If County elects not to restore or replace the Premises or portion thereof, Lessee or County may elect to terminate this Lease. Unless this Lease is terminated, in the case of material damage or destruction to the Premises (other than by any direct or indirect act(s) or omission(s) of Lessee or any of the Lessee Affiliates), a proportionate amount of the rent shall abate (calculated based on the portion of the Premises that are destroyed or damaged beyond use) until the Premises shall be so restored.

**11. Hazardous Materials Permit and Spill Plan**

Lessee shall comply with the requirements of the County's Hazardous Materials Permit and Storm Water Pollution Prevention Program (SWPPP).

Lessee shall prepare and maintain a written Spill Prevention Contingency and Control Plan (SPCC). The SPCC shall be reviewed and approved by the appropriate agency(s). The approved SPCC shall be kept current and a copy of the most current version shall be submitted to the County to be kept on file.

**12. Responsibilities**

**12.1 Lessee Responsibilities**

12.1.1 Report to County any suspected inappropriate activities at the Airport.

- 12.1.2 Monitor and report all safety concerns to County.
- 12.1.3 Keep Premises open during normal business hours.
- 12.1.4 Make available after-hours phone number for emergency issues that occur onsite and require Lessee's attention.
- 12.1.5 When necessary, provide onsite representation for the County to the FAA, or NTSB.
- 12.1.6 Maintain at least one restroom that is open to the public during business hours; provided however, and notwithstanding anything to the contrary in this Lease, County shall have the obligation of ADA compliance with any public restroom.

## 12.2 Operations and Maintenance Responsibilities

The Lessee has the primary responsibility for the daily upkeep and maintenance of items related to the leasing of the Premises including any repairs or maintenance necessitated by the negligent or intentional acts or omissions of the Lessee or the employees, agents, or contractors of Lessee. Lessee shall perform the items designated as the responsibility of the Lessee in Section 12.2.1. Further, except for maintenance work expressly listed as the County's responsibilities in Section 12.2.2 (which shall be at County's sole cost and expense), it shall be Lessee's responsibility, at Lessee's sole cost and expense, to continually keep and maintain the Premises and all improvements, systems, and equipment located thereon (whether constructed by Lessee or County) clean and neat, free of waste material and debris, in good condition and repair and in a fully operational condition and to make all necessary and appropriate preventive maintenance, repairs and replacements. One restroom shall be kept open to the public at all times during business hours, and the Lessee shall be responsible for its cleaning and upkeep.

County and Lessee have agreed on the following division of responsibilities regarding maintenance of the Premises.

### 12.2.1 Lessee Responsibilities

- a) Non-Structural portions of the interior of premises of the building including windows, doors, carpets, tile, ceilings, floors and floor coverings.
- b) Janitorial services for and general upkeep of restrooms including restroom supplies.

- c) Interior electrical panels, including power from main electrical panel throughout the Premises, conduit and wiring, subpanels, power outlets and switches.
- d) Interior light lamps (light bulbs).
- e) Fixed Base Operator signs and directories.
- f) Interior of structures including ceilings, walls, floors and waterproofing and sealing of floor penetrations.
- g) Interior locks.
- h) Hot water heater and refrigeration units.
- i) Common areas to be kept free and clear of debris.
- j) Landscaping
- k) Cleaning exterior of building, including rain gutters, sidewalks, vehicular parking lot and aircraft parking ramp.
- l) Interior fire extinguishers
- m) Telephone system
- n) Internet
- o) Communication and information technology
- p) Graffiti Abatement
- q) Pick up and disposal of Hazardous Waste, E-waste, Battery and Universal Waste

#### 12.2.2 Lessor Responsibilities

- a) Exterior lighting, including wiring and light fixtures.
- b) Fire systems, including sprinklers (heads and piping) and fire suppression equipment and devices.
- c) Heating, air condition, ventilation systems and associated controls.
- d) Building identification and directory
- e) Exterior of structures including roofs, sidings, gutters, drains, walkways, exterior doors, exterior painting.
- f) Asbestos Management
- g) Radio and Weather Equipment



- h) Above ground fuel storage system and associated components
- i) Termite and rodent infestation control
- j) Mold Remediation
- k) Exterior fire extinguishers
- j) Modifications in public use areas required to meet the Americans with Disabilities (ADA) standards.

**13. Limitation of Liability and Indemnity**

13.1 Except to the extent of Claims (defined below) directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, Lessee agrees to protect, defend (with counsel reasonably acceptable to County) and hold County and County's lenders, partners, members, property management company (if other than County), agents, directors, officers, employees, representatives, contractors, successors and assigns and each of their respective partners, members, directors, officers, employees, representatives, agents, contractors, heirs, successors and assigns (collectively, the "County Affiliates") harmless and indemnify the County and County Affiliates from, for and against all liabilities, damages, demands, penalties, costs, claims, losses, judgments, charges arising from Lessee's and Lessee Affiliates' use of the Premises and/or Lessee's failure to perform any covenant or obligation of Lessee under this Lease. Lessee agrees that the obligations of Lessee herein shall survive the expiration or earlier termination of this Lease.

13.2 Except to the extent of Claims directly resulting from the gross negligence or willful misconduct of County or its authorized representatives, to the fullest extent permitted by law, Lessee agrees that neither County nor any of the County Affiliates shall at any time or to any extent whatsoever be liable, responsible or in any way accountable for any loss, liability, injury, death or damage to persons or property which at any time may be suffered or sustained by Lessee or by any person(s) whomsoever who may at any time be using, occupying or visiting the Premises, including, but not limited to, any acts, errors or omissions of any sublessees, subtenants, guests, invitees or occupants of the Premises. Lessee shall not, in any event or circumstance, be permitted to offset or otherwise credit against any payments of Rent required herein for matters for which County may be liable hereunder.

13.3 Notwithstanding any provision to the contrary contained in this Lease, at no time shall County be responsible or liable to the Lessee or the Lessee Affiliates for any lost profits, lost economic opportunities, punitive damages or any form of consequential damage of any kind or nature. Except as otherwise allowed or permissible by any other term or condition of this Lease including but not limited to Section 7 of this Lease, at no time shall Lessee be responsible or liable to the County for any lost profits or lost economic opportunities or punitive damages resulting from any actual or alleged breach by Lessee of its obligations under this Lease, provided that in no event shall County be precluded from exercising its remedies under Section 17 or any other provision of this Lease.

**14. Assignment and Subletting**

14.1 Lessee shall not assign, sublet, license or otherwise transfer or encumber all or any part or Lessee's interest in this Lease, the Premises or the Property without Lessor's prior written consent, which shall not be unreasonably withheld, conditioned or delayed. Any attempted assignment, sublease or other transfer without Lessor's consent shall be void and of no force and effect, and shall, at the Lessors election, constitute an event of default hereunder.

14.2 Lessee shall submit the proposed written agreement between Lessee and the sublessee to County for review and evaluation. County may require that an application be completed and all relevant and applicable information relating to the requested sublease be provided to County for review and evaluation.

14.3 Sublessee may not occupy the Premises before County consents to the sublease in writing.

**15. Quiet Enjoyment**

So long as Lessee successfully complies at all times with all terms and conditions of this Lease, including the timely payment of all Rent, costs and fees when due, Lessee will be entitled to quiet enjoyment of the Premises.

**16. Right of Entry**

County or its authorized representatives shall have the right to enter the Premises at all reasonable times. .

**17. Default and Remedies/Termination**

In addition to any other right to terminate this Lease, any of the following events or occurrences shall constitute a material breach of this Lease by Lessee, and shall be deemed an event of default upon the expiration of any stated period to cure said breach,

at which time County may terminate this Lease and shall have all remedies available at law or in equity:

- 17.1. The failure by Lessee to make any timely payment required by this Lease in full within ten (10) business days after written notice from the County;
- 17.2. The failure by Lessee to observe or perform any covenant, condition or provision of this Lease when such failure continues beyond thirty (30) days after County gives Lessee written notice of breach; provided, however, that if the nature of such failure reasonably requires longer than thirty (30) days to cure, Lessee shall not be in default if it begins such cure in good faith and with due diligence within thirty (30) days of the notice of breach, and thereafter prosecutes such cure to completion in good faith and with due diligence, or as otherwise determined by County, in County's reasonable discretion. County reserves the right, however, to make a commercially reasonable determination that Lessee is or will be unable to satisfactorily comply with any term or condition of this Lease, and to deem any failure under this paragraph to be an event of default at the expiration of the thirty (30) day cure period (or longer as required herein);
- 17.3. Any attempted conveyance, assignment, mortgage or subletting of any or all of this Lease, the Premises or the Property, in which case there shall be no cure period;
- 17.4. Violation by Lessee of any applicable law, rule or regulation with respect to Lessee's use of the Property or the Premises beyond a ten (10) business cure period shall be a default of this Lease; intentional violation of any applicable law, rule or regulation by Lessee shall have no cure period.
- 17.5. Any of the following: a general assignment by Lessee for the benefit of Lessee's creditors; any voluntary filing, petition, or application by Lessee under any law relating to insolvency or bankruptcy, whether for a declaration of bankruptcy, a reorganization, an arrangement, or otherwise; the abandonment of the Premises by Lessee without County's prior written consent (after Lessee's notice and opportunity to cure); or the dispossession of Lessee from the Property or the Premises (other than by County) by process of law, in which case there shall be no cure period;
- 17.6. Lessee's failure to comply with any term, condition or provision of the Lease, beyond any applicable cure period.
- 17.7. The appointment of a trustee or receiver to take possession of all or substantially all of Lessee's assets; or the attachment, execution or other judicial seizure of all or substantially all of Lessee's assets located at the Property or of Lessee's interest in this Lease, unless the appointment or attachment, execution, or seizure is discharged within thirty (30) days; or a petition for reorganization or arrangement of Lessee under any law relating to insolvency or bankruptcy,

unless, in the case of any involuntary filing, it is dismissed within one hundred twenty (120) days. There shall be no cure period.

- 17.8. Lessee's absence from the Premises for thirty (30) consecutive calendar days, without prior written notice to County, during which time rent or other charges are delinquent, shall be deemed abandonment of the Premises. Such abandonment will be deemed cause for immediate termination without notice. County shall thereupon be authorized to enter and take possession and to remove and dispose of the property of Lessee or its guests without any liability whatsoever to County.

**18. Audit**

Lessee shall maintain for a period of at least three (3) years following the end of each calendar or tax fiscal year to which they pertain, complete and accurate books and records relating to Lessee's use of the Premises, compliance with the Lease terms, Improvements, Lessee improvements and Tax Expenses. Such books and records shall be kept at the location where Lessee customarily maintains its books and records however such location shall be within the County of Santa Clara, State of California. After delivery to County of at least thirty (30) days prior written notice, County, at its sole cost and expense, or through any accountant designated by it, shall have the right to examine and/or audit the books and records evidencing such expenses for any of the previous three (3) calendar years, during County's reasonable business hours but not more frequently than once during any calendar year. Lessee shall fully cooperate with County or its representatives in such audits and shall promptly resolve any discrepancies between County and Lessee in the accounting of such expenses.

**19. Taxes**

19.1 Lessee shall pay and shall be liable and responsible for any and all Tax Expenses (as defined below) applicable to the Premises or its use. Prior to delinquency, Lessee shall pay any and all taxes and assessments levied upon the Premises, including, without limitation, (i) any and all taxes and assessments resulting from or relating to any increase in real property taxes attributable to any and all Improvements, fixtures, equipment or other improvements of any kind whatsoever placed or existing in, on or about the Premises and (ii) taxes and assessments levied or assessed upon or with respect to the possession, operation, use or occupancy of the Premises during the Lease Term. "Tax Expenses" means, without limitation, any form of tax and assessment (general, special, supplemental, ordinary or extraordinary), commercial rental tax, payments under any improvement bond or bonds, license fees, license tax, business license fee, rental tax, transaction tax or levy imposed by any authority having the direct or indirect power of tax (including any governmental, school, agricultural, lighting or other improvement district) as

against any legal or equitable interest in the Premises or any other tax, fee, or excise, however described, including, but not limited to, any tax imposed in substitution (partially or totally) of any tax previously included within the definition of Tax Expenses and any cost and/or fee (including without limit attorneys' and appraisers' fees and court costs) incurred in calculating, contesting or negotiating any such taxes or assessments.

**19.2 Possessory Interest Tax.**

Lessee acknowledges that its interest in and/or use of the Premises may be subject to possessory interest taxation and that such taxation shall be Lessee's sole responsibility and liability.

**20. Notices**

Any notices which are required to be given hereunder, or which either party may wish to give to the other, shall be in writing and shall be effective for all purposes on any business day before 5:00 PM local time and on the next business day if received after 5:00 PM or on other than a business day, including without limitation, upon (i) receipt or refusal of receipt, in the case of personal delivery, (ii) the next business day after depositing notice with a reputable overnight courier, and (iii) three (3) days after depositing notice in with the United States Post Office for delivery by first class certified or registered mail, postage prepaid, and addressed as follows:

To COUNTY: County of Santa Clara  
2500 Cunningham Ave.  
San Jose, CA 95148

Or to such other place as COUNTY may designate by written notice.

To LESSEE: San Martin Aviation  
13025 Murphy Ave.  
San Martin, CA 95046

Or to such other place as LESSEE may designate by written notice.

**21. Miscellaneous**

**21.1 Waiver**

The failure of County to insist upon strict performance of any of the terms, covenants, or conditions of this Lease shall not be deemed a waiver of any right or remedy that County may have, and shall not be deemed a waiver of County's right to require strict performance of all terms, covenants, and conditions

thereafter, nor a waiver of any remedy for the subsequent breach of any of the terms, covenants, or conditions.

21.2 Intentionally Deleted

21.3 Severability and Governing Law.

Any non-material provision of this Lease which shall prove to be invalid, void or illegal shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect. This Lease, and all the rights and duties of the parties arising from or relating in any way to the subject matter of this Lease, shall be enforced, governed by and construed in accordance with the laws of the State of California (excluding any conflict of laws provisions that would refer to and apply the substantive laws of another jurisdiction). Lessee expressly agrees that any and all disputes, lawsuits or proceedings arising out of, relating to or in connection with this Lease, including any and all mediation or other alternative dispute resolution proceedings or settlements or negotiations, shall be brought, disputed and litigated only in the Superior Court of the State of California in the County of Santa Clara or the United States District Court, Northern District of California, San Jose Division (and in no other), and Lessee hereby consents to the exclusive personal jurisdiction and venue of said court.

21.5 Entire Agreement.

It is understood and agreed that there are no oral agreements between the parties hereto affecting this Lease and this Lease (including all exhibits and addenda) supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by County to Lessee with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. This Lease and any separate agreement executed by County and Lessee in connection with this Lease and dated of even date herewith (a) contain all of the terms, covenants, conditions, warranties and agreements of the parties relating in any manner to the rental, use and occupancy of the Premises, and (b) shall be considered to be the only agreement between the parties hereto and their representatives and agents. This Lease may not be modified, deleted or added to except by a writing signed by the parties hereto. All negotiations and oral agreements have been merged into and are included herein. There are no other representations or warranties between the parties, and all reliance with respect to representations is based totally upon the representations and agreements contained in this Lease. The parties acknowledge that (i) each party and/or its counsel have reviewed and revised this Lease, and (ii) no rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall be employed in the

interpretation or enforcement of this Lease or any amendments or exhibits to this Lease or any document executed and delivered by either party in connection with this Lease.

21.6 Warranty of Authority.

Lessor and Lessee each represent that the person executing this Lease on behalf of such party (i) is duly and validly authorized to do so on behalf of the entity it purports to so bind, and (ii) has full right and authority to enter into this Lease. Each party hereby warrants that this Lease is legal, valid and binding upon such party and enforceable against such party in accordance with its terms.

21.7 Joint and Several; Covenants and Conditions.

If Lessee consists of more than one person or entity, the obligations of all such persons or entities shall be joint and several. Each provision to be performed by Lessee hereunder shall be deemed to be both a covenant and a condition.

21.8 California Public Records Act.

The County is a public agency subject to the disclosure requirements of the California Public Records Act (“CPRA”). If Lessee’s proprietary information is contained in documents submitted to County, and Lessee claims that such information falls within one or more CPRA exemptions, then Lessee must clearly mark such information “CONFIDENTIAL AND PROPRIETARY,” and identify the specific lines containing the information. In the event of a request for such information, the County will use reasonable efforts to provide notice to Lessee prior to such disclosure. If Lessee contends that any documents are exempt from the CPRA and wishes to prevent disclosure, it is required, at its sole cost, liability and expense, to obtain a protective order, injunctive relief or other appropriate remedy from a court of law in Santa Clara County before the County’s deadline for responding to the CPRA request. If Lessee fails to obtain such remedy within County’s deadline for responding to the CPRA request, County may disclose the requested information even if marked “CONFIDENTIAL AND PROPRIETARY” without any liability or obligation to Lessee or any third parties.

21.9 Waiver of Jury Trial.

To the extent permitted by applicable law, the parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other on any matters whatsoever arising out of or in any way related to this Lease, the relationship of County and Lessee, Lessee's use or occupancy of the Premises and/or any claim of injury, loss or damage.

21.12 Headings.

Section headings shall not be used in construing this Lease.

21.15 Conflict of Interest.

Lessee represents, warrants and agrees that it shall comply, and require its employees, agents, representatives, contractors, consultants, sub-consultants and subcontractors (collectively, "Lessee Affiliates") to comply, with all applicable (i) requirements governing avoidance of impermissible client conflicts; and (ii) federal, state and local conflict of interest laws and regulations including, without limitation, California Government Code section 1090 et. seq., the California Political Reform Act (California Government Code section 87100 et. seq.) and the regulations of the Fair Political Practices Commission concerning disclosure and disqualification (2 California Code of Regulations section 18700 et. seq.). Failure to do so constitutes a material breach of this Lease and is grounds for immediate termination of this Lease by the County.

21.16 Relationship of Parties.

The parties acknowledge and agree that nothing set forth in this Lease shall be deemed or construed to render the parties as joint venturers, partners, associations, master-servant, agents, a joint enterprise, employer-employee, lender-borrower or contractor. Lessee shall have no authority to employ any person as employee or agent on behalf of County for any purpose. Neither Lessee nor any person using or involved in or participating in any actions or inactions relating to the Premises or this Lease shall be deemed an employee or agent of County, nor shall any such person or entity represent himself, herself or itself to others as an employee or agent of County. Lessee's status, as well as the status of its officers, agents or employees, including personnel in the administration and performance of services under this Lease, shall be in an independent capacity and not as an employee or agent of the County.

21.17 No Third-Party Rights.

This Lease shall not be construed as nor deemed to be an agreement for the benefit of any third party or parties, and no third party or parties shall have any right of action herein for any cause whatsoever.

21.19 Signs.

All signs and graphics of every kind visible in or from public view shall be subject to (i) County's prior written approval, and (ii), and in compliance with, all applicable Laws, Development Documents, Recorded Matters, Rules and Regulations, and County's sign criteria ("Sign Criteria") as same may exist from time to time.



21.22 Brokerage Commission.

Lessee represents and warrants for the benefit of County that it has had no dealings with any real estate broker, agent or finder in connection with the Premises and/or the negotiation of this Lease, and that it knows of no other real estate broker, agent or finder who is or might be entitled to a real estate brokerage commission or finder's fee in connection with this Lease or otherwise based upon contacts between the claimant and Lessee.

21.23 OFAC.

Lessee represents and warrants to County that: (i) Lessee is not acting, and shall not act, directly or indirectly, for or on behalf of any person, group, entity, or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially Designated National and Blocked Person," or other banned or blocked person, entity, nation, or transaction pursuant to any law, order, rule or regulation enforced or administered by the federal Office of Foreign Assets Control; and (ii) Lessee is not engaged in this transaction, directly or indirectly, on behalf of, or instigating or facilitating this transaction, directly or indirectly, on behalf of any such person, group, entity, or nation.

21.24 Non-Discrimination.

Lessee and Lessee Affiliates shall each comply with all applicable federal, state and local laws and regulations including the County of Santa Clara's policies concerning nondiscrimination and equal opportunity in contracting. Such laws include but are not limited to the following: Title VII of the Civil Rights Act of 1964, as amended; Americans with Disabilities Act of 1990; The Rehabilitation Act of 1973 (Sections 503 and 504); California Fair Employment and Housing Act (Government Code Sections 12900 et sea.); California Labor Code sections 1101 and 1102. Lessee and each of the Lessee Affiliates shall not discriminate against any subcontractor, employee, or applicant for employment because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organization affiliations, or marital status in the recruitment, selection for training including apprenticeship, hiring, employment, utilization, promotion, layoff, rates of pay or other forms of compensation. Nor shall Lessee or any of the Lessee Affiliates discriminate in the provision of services provided under this Lease because of age, race, color, national origin, ancestry, religion, sex/gender, sexual orientation, mental disability, physical disability, medical condition, political beliefs, organizational affiliations, or marital status.

21.25 No Relocation Assistance.

It is understood that this Lease is intended to give Lessee a temporary conditional use of the Premises and that Lessee shall not be entitled to relocation

benefits, assistance, damages (liquidated or otherwise), costs, claims or fees from County upon expiration, termination or cancellation of this Lease, except as expressly provided for elsewhere in this Lease.

21.26. Prevailing Wage.

If the work to be performed by Lessee or any of its contractors hereunder is a public work as defined in California Labor Code Section 1720 et seq., then Lessee and its contractors must comply with the payment of prevailing wages and the employment of apprentices as set forth in Section 1770, et al. and following of the Labor Code. Lessee is solely liable for failing to comply with prevailing wage laws.

21.27. Wage Theft Prevention.

These provisions are in relation to any work performed by Lessee or Lessee Affiliates under the terms or conditions of the Lease only.

Compliance with Wage and Hour Laws. Lessee and the Lessee Affiliates who are involved in the work must comply with all applicable federal, state, and local wage and hour laws. Applicable laws may include, but are not limited to, the Federal Fair Labor Standards Act, the California Labor Code, and any local Minimum Wage Ordinance or Living Wage Ordinance.

21.27.1. Final Judgments, Decisions, and Orders. For purposes of this Section, a “final judgment, decision, or order” refers to one for which all appeals have been exhausted. Relevant investigatory government agencies include: the federal Department of Labor, the California Division of Labor Standards Enforcement, a local enforcement agency, or any other government entity tasked with the investigation and enforcement of wage and hour laws.

21.27.2. Prior Judgments against Lessee and/or its contractors. BY SIGNING THIS LEASE, LESSEE AFFIRMS THAT IT HAS DISCLOSED ANY FINAL JUDGMENTS, DECISIONS, OR ORDERS FROM A COURT OR INVESTIGATORY GOVERNMENT AGENCY FINDING—IN THE FIVE YEARS PRIOR TO EXECUTING THIS LEASE—THAT LESSEE OR ANY OF THE LESSEE AFFILIATES HAS VIOLATED ANY APPLICABLE WAGE AND HOUR LAWS.

21.27.3. LESSEE FURTHER AFFIRMS THAT IT AND/OR THE LESSEE AFFILIATES HAVE SATISFIED AND COMPLIED WITH—OR HAS REACHED LEASE WITH THE COUNTY REGARDING THE MANNER IN WHICH IT WILL SATISFY—ANY SUCH JUDGMENTS, DECISIONS, OR ORDERS.

- 21.27.4. **Judgments During Term of Lease.** If at any time during the Term of this Lease, a court or investigatory government agency issues a final judgment, decision, or order finding that Lessee or any contractor it uses to perform work under this Lease has violated any applicable wage and hour law, or Lessee learns of such a judgment, decision, or order that was not previously disclosed, Lessee must inform the Office of the County Executive-Office of Countywide Contracting Management (OCCM), no more than 15 days after the judgment, decision, or order becomes final or of learning of the final judgment, decision, or order. Lessee and its contractors shall promptly satisfy and comply with any such judgment, decision, or order, and shall provide the Office of the County Executive-OCCM with documentary evidence of compliance with the final judgment, decision, or order within 5 days of satisfying the final judgment, decision, or order. The County reserves the right to require Lessee to enter into an agreement with the County regarding the manner in which any such final judgment, decision, or order will be satisfied.
- 21.27.5. **County’s Right to Withhold Payment.** Where Lessee or any contractor it employs to perform work under this Lease has been found in violation of any applicable wage and hour law by a final judgment, decision, or order of a court or government agency, the County reserves the right to withhold payment to Lessee until such judgment, decision, or order has been satisfied in full.
- 21.27.6. **Material Breach.** Failure to comply with any part of this Section constitutes a material breach of the Lease. Such breach may serve as a basis for termination of this Lease and/or any other remedies available under this Lease and/or law.
- 21.27.7. **Notice to County Related to Wage Theft Prevention.** Notice provided to the Office of the County Executive as required under this Section shall be addressed to: Office of the County Executive—OCCM; 70 West Hedding Street; East Wing, 11th Floor; San José, CA 95110. The Notice provisions of this Section are separate from any other notice provisions in this Lease and, accordingly, only notice provided to the above address satisfies the notice requirements in this Section.
- 21.28. **Counterparts.** This Lease, and any amendments thereto, may be executed in several counterparts, and all of such counterparts so executed together shall be deemed to constitute one and the same agreement, and each such counterpart shall be deemed to be an original. Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of this agreement, or an electronically signed agreement, has the same force and legal effect as the agreement executed with an original ink signature. The term “electronic copy of this agreement” refers to a transmission by facsimile, electronic mail, or other electronic means

of a copy of the original signed agreement in a portable document format. The term “electronically signed agreement” means the agreement that is executed by applying an electronic signature using technology approved by the County.

21.29 County Sustainability Policies.

In performing any work on the Premises, Lessee will use best efforts to substantially comply with Lessor's Sustainability policies found in Board of Supervisors Policy Manual 8.1 through and including 8.4, as amended from time to time by Lessor, and Lessor’s Green Cleaning Policy Administrative Guidelines, as amended from time to time by Lessor.

21.30 Integrated Pest Management Ordinance.

When conducting or allowing the performance of any pest management practices or pesticide uses, Lessee, its contractors, employees, agents and representatives, will use best efforts to substantially comply with and require any pest management service providers to comply with the County Integrated Pest Management ordinance.

21.31 County No-Smoking Policy.

Lessee and Lessee Affiliates, guests and invitees, shall not smoke on, in or around the Property or Premises unless expressly allowed by applicable smoking laws.

21.32 Liens.

Except as expressly authorized in a term or condition found elsewhere in this Lease, Lessee shall keep the Premises free and clear of all liens and encumbrances. If, because of any act or omission of Lessee or any of its employees, officers, agents, representatives or volunteers, any mechanic’s lien or other lien, charge or order for the payment of money are filed against any portion of the Premises, structures, or Alterations, Lessee shall at its own expense, cause the same to be discharged of record within thirty (30) days after written notice from Lessor; and, Lessee shall indemnify, defend and save harmless Lessor against all resulting costs, liabilities, suits, claims and demands, including legal fees and court costs.

21.33 Prohibition of Alcohol and Controlled Substances.

Sale, promotion or advertising of any type of alcohol or controlled substances are strictly prohibited on, in or near the Premises.

21.34 Timing.

In the event the time for performance of any obligation under this Lease shall fall on a Saturday, Sunday or court holiday, such time for performance shall be extended to the next business day. “Business day” means days other than Saturdays, Sundays, and federal and state legal holidays in the state of California.

21.35 Survival.

Those provisions which by their nature should survive termination, cancellation or expiration of this Lease, shall so survive.

21.36 Recitals and Exhibits.

The Recitals stated above, and all Exhibits referenced in this Lease, are incorporated herein and made a part of this Lease by this reference.

**22. Flight Training**

The Lessor shall obtain a Part 141 Flight School certificate, or subcontract with a secondary service provider holding a FAA Part 141 Flight School Certificate to provide pilot training by January 1, 2022.

**23. FAA Assurance**

Should Lessee provide any service to the public, including subleasing, at the airport, Lessee shall:

23.1 Furnish said services on a fair, equal, and not unjustly discriminatory to all users thereof; and

23.2 Charge fair, reasonable, and not unjustly discriminatory prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to

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volume purchasers.

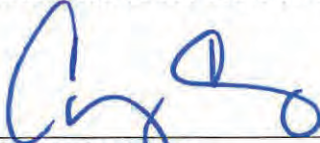
IN WITNESS WHEREOF, the parties hereto have executed this Lease as follows:

**LESSOR:**

**LESSEE:**

**County of Santa Clara, a political  
subdivision of the State of California**

**San Martin Aviation, a California  
Corporation**



DocuSigned by:  
*Daniel L Neal*

\_\_\_\_\_  
CINDY CHAVEZ  
President, Board of Supervisors

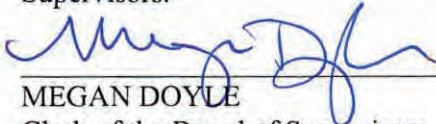
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DAN NEAL  
**Title:**

Date: NOV 17 2020

Date: 11/10/2020

ATTEST:

~~Signed and certified that a copy of this document has been delivered by electronic or other means to the President, Board of Supervisors.~~



\_\_\_\_\_  
MEGAN DOYLE  
Clerk of the Board of Supervisors

APPROVED AS TO FORM AND LEGALITY:

DocuSigned by:  
*Christopher Cheleden*

\_\_\_\_\_  
B179ECE83EEF431...  
Christopher R. Cheleden  
Lead Deputy County Counsel

### Exhibit A (Premises)



#### KEY

1. Approximately 2 acres consisting of a commercial hangar and office space, aircraft parking ramp and vehicle parking lot.
2. Land adjacent to the fuel ramp for the storage of aircraft refueling vehicles.
3. Three (3) tie-downs for use by Lessee.
4. One (1) tie-down for use by Lessee.

EXHIBIT B-8 (revised)

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.



EXHIBIT B-8 (revised)

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance - for bodily injury (including death) and property damage which provides limits of not less than three million dollars (\$3,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General liability and airport liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General liability and airport liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8 (revised)

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

5a. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than three million dollars (\$3,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

6. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

7. Hangarkeepers Liability - with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

8. Fueling or Refueling Operations - with a limit of not less than three million dollars (\$3,000,000) if such operations are to be conducted by the contractor/permittee.

9. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount

EXHIBIT B-8 (revised)

of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

10. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

11. Interruption of Business Insurance

Lessee shall, at its sole cost and expense, maintain business interruption insurance by which the minimum monthly rent will be paid to Lessor for a period of up to one (1) year if the premises are destroyed or rendered inaccessible by a risk insured against by a policy of standard fire and extended coverage insurance, with vandalism and malicious mischief endorsements

E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County upon satisfactory evidence of financial capacity. Contractors obligation hereunder

EXHIBIT B-8 (revised)

may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit C

# Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California



Tuesday 3<sup>rd</sup> August, 2021

## **Preface**

This report presents findings of a study sponsored by the County of Santa Clara and in cooperation with the California Department of Public Health (CDPH), Childhood Lead Poisoning Prevention Branch (CLPPB). The views and analysis presented here are those of the authors, and do not necessarily reflect the views of the County of Santa Clara or the CDPH. Pursuant to a Board request, this research was conducted by Mountain Data Group to assess statistical associations between the blood lead levels of sampled children and indicators of aviation gasoline exposure risk around Reid-Hillview Airport.

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## List of Abbreviations

ACS	American Community Survey
BLLs	Blood Lead Levels
CAA	Clean Air Act
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CLPPB	Childhood Lead Poisoning Prevention Branch
E16	San Martin Airport
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FFE	Fuel Flowage Fee
FWC	Flint Water Crisis
LTO	Landing-Takeoff
NUQ	Moffett Federal Airfield
PAO	Palo Alto Airport
Pb	Lead
PEA	Piston Engine Aircraft
RHV	Reid-Hillview Airport
SES	Socioeconomic Status
SJC	Norman Y. Mineta San Jose International Airport
TEL	Tetraethyl-lead
TFMSC	Federal Aviation Administration Traffic Flow Management System Counts
TRI	Toxic Release Inventory

## Executive Summary

### Background

Lead (Pb) is a naturally occurring and ubiquitous metal, used in human industry since antiquity. Lead emissions persists in the lived environment. Lead ingested or inhaled resides in the human bloodstream for about sixty days, but can persist in human tissue, the brain, and the skeletal system for many decades after an exposure event. Lead has no known biological purpose in the human body.

As noted by Bellinger and Bellinger (2006), because “lead serves no useful purpose in the body, exposure to it – regardless of route – can lead to toxic effects.” Children exposed to lead suffer substantial, long lasting, and possibly irreversible negative health, behavioral, and cognitive outcomes. Importantly, negative cognitive and behavioral effects in lead-exposed children are higher at lower blood lead levels (BLLs), with deleterious effects observable at BLLs in the range of 2 to 3  $\mu\text{g}/\text{dL}$  (Miranda et al., 2007, 2009). On the question of safe exposure, the Centers for Disease Control and Prevention (CDC) states: “No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement.”

Over the last four decades, the BLLs of children in the United States have declined significantly, coincident with a series of policies that expelled lead from paint, plumbing, food cans and automotive gasoline. Most effective was the phase-out of tetraethyl lead (TEL) from automotive gasoline induced by provisions of the Clean Air Act (CAA) of 1970. While TEL is no longer used as an additive in automotive gasoline, it remains a constituent in aviation gasoline used by an estimated 170,000 piston-engine aircraft (PEA) nationwide.

Consumption of lead-formulated aviation gasoline accounts for about half to two thirds of current lead emissions in the United States (Kessler, 2013). In a recently published consensus study on *Options for Reducing Lead Emissions by Piston-Engine Aircraft* by

the National Academies of Sciences, Engineering, and Medicine, the authors note: “While the elimination of lead pollution has been a U.S. public policy goal for decades, the GA [General Aviation] sector continues to be a major source of lead emissions.” (2021, pg. 10-11).

Several studies have linked aviation gasoline use to elevated atmospheric lead levels in the vicinity of airports. The U.S. Environmental Protection Agency (EPA) estimates that four million persons reside, and about six hundred K-12th grade schools are located, within 500 meters of PEA servicing airports (EPA, 2020b). Zahran et al. (2017a) estimate that sixteen million persons – and about three million children – live within a kilometer of such airport facilities. The disposition of aviation gasoline around such airports may be a meaningful source of child lead exposure. To date, two studies have explicitly statistically linked aviation gasoline usage to blood lead levels of children residing in the vicinity of general aviation airports, showing the child BLLs increase in proximity to general aviation airports and increase dose-responsively with the volume of piston-engine aircraft traffic at general aviation airports.

## **Research Objective**

The risk of aviation gasoline exposure for children varies considerably by airport, depending on 1) the volume of piston-engine aircraft traffic at the airport, 2) child residential proximity to the airport, and 3) child residential near angle to airport runways. Reid-Hillview Airport (RHV) is among a subset of airports identified by the EPA as having highest potential to exceed National Ambient Air Quality Standards for lead because of the combustion of leaded aviation gasoline. In this study, a team of data scientists from Mountain Data Group assessed whether the BLLs of sampled children around Reid-Hillview Airport are statistically associated with indicators of aviation-related lead exposure, net of other lead exposure pathways. To accomplish this objective, data were collected from various sources and analyzed using established statistical and econometric methods.

## Materials and Methods

### California Department of Public Health Data

Permission to analyze blood lead data was granted by agreement with the Childhood Lead Poisoning Prevention Branch (CLPPB) of the California Department of Public Health (CDPH). Restricting to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles of Reid-Hillview Airport, and sampled between January 1<sup>st</sup>, 2011 and December 31<sup>st</sup>, 2020, over 17,000 blood lead samples were obtained for statistical analysis.

The main outcome variable of analytic interest is *Blood Lead Level* (BLL) measured in micro-grams per deciliter of blood ( $\mu\text{g}/\text{dL}$  units). In extended analyses, BLLs are divided into a set of ordered categories moving in increments of  $1.5 \mu\text{g}/\text{dL}$  from 0 to  $\geq 4.5 \mu\text{g}/\text{dL}$ , the CDPH-defined threshold for service action. Also from CDPH data holdings, five control variables were obtained that are known to be correlated with child BLLs, including: child gender, child age, method of blood draw, sample detection limit, and sample order.

### Main Indicators of Exposure Risk

#### Residential Distance

The Haversine distance from the residential address of a sampled child to Reid-Hillview Airport was calculated. Using distance information on each child as an indicator of exposure risk, we test whether BLLs increase measurably with proximity to Reid-Hillview Airport. Following previous research (Miranda et al., 2011; Zahran et al., 2017a), residential distance is analyzed both continuously and by division into categories of distance:  $< 0.5$  miles, 0.5 to 1 mile, and 1 to 1.5 miles from Reid-Hillview Airport. Over the period of January 1<sup>st</sup>, 2011 to December 31<sup>st</sup>, 2020, we observe a total of 1,065 records at  $< 0.5$  miles, 6,472 records at 0.5 to 1 mile, and 9,704 at 1 to 1.5 miles from Reid-Hillview Airport. Insofar as aviation gasoline exposure is a source of risk, and other things held equal, children in the nearest orbit to Reid-Hillview Airport should present with higher BLLs as compared to children in outer orbits.



### **Residential Near Angle**

Airport proximity, by itself, is an imperfect indicator of aviation gasoline exposure risk. The fate and transport of lead emissions depend on the direction of prevailing winds. Insofar as aviation gasoline is an independent source of lead exposure, two children equidistant to the same airport face different risk of elevated blood lead depending on the child's residential near angle to the airport. In this study, each sampled child is assigned a near angle to Reid-Hillview Airport corresponding to the four cardinal directions of North, East, South and West. We observe 5,962 blood lead records residing North of Reid-Hillview Airport, 1,170 records East, 3,495 records South, and 6,614 records West of the airport. We also calculate the number of days that winds drift in the direction of a sampled child's residence from the date of blood draw. Because prevailing winds at Reid-Hillview Airport emanate from the West Northwest, children East of Reid-Hillview Airport should present with higher BLLs, other things held equal.

### **Piston-Engine Aircraft Traffic**

The volume of PEA traffic varies meaningfully between airports and within an airport in time. Therefore, two children residing in the same household but sampled at different moments in a calendar year may present with different BLLs, depending on the coincidence of PEA traffic activity. To capture this channel of risk, we collected data on PEA departures and arrivals from Federal Aviation Administration Traffic Flow Management System Counts (TFMSC). Also, fuel flowage fee (FFE) data were obtained from personnel at the Roads and Airports Department of Santa Clara County. The FFE data track monthly quantities of aviation gasoline (100LL) sold to fixed-base operators at Reid-Hillview Airport from 2011 to 2019. Insofar as aviation gasoline exposure is a source of risk, then the BLLs of sampled children should correlate statistically with measured quantities of PEA traffic and aviation gasoline sales.

## Control Variables

Lead-emitting industrial facilities are more common in the vicinity of airports (Zahran et al., 2017a). Children that are proximate to airports are therefore simultaneously proximate to other point source emitters of lead. Failing to account for this spatial coincidence can produce biased estimates of aviation gasoline exposure risk vis-à-vis child BLLs. The EPA's Toxic Release Inventory (TRI) system tracks the industrial management of over 650 listed chemicals that pose harm to humans and the environment. We collected records on all facilities in Santa Clara County with reported on-site releases of lead between 2011 to 2020, and calculated the Haversine distance of every sampled child to each of these TRI facilities operating in the year of blood draw.

Legacy use of lead-based paint remains an exposure risk to children. Exposure to lead-based paint is primarily a problem in older homes. By 1960, use of lead-based paint subsided by more than 90% from peak usage in the 1920s. Still, children in the United States may ingest paint chips or may be exposed to dust from deteriorating or haphazardly removed lead-based paint in homes built in the era before 1960. We collected American Community Survey data on the fraction of homes in a child's neighborhood built before 1960. In analyses that follow, each sampled child in our data is assigned a lead-based paint exposure risk according to the neighborhood of residence and year of blood draw, as captured by the percentage of homes built before 1960.

Studies show that children of low socioeconomic status are at greater risk of presenting with elevated BLLs (Campanella and Mielke, 2008; Zahran et al., 2010). Socioeconomic status proxies for household resources, knowledge about the dangers of, and protective actions taken against lead exposure (Zahran et al., 2017a). In addition to demographic information present in CDPH data, we measured the percentage of adults with a college degree, median home prices, and median household incomes to characterize the socioeconomic status of a child's residential neighborhood. These data were also collected from the American Community Survey.

## Statistical Methods

To assess whether child BLLs (measured in units of  $\mu\text{g}/\text{dL}$ ) are statistically associated with indicators of aviation gasoline exposure risk, net of other factors, we deploy a least squares estimator with census block fixed effects, and with bootstrapped standard errors to account for heteroskedasticity and to relax distributional assumptions. To allow for non-linear associations, we use flexible specifications with categorical versions of continuous variables of interest, such as distance to the airport and PEA traffic. In extended analyses, we reconstitute our response variable in ordered categorical terms, defining mutually exclusive BLL categories ranging from 0 to exceedance of the CDPH-defined threshold of action of  $\geq 4.5 \mu\text{g}/\text{dL}$ . The purpose here is to investigate threshold effects with respect to our main indicators of aviation gasoline exposure risk and to relax the assumption of precisely measured BLLs. Within this framework, we execute a series of Ordered Logit models estimating the odds that a sampled child's BLL exceeds a specified blood lead category as potentially resulting from exposure risk to lead-formulated aviation gasoline.

## Main Results

### Residential Distance Results

Evidence presented in Table 3 and Figure 9 indicates that children proximate to Reid-Hillview Airport present with systematically higher BLLs, net of other measured sources of lead exposure risk, child characteristics, and neighborhood conditions. This result is compatible with exposure risk to aviation gasoline, and consistent in direction and magnitude with previous studies (Miranda et al., 2011; Zahran et al., 2017a). As shown in Table 3, children within 0.5 miles of Reid-Hillview Airport have BLLs that are about  $1/5^{\text{th}}$  of a  $\mu\text{g}/\text{dL}$  higher than statistically similar children more distant from Reid-Hillview Airport. This calculated difference is equivalent to about 50% of the estimated surge in child BLLs at the height of the Flint Water Crisis (FWC) of 0.35 to 0.45  $\mu\text{g}/\text{dL}$  over baseline BLLs in Flint (Zahran et al., 2017c). These results are supported by analyses involving models

with residential distance measured continuously and applying various transformations to both distance and child BLLs. As shown in Table 4, across all such models, child BLLs decrease statistically significantly with distance from Reid-Hillview Airport.

### **Residential Near Angle Results**

Evidence presented in Table 5 and Figure 10 indicates that sampled children residing East and downwind of Reid-Hillview Airport have substantively higher BLLs. As compared to sampled children residing West (and predominately upwind) of Reid-Hillview Airport, sampled children residing East (and predominately downwind) of Reid-Hillview, present with BLLs that are 0.4  $\mu\text{g}/\text{dL}$  higher, other things held equal. This estimated margin of difference of 0.4  $\mu\text{g}/\text{dL}$  is approximately equal to the measured difference between children sampled at the peak of the FWC relative to children sampled before the FWC (Zahran et al., 2017c). These results are also supported by ancillary analyses involving the calculation of downwind days, showing that BLLs among sampled children increase significantly in the count of wind days drifting in the direction of a child's residence.

### **Piston-Engine Aircraft Results**

Evidence presented in Table 6 and Figure 11 indicates that child BLLs increase significantly with exposure to piston-engine aircraft operations at Reid-Hillview Airport, net of all other factors. In going from the minimum to the maximum of child PEA traffic exposure, we find that child BLLs increase by 0.163 to 0.387  $\mu\text{g}/\text{dL}$ , depending on the presence of control variables. This result holds with the division of PEA traffic into terciles, suggesting that child BLLs increase dose-responsively with PEA traffic. Moreover, as shown in Figure 13, the estimated positive association between child BLLs and PEA traffic is robust to the substitution of PEA traffic for the quantity of aviation gasoline sold at Reid-Hillview Airport, an independent indicator of lead exposure risk.

## Extended Results

### Blood Lead Threshold Results

Results on BLL threshold outcomes reported in Table 7 and Figure 14 are consistent with linear model results reported in Section 4. All indicators of aviation gasoline exposure risk – residential proximity to Reid-Hillview Airport, residing East and predominately downwind of Reid-Hillview Airport, and exposure to high PEA traffic – meaningfully increase the odds that a sampled child presents with a  $BLL \geq 4.5 \mu\text{g}/\text{dL}$  relative to the combined odds of presenting with a lower category of blood lead. Specifically, we estimate that the probability of exceeding  $4.5 \mu\text{g}/\text{dL}$  for sampled children in the nearest orbit is 20% and 27% higher than children in outer orbits of 0.5 to 1 mile and 1 to 1.5 miles, respectively. With respect to near angle, the probability of a sampled child residing East (predominantly downwind) of RHV presenting with a  $BLL \geq 4.5 \mu\text{g}/\text{dL}$  is about 200% higher than sampled children West of Reid-Hillview Airport (and predominantly upwind). With respect to PEA traffic exposure, children exposed to maximum traffic have an estimated probability of superseding  $4.5 \mu\text{g}/\text{dL}$  that is about 29% higher than children sampled in moments of minimum PEA traffic.

### PEA Traffic Exposure × Residential Distance Results

The evidence presented in Table 8 and Figure 15 suggests that children residing within 0.5 miles of Reid-Hillview Airport are especially vulnerable to increases in PEA traffic. Children more distant from Reid-Hillview Airport (0.5 to 1.5 miles) experience a modest increase in BLLs of about  $1/10^{\text{th}}$  of  $\mu\text{g}/\text{dL}$  from an increase in PEA traffic from the minimum to the maximum. By contrast, among sampled children at  $< 0.5$  miles of Reid-Hillview Airport, an increase from the minimum to maximum exposure to PEA traffic is associated with an estimated  $0.83 \mu\text{g}/\text{dL}$  increase in BLLs – an effect that is substantively higher than the increase in BLLs caused by water system failures during the FWC. These results are supported by ancillary analyses presented in Figure 16 involving the statistical interaction between distance and aviation gasoline sales at Reid-Hillview Airport.

### **PEA Traffic Contraction Period Results**

As the COVID-19 pandemic gripped the country, state and local governments enacted various restrictions on the behavior of households and firms to limit the spread of the disease. Corresponding with these efforts in Santa Clara County, PEA traffic declined over baseline levels by an estimated 35-45% at Reid-Hillview Airport over the months of February to July of 2020. As shown in Table 10 and Figure 17, children sampled in this PEA traffic contraction period presented with significantly lower BLLs – about 1/4th of a  $\mu\text{g}/\text{dL}$  lower – than children sampled outside this contraction window.

### **School Commuting Results**

Knowing where school-aged children reside and assuming that such children attend the nearest grade-serving school, one can compute the distance a child commutes toward or away from Reid-Hillview Airport to attend school. Other things held equal, the evidence presented in Table 11 and Figure 19 indicates that commuting away from Reid-Hillview Airport to attend school is negatively correlated with child BLLs. Sampled children that commute toward Reid-Hillview Airport for school by 1 mile from their place of residence have predicted BLLs that are  $0.65 \mu\text{g}/\text{dL}$  higher than sampled children commuting away from Reid-Hillview Airport for school by 1 mile.

### **Inclusion of All Airports Results**

As indicated in Federal Aviation Administration (FAA) data, four other airports located in Santa Clara County service piston-engine aircraft, including Moffett Federal Airfield (NUQ), Palo Alto Airport (PAO), Norman Y. Mineta San Jose International Airport (SJC), and San Martin Airport (E16). Across an ensemble of tests, the results reported in Section 4 and Section 5 pertaining to Reid-Hillview Airport are statistically upheld with the inclusion of children proximate to other airports in Santa Clara County with non-zero piston-engine aircraft activity. Estimated coefficients are similar in direction and magnitude as RHV-specific analyses.

## Reduction Scenario

To provide additional quantitative meaning to our results, we conservatively estimate the social benefits of a simulated reduction in PEA traffic from the 50<sup>th</sup> (observed median) to the 1<sup>st</sup> percentile (observed minimum). Social benefits are quantified with a standard syllogism in environmental health economics (PEA Traffic → Child BLLs → IQ → Lifetime Earnings) linking lead exposure source to child BLLs to IQ points and to the net present value of future earnings. Leveraging coefficients from our Distance × PEA Traffic test reported in Table 8 and visualized in Figure 15, we estimate a gain of \$11.0 to \$24.9 million in discounted net present value of earnings for the cohort of children ≤ 18 years of age residing within 1.5 miles of Reid-Hillview Airport from a simulated reduction in PEA traffic. Our social benefit estimate is not comprehensive since it reflect gains to a subset of the population (children ≤ 18 years of age), and only one benefit channel (lifetime earnings from expected gains in IQ).

## Concluding Remarks

At the height of the Flint Water Crisis, child BLLs surged over pre-crisis levels by an estimated 0.35 to 0.45  $\mu\text{g}/\text{dL}$ . Under periods of high piston-engine aircraft traffic, children proximate to Reid-Hillview Airport experience an increase in BLLs excess of what the children of Flint experienced during the FWC. Because negative cognitive and behavioral outcomes in lead-exposed children are higher at lower blood lead levels – the dose-response is non-linear – limiting exposure to lead-formulated aviation gasoline can deliver sizable and lasting social benefits. On the matter of aviation gasoline exposure risk to families and children proximate to general aviation airports, the National Academies of Sciences, Engineering, and Medicine maintains: “Because lead does not appear to exhibit a minimum concentration in blood below which there are no health effects, there is a compelling reason to reduce or eliminate aviation lead emissions.” The ensemble of evidence compiled in this study supports the “compelling” need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children around Reid-Hillview.

# 1 Introduction and Background

Lead (Pb) is a naturally occurring and ubiquitous metal. Its physical properties of high malleability, ductility, low melting point, and resistance to corrosion invited widespread usage in human industry since antiquity (Flora et al., 2012). Lead persists in the lived environment because it is non-biodegradable. Lead enters the human body via inhalation or ingestion. The half-life of lead in the human bloodstream is about thirty days (Papanikolaou et al., 2005), but can persist in human tissue, the brain, and the skeletal system for many decades after an exposure event. Lead has no known biological purpose in the human body. The estimated pre-industrial concentration of lead in the human bloodstream is 0.016  $\mu\text{g}/\text{dL}$ , more than 100-fold lower than the typical level observed in children in the United States today (Flegal and Smith, 1992).

## 1.1 Health and Human Capital Effects of Lead

While knowledge of the toxic effects of lead stretch back millennia, the evidence amassed by modern science indicates that the health and human capital costs of lead exposure in childhood are substantial, long lasting, and possibly irreversible. Numerous studies have linked elevated blood lead levels (BLLs) in children to cognitive and intellectual impairments, poor academic achievement, and higher risk of attention-deficit and hyperactivity disorders. Importantly, estimated marginal effects with respect to negative cognitive and behavioral outcomes in lead-exposed children are higher at lower BLLs (Nigg et al., 2010; Needleman and Gatsonis, 1990; Mielke and Zahran, 2012; Lanphear et al., 2005; Dietrich et al., 2001; Canfield et al., 2003).

Studies have also shown that lead exposure in childhood causes abnormal psychology and behavior in adolescence (Graff Zivin and Neidell, 2013). Curci and Masera (2018) find that childhood lead exposure results in higher incidents of juvenile delinquency in adolescence. Reyes (2015) links childhood lead exposure to “an unfolding series of adverse behavioral outcomes” that stretch into adolescence and early adulthood.



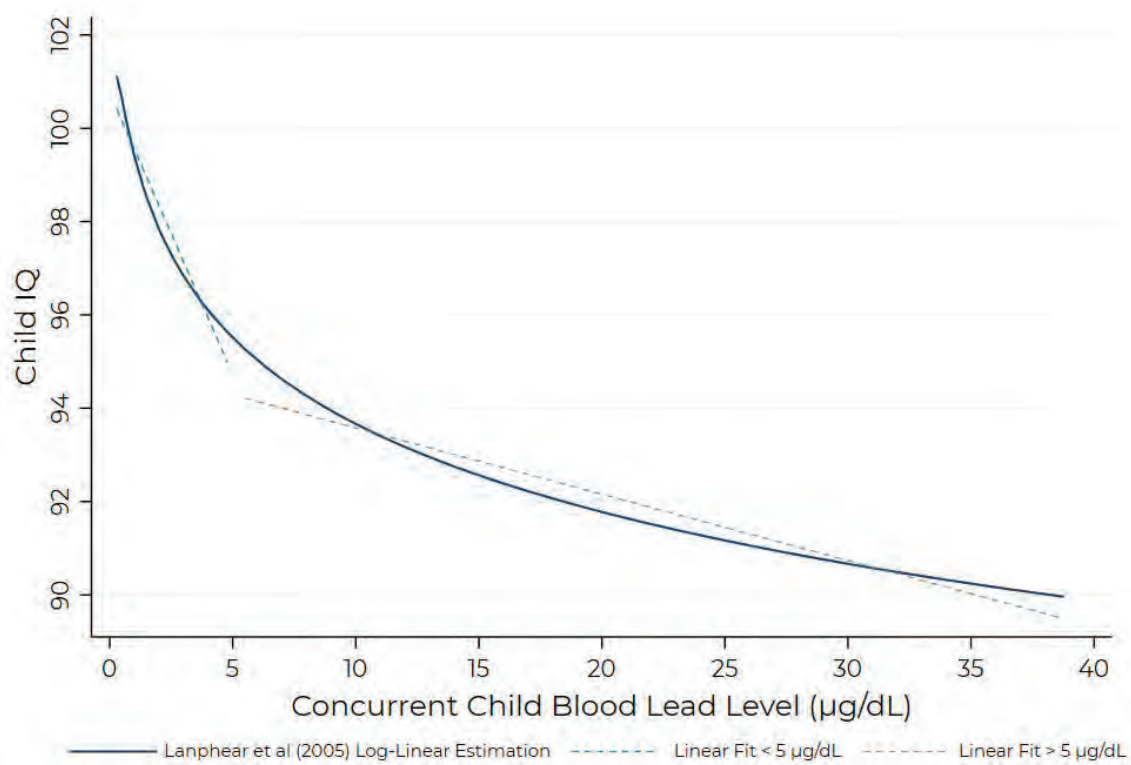
Childhood lead exposure has also been linked to adult-onset physical health problems, including hypertensive disorders, the malfunction of renal and cardiovascular systems, and all-cause and motor neuron disease mortality (Needleman and Gatsonis, 1990; Dietrich et al., 2001; Canfield et al., 2003; Lanphear et al., 2005; Nigg et al., 2010; Mielke and Zahran, 2012; Zahran et al., 2017b). Brain imaging studies find that adults exposed to lead as children present with volumetric loss in brain regions that govern judgment, decision-making and mood regulation (Cecil et al., 2008; Cecil, 2011), cognitive and socio-emotional traits that economists have linked to long-term life outcomes (Cunha et al., 2010; Almond and Currie, 2011; Doyle et al., 2013). In a recent study on the lasting consequences of child lead exposure, Reuben et al. (2017) find that adults in New Zealand exposed to lead in childhood had measurable reductions in IQ and occupational status in midlife, with these negative effects appearing to amplify over the life-course.

## **1.2 No Safe Blood Lead Level in Children**

As noted by Bellinger and Bellinger (2006), because “lead serves no useful purpose in the body, exposure to it – regardless of route – can lead to toxic effects.” Indeed, numerous studies (Needleman, 2004; Lanphear et al., 2005; Desrochers-Couture et al., 2018) find that the dose-response relationship between child cognitive ability and blood lead is non-linear, with the loss in ability proportionately steeper at lower BLLs (see Figure 1). In an analysis of about 5,000 children ages 6 to 16, for example, Lanphear et al. (2000) report that performance on Wide Range Achievement Tests in arithmetic, reading, verbal comprehension, and perceptual reasoning decline discernibly at the lowest measurable levels of blood lead. As compared to children with negligible BLLs of  $\leq 1 \mu\text{g}/\text{dL}$ , average performance for children at 2 to 3  $\mu\text{g}/\text{dL}$  was lower by 4% to 6% across cognitive tests, with observable differences persisting in the presence of statistical controls.

Despite scientific evidence of decelerating dose-response curves with measurable deleterious effects in children at very low BLLs (Lanphear et al., 2005), the current reference value of the U.S. Centers for Disease Control and Prevention (CDC) of 5  $\mu\text{g}/\text{dL}$  is still rou-

Figure 1: Non-Linear IQ Response to Concurrent Child Blood Lead Level



Note: The data are from Lanphear et al. (2005) Figure 4, based on an international pooled analysis of low-level environmental lead exposure and children's intellectual function.

tinely and incorrectly used as a threshold for concern. The CDC is explicit on the statistical, not medical or epidemiological, meaning of this reference value. The threshold defines children with abnormally high BLLs – children that present with BLLs in the highest 2.5% of children tested.

Given the statistical nature of this threshold, the CDC reference value has undergone numerous revisions in time<sup>1</sup> as child BLLs have declined and evidence amassed for harm at lower BLLs: 1971: 40  $\mu\text{g}/\text{dL}$ ; 1975: 35  $\mu\text{g}/\text{dL}$ ; 1985: 25  $\mu\text{g}/\text{dL}$ ; 1991: 10  $\mu\text{g}/\text{dL}$ ; 2012: 5  $\mu\text{g}/\text{dL}$ . According to Bellinger and Bellinger (2006), each revision has been followed by a series of studies to determine “whether the new level used to define *normal* provided children with an adequate margin of safety.” The CDC summarizes the margin of safety question: “No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement.”

### 1.3 Tetraethyl Lead (TEL) in Aviation Gasoline

It might be tempting to assume that lead exposure in the United States is a rear-view or legacy problem. BLLs in children of the United States have declined substantially over the last four decades, coincident with a series of regulatory actions that expelled lead from paint, plumbing, food cans and automotive gasoline. Most effective among these interventions was the phase-out of tetraethyl lead (TEL) from automotive gasoline induced by provisions of the Clean Air Act (CAA) of 1970.<sup>2</sup>

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<sup>1</sup>Recent research indicates “The 97.5th percentile BLL based on NHANES 2011 to 2014 results in children 1 to 5 years is 3.48  $\mu\text{g}/\text{dL}$ , 30 percent lower than the current reference value of 5  $\mu\text{g}/\text{dL}$  (Caldwell et al., 2017)

<sup>2</sup>Under the CAA, the removal of lead from gasoline launched in 1975. Over the next two decades, lead entering the environment from automobile emissions declined precipitously. Though the policy was enforced at the national level, the incentive structure for compliance, and the characteristics of the petroleum and automobile industries, produced significant variation in lead emissions across states between 1975 and 1990. Leveraging this between-state variation in phase-out efforts, Keyes and Zahran (2021) estimate that child BLLs decreased by about 40% for every g/gal reduction in TEL concentrations over this phase-out period.

While TEL is no longer used as an additive in automotive gasoline, it remains a constituent in aviation gasoline used by an estimated 170,000 piston-engine aircraft (PEA). These aircraft constitute about 70% of the U.S. air fleet. The rationale for continued use of TEL in aviation gasoline is aircraft safety. TEL is one of the best-known additives for mitigating the risk of *knocking* that can lead to sudden engine failure (Ells, 2006). The high intensity at which aircraft engines operate explains why TEL remains an additive in aviation gasoline even though it has been effectively banned from other transportation fuels. While Swift Fuels, LLC has produced an effective substitute to lead-formulated aviation gasoline covering an estimated two-thirds of aircraft in the general aviation fleet, more investment in airport infrastructure is necessary to enable transition.

Tens of millions of gallons of TEL-formulated gasoline are consumed by piston-engine aircraft (PEA) annually. The consequent emissions from this consumption accounts for about half to two thirds of current lead emissions in the United States (Kessler, 2013). In a recently published consensus study on *Options for Reducing Lead Emissions by Piston-Engine Aircraft* by the National Academies of Sciences, Engineering, and Medicine, the authors note: “While the elimination of lead pollution has been a U.S. public policy goal for decades, the GA [General Aviation] sector continues to be a major source of lead emissions” (2021, pg. 10-11).

#### **1.4 Deposition of Lead from Aviation Gasoline**

While the quantity of aviation gasoline consumed by PEA is historically low by comparison to the consumption of lead-formulated automotive gasoline, the emissions from piston-engine aircraft are highly spatially concentrated. Lead from aviation gasoline deposits near airports. The U.S. Environmental Protection Agency (EPA) estimates that around four million persons reside within 500 meters of PEA-servicing airports, including approximately six hundred K-12th grade schools (EPA, 2020b). Zahran et al. (2017a) estimate that sixteen million persons – and about three million children – live within a kilometer of such airport facilities. The disposition of aviation gasoline around such air-

ports may be a meaningful source of child lead exposure.

Several studies have linked aviation gasoline use to elevated atmospheric lead levels in the vicinity of airports.<sup>3</sup> On the basis of such studies, various public interest organizations have petitioned the EPA to find endangerment from aviation gasoline emissions. While the EPA recognizes that there is no known safe level of lead exposure, it has cautioned that additional scientific research is needed “to differentiate aircraft lead emissions from other sources of ambient air lead” (EPA, 2010) that may cause elevated BLLs in nearby children.

## **1.5 Lead from Aviation Gasoline and Child BLLs**

To date, only two studies have explicitly linked aviation gasoline usage to blood lead levels of children residing in the vicinity of general aviation airports. In a study involving over 125,000 BLL observations across six counties and 66 airports in North Carolina, Miranda et al. (2011) reported a striking correlation between child BLLs and airport proximity. “The estimated effect on blood lead levels exhibited a monotonically decreasing dose-response pattern” with children at 500 and 1,000 meters of an airport at greatest risk of elevated BLLs. Reported results statistically controlled for the age of housing stock, neighborhood socioeconomic conditions, and seasonality.

In a study involving over 1 million children and 448 airports in Michigan, Zahran et al. (2017a) found that child BLLs: 1) increased dose-responsively in proximity to airports, 2) declined measurably among children sampled in the months after the tragic events of 9-11, resulting from an exogenous reduction in PEA traffic, 3) increased dose-responsively in the flow of piston-engine aircraft traffic across a subset of airports, and 4) increased in the percent of prevailing wind days drifting in the direction of a child’s residence.

With a standard syllogism linking BLLs to IQ and IQ to lifetime earnings, Zahran et al.

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<sup>3</sup>See recent findings from McCumber and Strevett (2017); Altuntas (2020); Matthews and Pandey (2020) along with previous research from Piazza (1999); Callahan (2010); Carr et al. (2011).

(2017a) estimate a 5-year cohort benefit from a hypothetical reduction in PEA traffic from the 50<sup>th</sup> to the 10<sup>th</sup> percentile at \$126 million for Michigan and \$4.9 billion nationwide. Using a Community Multi-Scale Air Quality model, Wolfe et al. (2016) arrive at a similar estimate, reporting a 1-year cohort cost of \$1.06 billion in economic damages from exposure to elevated atmospheric lead at general aviation airports nationwide. Calculations by Zahran et al. (2017a) and Wolfe et al. (2016) understate the gains available to society from reduced use of leaded aviation gasoline because the negative impacts of lead operate through many more channels than compromised cognitive abilities.

## **1.6 Studying Exposure Risk at Reid-Hillview Airport**

The risk of aviation gasoline exposure for children varies considerably by airport, depending on the volume of PEA traffic, as well as neighborhood proximity and near angle to airport runways. Reid-Hillview (RHV) is among seventeen airports identified by the U.S. EPA with the highest potential of approaching or exceeding National Ambient Air Quality Standards for lead due to the local combustion of leaded aviation gasoline.

In this study, data scientists at Mountain Data Group assess whether child exposure to lead from aviation-related sources in Santa Clara County is statistically associated with the BLLs of sampled children, independent of other lead exposure pathways. Specifically, statistical relationships between the BLLs of sampled children and the following indicators of aviation gasoline exposure risk are assessed: 1) child residential proximity to Reid-Hillview Airport, 2) variation in piston aircraft operations at Reid-Hillview Airport, and 3) child residential near angle to Reid-Hillview Airport.

Materials and methods to conduct statistical assessments are detailed below. Section 2 describes the data sources leveraged in this study, as well as the various measurement decisions made to estimate exposure risk to lead-formulated aviation gasoline. Section 3 describes the logic of statistical strategies used to assess whether indicators of aviation gasoline exposure risk are independently correlated with the BLLs of sampled children.

Section 4 presents main statistical results, and Section 5 presents statistical findings from various extension and robustness tests. Section 6 considers results in the context of a simulation involving a reduction in piston-engine aircraft operations at Reid-Hillview Airport and Section 7 concludes the study with a recapitulation of key results.

## **2 Data and Measurement**

### **2.1 Childhood Lead Poisoning Prevention Data**

Permission to analyze blood lead was granted by agreement with the Childhood Lead Poisoning Prevention Branch (CLPPB) of the California Department of Public Health (CDPH). All blood lead results from sampled children in California are reported to CDPH. In California, children in publicly supported programs (such as Medi-Cal and WIC) are mandated to be tested at 1 and 2 years with catch-up testing up to 6 years of age. Children not in publicly supported programs are mandated to be asked by a health care provider: “Does your child live in, or spend a lot of time in, a place built before 1978 that has peeling or chipped paint or that has been recently renovated?” to determine whether the child should be tested. Providers also test for lead poisoning if a change in circumstance has placed a child at risk of lead exposure. Laboratories and health providers submit HL7 formatted blood lead test information to WEBCOLLECT – a web-based data management platform that centralizes blood lead data on children statewide.

HL7 submitted data pass through successive quality checks, and deposit in the Response and Surveillance System for Childhood Lead Exposures (RASSCLE II) database. Tables in the RASSCLE II database contain demographic and clinical information on a sampled person, including residential address, date of birth, sex/gender, clinical information on the date and method of blood draw, and the laboratory performing analysis on blood samples. Some children are sampled repeatedly in the first few years of life.

The RASSCLE II database was queried for records with: 1) an indication of residence in Santa Clara County, 2) a date of blood draw occurring within the last 10 years, 3) a date of birth for the sampled person, and 4) a reported blood lead value. Candidate records extracted from RASSCLE II were interrogated for anomalies and completeness. Unprocessed HL7 records not appearing in RASSCLE II were also examined for inclusion.

RASSCLE II and HL7 Records with indication of a residential address were independently



geo-coded. Address records were matched to latitude and longitude coordinates. This process enabled the assignment of a unique geographic identifier (FIPS), defined by the U.S. Census Bureau. Between processed RASSCLE II and unprocessed HL7 files, and restricting to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles of Reid-Hillview Airport, and observed from January 1<sup>st</sup>, 2011 to December 31<sup>st</sup>, 2020, we arrived at 17,241 blood lead sample observations amenable to statistical analysis.

### **2.1.1 Child Blood Lead Data**

The main response or outcome variable of analytic interest is *Blood Lead Level* (BLL) measured in micro-grams per deciliter of blood ( $\mu\text{g}/\text{dL}$  units). Restricting to children  $\leq 18$  years of age at the moment of blood sample, residing  $< 1.5$  miles of Reid-Hillview, and observed from January 1<sup>st</sup>, 2011 to December 31<sup>st</sup>, 2020, the unconditional mean BLL of sampled children was  $1.83 \mu\text{g}/\text{dL}$ . About 1.7% of sampled children present with BLLs in excess of  $4.5 \mu\text{g}/\text{dL}$ , the CLPPB-defined threshold for action.

Five control variables from RASSCLE II/HL7 known to be correlated with child BLLs were collected from CDPH data, including: child gender, child age, method of blood draw, sample detection limit, and sample order. *Gender* is measured as 1 = female; child *age* is measured in years (ranging from 0 to 18); the *method of blood draw* = 1 if capillary, and 0 = otherwise; sample *detection limit* is measured as 1 = if the reported BLL is at or below the limit of quantification, and 0 = otherwise; and *sample order* which codes the count of blood samples (0=singleton observation, 1,...,n = repeated n times).

## 2.2 Aviation Gasoline Exposure Risk Data

### 2.2.1 Residential Distance

Following others (Miranda et al., 2011; Zahran et al., 2017a), we calculate the distance from the residential address of a sampled child to Reid-Hillview Airport. Using distance information on each child as an indicator of exposure risk, we test whether the BLLs of sampled children increase measurably with proximity to Reid-Hillview Airport.

Over the Landing-Takeoff (LTO) cycle, studies find that the bulk of aircraft emissions are released during departure phases of run-up, takeoff, and climb-out (Song and Shon, 2012; Feinberg et al., 2016; Mazaheri et al., 2011). According to Carr et al. (2011), total fuel consumed by piston aircraft in departure phases of the LTO cycle is estimated at 82% for twin-engine aircraft and 85% for single-engine aircraft. About 80% of lead emissions are released during departure phases of the LTO cycle (Carr et al., 2011).

Given that the bulk of lead emissions are released during departure phases of the LTO cycle, we capture child proximity by calculating the Haversine distance<sup>4</sup> from the child's residence at the date of blood draw to the northwest tip of Reid-Hillview Airport (longitude and latitude point coordinates -121.8230194, 37.3362252). In addition to measuring distance continuously, residential distance is also divided into three even categories: < 0.5 miles, 0.5 to 1 mile, and 1 to 1.5 miles from Reid-Hillview Airport<sup>5</sup>.

<sup>4</sup>The haversine of the central angle, which is  $d$  over the  $r$ , is calculated by:  $\left(\frac{d}{r}\right) = \text{haversine}(\Phi_2 - \Phi_1) + \cos(\Phi_1)\cos(\Phi_2)\text{haversine}(\lambda_2 - \lambda_1)$ , where  $r$  is the radius of earth(6,371 km),  $d$  is the distance between a child's residence and Reid-Hillview Airport,  $\phi_1, \phi_2$  is latitude and  $\lambda_1, \lambda_2$  is longitude of the child's residence and Reid-Hillview, respectively. We solve for  $d$  by the inverse sine function, getting:  $d = rhav^{-1}(h) = 2r\sin^{-1}(\sqrt{h})$ .

<sup>5</sup>Our inner orbit of exposure risk at < 0.5 miles conforms to previous research. Recall, Miranda et al. (2011) find that children at 500m to 1km from a general aviation airport in North Carolina are at highest at-risk of presenting with elevated BLLs. Zahran et al. (2017a) find that sampled children within 1km of 448 airports in Michigan are at greatest risk. The EPA (U.S. Environmental Protection Agency, 2020) maintains that children within 500m of PEA-servicing airports are at highest risk of exposure to aviation-related atmospheric lead. Our inner distance of < 0.5 miles sits between the consensus range of exposure risk at 500m to 1km.

Figure 2 shows the spatial distribution of blood lead samples by distance categories. Over the period of January 1<sup>st</sup>, 2011 to December 31<sup>st</sup>, 2020, we observe a total of 1,065 records at < 0.5 miles, 6,472 records at 0.5 to 1 mile, and 9,704 at 1 to 1.5 miles from Reid-Hillview Airport. Insofar as aviation gasoline exposure is a source of risk, sampled children in the nearest orbit to Reid-Hillview Airport should present with higher BLLs as compared to sampled children in outer orbits.

### 2.2.2 Residential Near Angle

Airport proximity, by itself, is an imperfect measure of aviation gasoline exposure risk. The fate and transport of lead emissions depend on the direction of prevailing winds that vary in and across airport facilities. Insofar as aviation gasoline is an independent source of lead exposure, two children equidistant to the same airport face different risk of elevated blood lead depending on the child's residential near angle to the airport.

A near angle group was assigned to each address by calculating the compass bearing (degrees) between a child's residential location and Reid-Hillview Airport.<sup>6</sup> We define near angle groups by the four cardinal directions: North (*N*), East (*E*), South (*S*) and West (*W*). For a BLL sample from child *i* in time *t*, with range of possible compass bearings  $b_{it} \in [0, 360)$ , we assign near angle group  $a_{it}$  as:

$$a_{it} = \begin{cases} E, & \text{if } b_{it} \in [45^\circ, 135^\circ), \\ S, & \text{if } b_{it} \in [135^\circ, 225^\circ), \\ W, & \text{if } b_{it} \in [225^\circ, 315^\circ), \\ N, & \text{otherwise.} \end{cases} \quad (1)$$

Figure 3 shows the spatial distribution of BLL samples over our observation period by near angle groups. We observe 5,962 records residing North of Reid-Hillview Airport, 1,170 records East, 3,495 records South, and 6,614 records West of the airport. As

<sup>6</sup>See Appendix Figure A.1 for example calculations.

Figure 2: BLL Samples by Distance Categories to Reid-Hillview Airport



Note: Distance is calculated as the Haversine distance to North tip of runway at Reid-Hillview Airport, (-121.823, 37.336). BLL samples are restricted to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles of Reid-Hillview Airport, and observed from 1/1/2011 to 12/31/2020. Over the observation period, we observe a total of 1,065 records at  $< 0.5$  miles, 6,472 records at 0.5 to 1 mile, and 9,704 at 1 to 1.5 miles from Reid-Hillview Airport. On recommendation of scientific staff from (CLPPB), three sample locations have been suppressed to protect the anonymity of sampled children.

shown in Appendix Figure A.2, prevailing winds at Reid-Hillview Airport emanate from the West and Northwest. Insofar as aviation gasoline exposure is a source of risk, children East of Reid-Hillview Airport should present with higher BLLs.

In addition to residential near angle, we collected prevailing wind direction data from ©Dark Sky. Daily weather data include average daily wind bearing (degrees) and were collected at Reid-Hillveiw Airport from 2011 to 2020. Prevailing wind bearing was assigned a near angle group as in Equation 1. For a given day, an address is defined as downwind if the assigned near angle groups of the wind and address are equal. Because the half-life of lead in the bloodstream is estimated at around 30 days (Lidsky and Schneider, 2003), we calculate the number of days in the last 60 (from date of blood draw) that a child is downwind from Reid-Hillview Airport. This measurement decision assumes that children have continuity of residence for 60 days.

### **2.2.3 Piston-Engine Aircraft Traffic and Aviation Gasoline Sales**

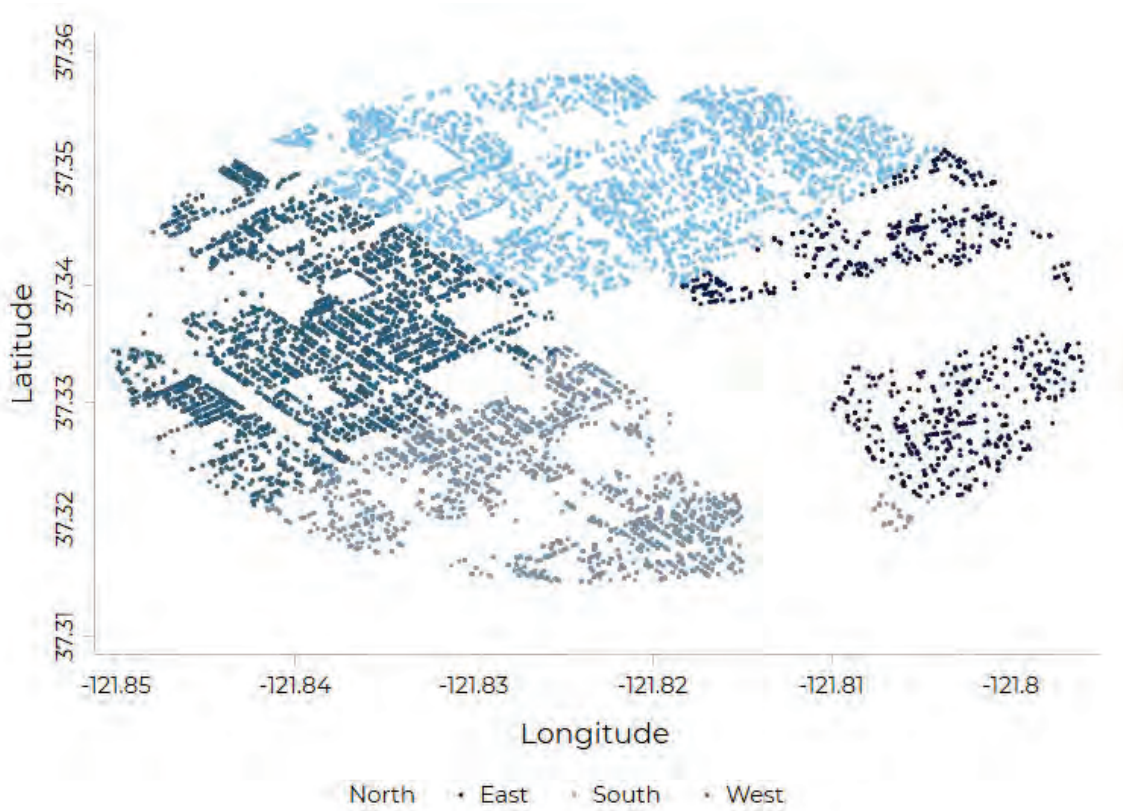
The volume of PEA traffic varies meaningfully between airports and within an airport in time. Therefore, two children residing in the same household but sampled at different moments in a calendar year may present with different BLLs, depending on the coincidence of PEA traffic. To capture this channel of risk, we collected data on PEA departures and arrivals from Federal Aviation Administration Traffic Flow Management System Counts (TFMSC) .

Daily piston-engine aircraft data were available for Reid-Hillview Airport and all other operational PEA-servicing airports in Santa Clara County, including Palo Alto Airport (PAO), Moffett Federal Airfield (NUQ), San Martin Airport (E16), and Norman Y. Mineta San Jose International Airport (SJC).<sup>7</sup> Because the half-life for lead in blood is about 30 days (Lidsky and Schneider, 2003), we back calculated a rolling average of PEA operations over

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<sup>7</sup>General aviation count data was also available for RHV, SJC, and PAO in the TFMS system, but departure and arrival information was not distinguishable by physical class (i.e., piston, turbine, or jet).

Figure 3: BLL Samples by Residential Near Angle to Reid-Hillview Airport

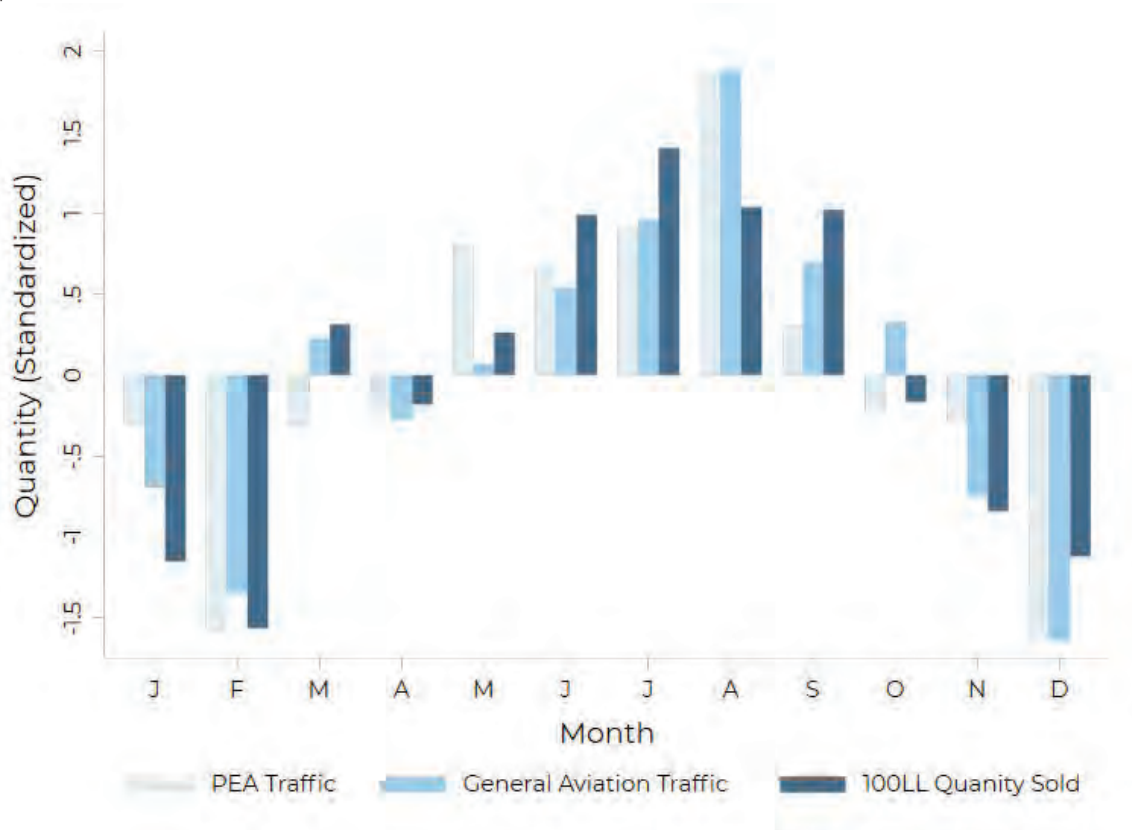


Note: Near angle groups assigned using Equation 1 and relative to Reid-Hillview Airport. BLL samples are restricted to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles of Reid-Hillview, and observed from 1/1/2011 to 12/31/2020. Over the observation period, We observe 5,962 records residing North of Reid-Hillview, 1,170 records East, 3,495 records South, and 6,614 records West of Reid-Hillview Airport. On recommendation of scientific staff from (CLPPB), three sample locations have been suppressed to protect the anonymity of sampled children.

60 days from the date of a child's blood draw. With the date of blood draw linked to the quantity of PEA traffic, one can test whether child BLLs are dose-responsive with the volume of PEA traffic. Our measurement of PEA traffic exposure assumes that children have continuity of residence for 60 days.

Also, fuel flowage fee (FFE) data were obtained from personnel at the Roads and Airports Department of Santa Clara County. The FFE data track monthly quantities of aviation gasoline (100LL) sold to fixed-base operators at Reid-Hillview Airport from 2011 to 2019. Each child is matched to the two-month rolling average of quantities of 100LL sold from date of blood draw. As with PEA traffic, we test whether child BLLs are dose-responsive with aviation gasoline sales at Reid-Hillview Airport. Figure 4 shows high statistical agreement between quantities of 100LL sold and Federal Aviation Administration (FAA) traffic data by month at Reid-Hillview Airport.

Figure 4: Monthly Variation in Quantity of FAA Traffic & 100LL Sold at Reid-Hillview Airport

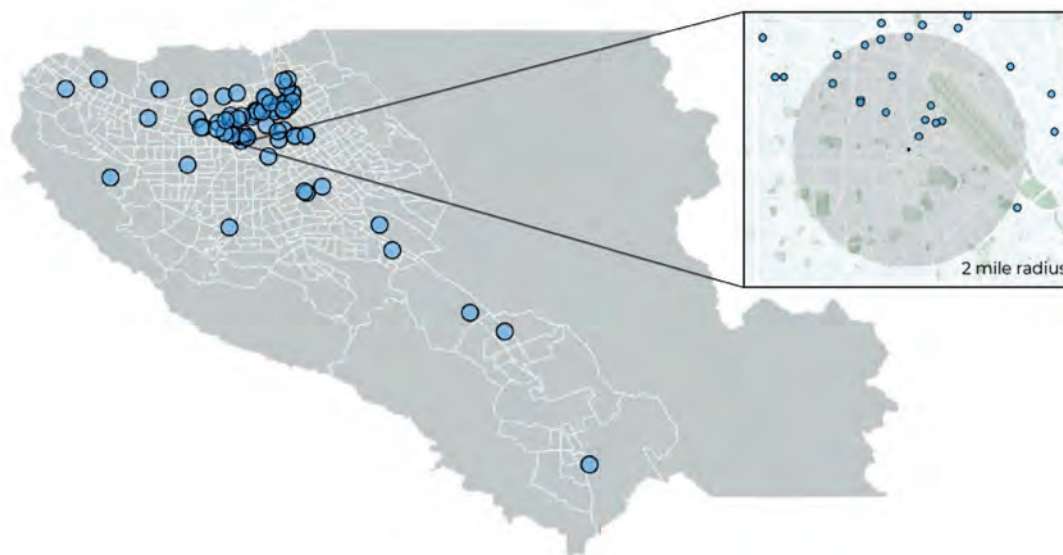


Note: Because aircraft traffic and gallons of 100LL sold are measured differently, we use standardization by z-score to resolve unit incommensurability. The z-score is calculated by taking the observed value for a given month minus the series mean over the series standard deviation. Data from 1/1/2011-12/31/2020 for general aviation traffic and piston-engine aircraft traffic (arrivals and departures). Gallons of 100LL sold to fixed-base operators at Reid-Hillview Airport are from 1/2011 till 12/2019.



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Figure 5: Location of Unique Lead-Emitting TRI Facilities in Santa Clara County from 2011 to 2020.



Note: We display the complete inventory of lead-emitting TRI facilities over the observation period, 1/1/2011-12/31/2020. The count of facilities varies by year, as firms enter and exit the TRI system on the basis of reported on-site lead releases. Two mile radius drawn from hypothetical residential address for sampled child. Data collected from U.S. Environmental Protection Agency's Toxic Release Inventory (TRI) system.

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## 2.3 Control Data

### 2.3.1 Toxic Release Inventory Facilities

Lead-emitting industrial facilities are more common in the vicinity of airports (Zahran et al., 2017a). Children that are proximate to airports are therefore simultaneously proximate to other point source emitters of lead. Failing to account for this spatial coincidence can produce biased estimates of aviation gasoline exposure risk vis-à-vis BLLs in children. The U.S. EPA's Toxic Release Inventory (TRI) system tracks the industrial management of over 650 listed chemicals that pose harm to humans and the environment.

Under Section 313 of the Emergency Planning and Community Right to Know Act, firms that release, transfer, or dispose of listed chemicals are required to submit annual reports to the EPA. Firms that exceed thresholds for listed chemicals must report to the EPA under the TRI system, detailing quantities of toxins used. Default thresholds for both private and federal facilities are 25,000lbs for manufacturing and processing activities, and 10,000lbs for toxic chemicals otherwise used. In 2001, the EPA determined that lower reporting thresholds for lead and lead compounds were warranted because lead persists in the environment, posing substantial health risk to human populations. The reporting threshold for lead was lowered to 100lbs across all uses of the toxicant (Zahran et al., 2014).

We collected records on all facilities in Santa Clara County with reported on-site releases of lead between 2011 to 2020. Following Zahran et al. (2017a), with the location of each facility and the year of reported release event, we counted the number of lead-emitting TRI facilities  $\leq 2$  miles of a child's residence in the corresponding year of blood draw. All results pertaining to the assessment of statistical relationships of child BLLs and indicators of aviation gasoline exposure risk control for the presence of this alternative source of lead exposure. Figure 5 illustrates the measurement logic, showing the distribution of unique TRI facilities countywide and zooming to the hypothetical residential location of a sampled child.

### **2.3.2 Lead-Based Paint Risk**

Legacy use of lead-based paint remains an exposure risk to children. Exposure to lead-based paint is primarily a problem in older homes. Figure 6 traces lead use in the United States over the 20<sup>th</sup> century by two major sources, namely lead in paint and lead in automotive gasoline. By 1960, the use of lead-based paint subsided over 90% from peak usage in the 1920s. Nonetheless, children in the United States may consume lead directly or may be exposed to leaded dust associated with deteriorating or haphazardly removed lead-based paint in homes from this era (Rabito et al., 2007; Farfel et al., 2003,

2005).

Moreover, in Michigan, Zahran et al. (2017a) report that the percentage of homes built in the era of widespread lead-based paint usage were almost twice as high in neighborhoods proximate to airports as compared to neighborhoods more distant from airports. In other words, children most at-risk to aviation gasoline exposure simultaneously face higher lead-based paint exposure risk.

To account for this potential confounding factor, we collected American Community Survey (ACS) data from the U.S. Census Bureau on the fraction of homes in a neighborhood (census tract) built before 1960. In analyses that follow, each child in our analytic set is assigned a lead-based paint exposure risk according to the neighborhood of residence and year of blood draw, as captured by the percentage of homes built before 1960.<sup>8</sup> Figure 7 shows the spatial distribution of the percentage of housing stock built before 1960 at the census tract scale in Santa Clara County as of 2019.

### **2.3.3 Neighborhood Socioeconomic Status**

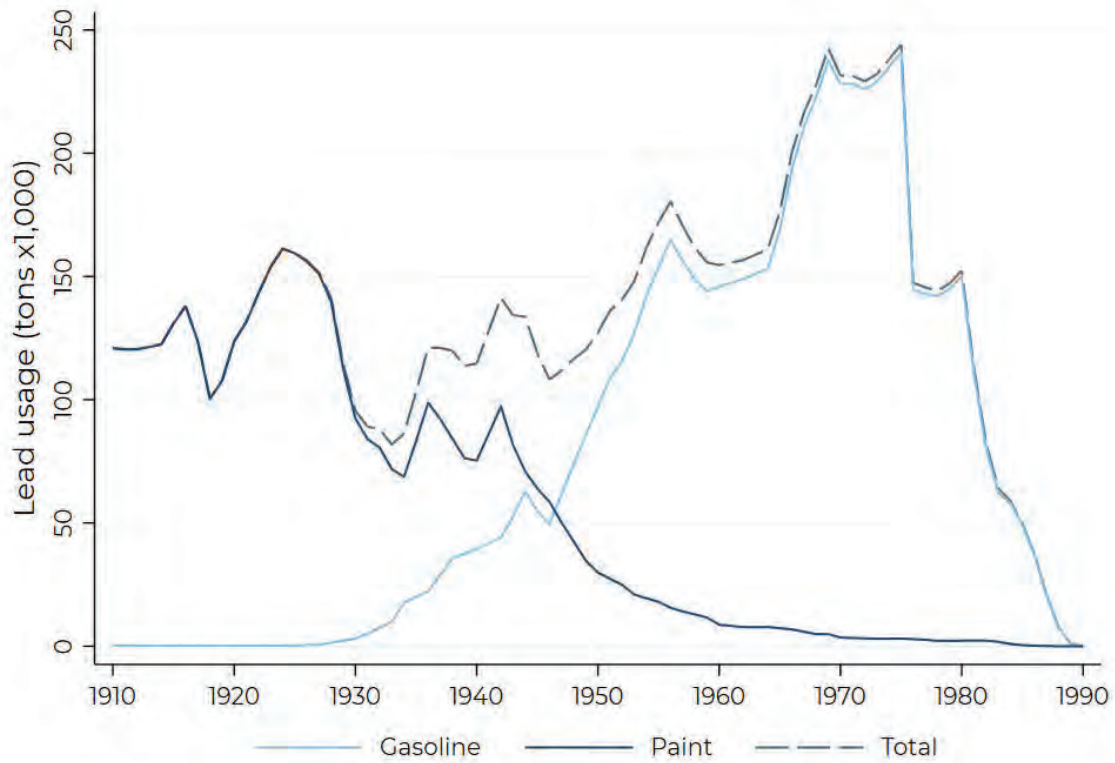
Studies show that children of low socioeconomic status are at greater risk of presenting with elevated BLLs (Campanella and Mielke, 2008; Zahran et al., 2010). Socioeconomic status proxies for resource access, knowledge about the dangers of, and protective actions taken against lead exposure (Zahran et al., 2017a).

In addition to the use of socio-demographic information present in RASSCLE II/HL7 data (described in Section 2.1.1), we measured the percentage of adults with a college degree, median home prices, and median household incomes to characterize the socioe-

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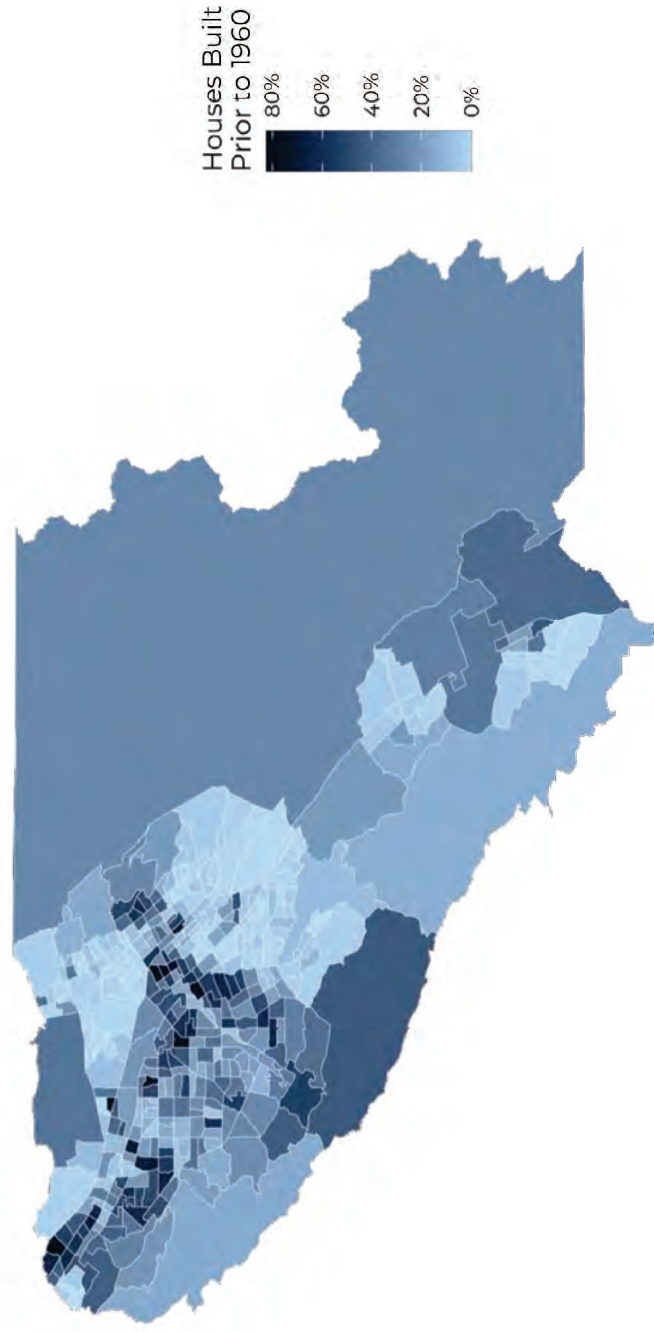
<sup>8</sup>This measurement strategy capitalizes on the fact that the age of homes within a neighborhood (or census tract) are more alike than the age of homes across neighborhoods. We also considered a more involved strategy of linking RASSCLE II/HL7 residential information on a sampled child to the same residential address in Santa Clara County Assessor files, where the age of a home is typically indicated. This effort produced intolerably high listwise deletion from imperfect matching across files.

Figure 6: Lead Use (in tons × 1,000) in the United States over 20<sup>th</sup> Century by Major Source



Note: Estimates of the legacy use of lead-based paint and lead in automotive gasoline in tonnages are from Laidlaw and Filippelli (2008).

Figure 7: Lead-Based Paint Exposure Risk by Neighborhood in Santa Clara County

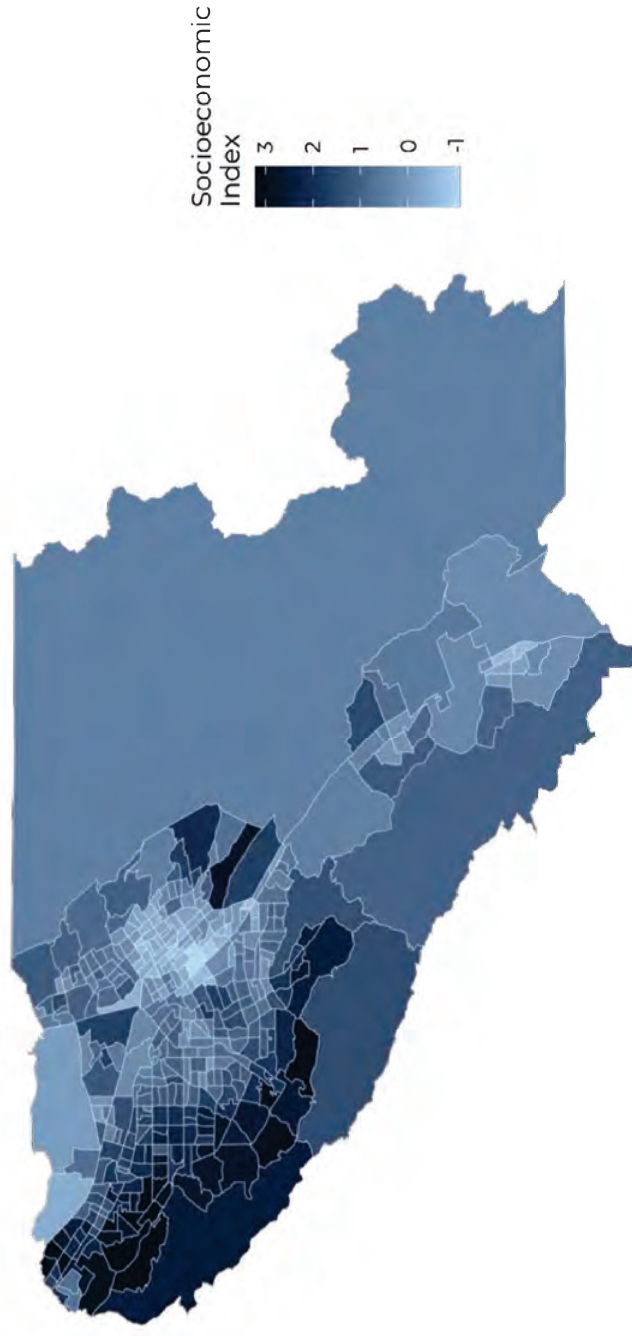


Note: The data displaying the percentage of housing stock in a census tract built prior to 1960 are from the U.S. Census Bureau ACS for the observation year of 2019.

conomic status of a child's neighborhood (i.e., census tract). These data were collected from the American Community Survey. Given the very high correlation across these variables, we distilled the data to a single Socioeconomic Index value for each neighborhood in Santa Clara County by year and matched to each child's residential location and year of blood draw. The index was computed by averaging standardized scores across indicators of neighborhood socioeconomic status. Figure 8 shows the spatial distribution of the neighborhood socioeconomic status index across Santa Clara County as of 2019.

In the next section we detail the logic of statistical strategies used to assess whether indicators of aviation gasoline exposure risk are independently correlated with the BLLs of sampled children. Accompanying the description of each statistical strategy is a stated expectation on the behavior of estimated coefficients corresponding to each indicator of aviation gasoline exposure, net of other factors.

Figure 8: Socioeconomic Status Index by Neighborhood in Santa Clara County



Notes: The neighborhood socioeconomic index was calculated by taking the average of standardized scores across the three variables of the percentage of adults with a college degree, median home prices, and median household incomes. Displayed data are from the U.S. Census Bureau American Community Survey for the observation year of 2019. Darker colors reflect higher socioeconomic status.

### 3 Empirical Methods

#### 3.1 Main Effects

To assess whether the BLLs of sampled children are statistically associated with indicators of aviation gasoline exposure risk we deploy a linear least squares estimator with census block fixed effects, accounting for heteroskedasticity and relaxing distributional assumptions with bootstrapped standard errors.

The outcome of interest is child BLL, measured as a continuous variable in  $\mu\text{g/dL}$ . For sampled child  $i$  in neighborhood block  $j$  at time  $t$ , we estimate the responsiveness of child blood lead  $Y_{ijt}$  to indicators of aviation gasoline exposure risk with the following linear model:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\
 & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\
 & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (2)
 \end{aligned}$$

Knowing that relationships of interest are possibly non-linear, we use a flexible specification where distance  $D$  is measured as a series of dichotomous variables, where  $D_{it}^n = 1$  if child  $i$  in time  $t$  resides 0.5-1 miles from Reid-Hillview Airport, 0 = otherwise, and  $D_{it}^f = 1$  if child  $i$  in time  $t$  resides 1-1.5 miles from Reid-Hillview Airport, and 0 otherwise. Children most proximate to Reid-Hillview Airport ( $< 0.5$  miles) constitute the reference distance. The flow of lead emitted from the aircraft traffic  $T_{it}$  is the count of PEA operations (measured in percentile terms) in the last 60 days relative to the draw date  $t$  of child  $i$ . Insofar as lead emitted from PEA traffic is not distributed uniformly over the distance gradient, but is a function of the prevailing wind direction, we include a series of dummy variables  $W$  for the location of child  $i$  in time  $t$  relative to the airport, with North being the reference direction, and:  $W_{it}^e = 1$  if a child resides East of RHV, 0 = otherwise,  $W_{it}^s = 1$  if a child resides South of RHV, 0 = otherwise, and  $W_{it}^w = 1$  if a child resides West of RHV, 0 = otherwise.



A series of variables are included to control for the timing, method, quantification limit, and order of blood draw, where  $C_{it}$  is whether or not the method of blood draw is capillary,  $L_{it}$  is whether the measured BLL is at or below the limit of test detection,  $Z_{it}$  is the year and quarter of the blood draw, and  $S_i$  is the order of sample for children sampled repeatedly.<sup>9</sup> Child demographic characteristics include the child's age  $A_{it}$  measured in years, and an indicator for whether the child is female  $G_i$ .

A suite of controls are included to account for confounding sources of lead exposure and neighborhood socioeconomic status corresponding to the residential location of a sampled child and date of blood draw.  $F_{it}$  is the count of nearby lead-emitting toxic release inventory facilities  $\leq 2$  miles of a child's residence, and  $H_{jt}$  is the percent of homes built  $\leq 1960$  in child's neighborhood of residence, proxying for lead-based paint exposure risk. Because atmospheric concentrations of lead fluctuate seasonally – in part because of the re-suspension of lead-contaminated surface soils by turbulence (Laidlaw et al., 2012; Zahran et al., 2013) – our statistical models proxy for this phenomenon with a series of dummy variables corresponding to the season of blood draw,  $Q_{it}$ , with winter as our reference season. Also included is  $I_{jt}$ , estimating the socioeconomic status of a neighborhood by an quantitative index that incorporates measures of educational attainment, median household income, and property values (proxying for household wealth).

Importantly,  $\gamma_j$  is the neighborhood or census block fixed effect. Inclusion of  $\gamma$  accounts for non-time varying unobservable factors which may influence BLLs that are common to sampled children within a given neighborhood but varying across neighborhoods. Fixed effects absorb omitted variables by estimating a distinct mean BLL value (or intercept) for each neighborhood. Finally,  $\varepsilon_{ijt}$  is the random error term associated to the observed  $Y_{ijt}$ .

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<sup>9</sup>For a singleton observation (non-repeated child)  $i$ ,  $S_i = 0$ . Otherwise,  $S_i = 1, \dots, n$  for child  $i$  repeated  $n$  times over the observation period, January 1st, 2011 to December 31st, 2020. The date of birth, child sex, child name, and date of blood draw were used to identify sample order for each child. The majority of children (53.8%) appearing in CDPH data were sampled only once.

## 3.2 Parameter Direction Expectations

### 3.2.1 Residential Distance

Insofar as aviation gasoline exposure is a source of risk, sampled children in the nearest orbit to Reid-Hillview Airport should present with higher BLLs as compared to children in outer orbits. Therefore, other things held equal, we expect  $\beta_1$  and  $\beta_2$  in Equation 2 corresponding to  $D_{it}^n$  and  $D_{it}^f$  to be negative, reflecting lower exposure risk for children residing at 0.5-1 mile and 1-1.5 miles, respectively, relative to children at < 0.5 miles from Reid-Hillview Airport. In addition to treating residential distance to Reid-Hillview Airport categorically, we estimate a series of linear models with residential distance measured continuously, applying various linear transformations to Equation 2. The expectation here is estimated coefficients should be negative, indicating that BLLs of sampled children decline with distance from Reid-Hillview Airport, other things held equal.

### 3.2.2 Residential Near Angle

The atmospheric transport of lead emissions from aviation gasoline used by piston-engine aircraft depend on the direction of prevailing winds that vary in and across airport facilities. As shown Appendix Figure A.2, prevailing winds at Reid-Hillview Airport emanate predominately from the West and Northwest. Insofar as exposure to aviation gasoline is a source of risk, then sampled children residing East of Reid-Hillview Airport should present with higher BLLs. Therefore, other things held equal, we expect  $\beta_4$  corresponding to  $W_{it}^e$  to be positive, indicating that sampled children residing east of Reid-Hillview Airport (and predominantly downwind) have higher BLLs than other children (not residing predominantly downwind of RHV).

We also execute a version of Equation 2 that substitutes our indicator variables for residential near angle with a continuous measure of downwind risk ( $DW_{it}$ ) that captures the number of days in the last 60 (from date of blood draw) where prevailing winds drift in the residential direction of a child. In this model,  $\beta_4$  is expected to be positive, indicating

that other things held equal, child BLLs increase with days of downwind drift. A graphical summary of results from this additional exercise is presented in Appendix Figure A.3.

### 3.2.3 Piston-Engine Aircraft Traffic Exposure

Following Zahran et al. (2017a), the inclusion of daily PEA traffic ( $T$ ) shown in Equation 2 and detailed in Section 2.2.3 is meant to capture variation in the flow of atmospheric lead emissions attributable to aviation gasoline at Reid-Hillview Airport that may impact the BLLs of sampled children nearby. Other things held equal, then, we expect  $\beta_3$  corresponding to  $T_{it}$  to be positive, indicating that BLLs increase with measured PEA operations at Reid-Hillview Airport.

We extend this test by converting our continuous PEA operations variable into a series of indicators corresponding to PEA traffic terciles at each airport. Denoting medium ( $m$ ) and high ( $h$ ) terciles of PEA traffic at Reid-Hillview Airport and letting the first tercile be the reference group, we modify Equation 2 by replacing the continuous variable  $T_{it}$  with dummy variables  $T_{it}^m$  and  $T_{it}^h$  for medium and high traffic terciles respectively. We expect  $\beta_{3a}$  and  $\beta_{3b}$ , corresponding to  $T_{it}^m$  and  $T_{it}^h$ , to be positive, indicating that BLLs are higher for children exposed to medium and high levels of PEA traffic in the last 60 days from draw date relative to children exposed to low levels of PEA traffic.

We also estimate a version of Equation 2 where measured PEA traffic is substituted for the monthly quantities of aviation gasoline ( $AG_{it}$ ) sold to fixed-base operators at Reid-Hillview Airport. In this external validation exercise, we similarly expect  $\beta_3$  to be positive, indicating that child BLLs increase with monthly quantities of aviation gasoline sold at Reid-Hillview Airport.

## 4 Main Results

### 4.1 Descriptive Statistics

Appendix Table A.1 reports descriptive statistics on our study population. The average age of sampled children is 2.82 years, with 51.2% identified as male and 48.8% identified as female. Table 1 shows descriptive statistics on child BLLs by residential distance, residential near angle, and terciles of piston-engine aircraft traffic at Reid-Hillview Airport over the entire observation period of January 1<sup>st</sup> 2011 to December 31<sup>st</sup> 2020. Across all conditions, mean BLLs behave as expected. Sampled children proximate to Reid-Hillview Airport (< 0.5 miles) present with higher mean BLLs than more distant children. Combining children in the outer orbits, we find that mean BLLs of near vs far children are modestly different (1.93 vs 1.83  $\mu\text{g}/\text{dL}$ ), but statistically discernible from chance (one-tailed  $t = 1.92$ ,  $p = 0.027$ ).<sup>10</sup>

Column 2 of Table 2, shows mean BLLs of children at the four cardinal directions from Reid-Hillview Airport. Combining blood lead samples of children not east of Reid-Hillview Airport, we find that mean BLLs of children East vs not East of Reid-Hillview Airport are modestly different (1.94 vs 1.82  $\mu\text{g}/\text{dL}$ ) and statistically significant (one-tailed  $t = 2.59$ ,  $p = 0.005$ ). Finally, Column 3 shows mean BLLs by low, medium, and high PEA traffic terciles. Indicative of an aviation gasoline exposure effect, we find that mean BLLs graduate upward across PEA traffic terciles, increasing from 1.72 to 1.81 to 1.96  $\mu\text{g}/\text{dL}$ , respectively.

While results in Table 2 are consistent with expectations, they do not control for the demographic characteristics of sampled children, blood testing method, timing and order of blood draw, alternative sources of lead, or neighborhood conditions, both observable and unobservable. In the next section we present regression results that account for

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<sup>10</sup>As shown in Table 1, sampled children in outer orbits (of 0.5 to 1.5 miles from Reid-Hillview Airport) have different demographic and neighborhood characteristics that are likely to attenuate observed differences in unconditional means by residential distance categories.

these factors. We begin with the question of residential distance, then move to results on residential near angle and downwind effects, and then complete our main effects investigation with results on piston-engine aircraft traffic and aviation gasoline sales.

## 4.2 Residential Distance

Before estimating regression coefficients pertaining to residential distance we compare sampled children in the inner orbit of proximity to Reid-Hillview Airport (< 0.5 miles) against children in outer orbits (0.5-1.5 miles) with respect to aviation gasoline exposure variables, and observable demographic and neighborhood characteristics. Table 1 shows means by distance categories on variables of interest, with computed  $p$ -values pertaining to one-tailed  $t$ -tests. The purpose here is to assess comparability of children by airport proximity. Sampled children are statistically similar with respect gender, residential near angle, age, PEA traffic exposure, sample order, and year or timing of blood draw, where  $p > 0.05$ .

We do observe statistically significant differences with respect to the proportion of children sampled by capillary method (0.24 vs 0.26,  $p = 0.024$ ), the percentage of neighborhood homes built prior to 1960 (23.8 vs 27.94,  $p < 0.001$ ), the count of lead-emitting TRI facilities within 2 miles of a child's residence (2.38 vs 2.51,  $p < 0.001$ ), and neighborhood socioeconomic status (-0.21 vs -0.25,  $p = 0.006$ ). On variables where statistically significant differences are observed, all function to inflate the BLLs of sampled children in outer orbits as opposed to sampled children most proximate to Reid-Hillview Airport. Therefore, whatever differences in estimated BLLs that may obtain between sampled children by residential distance in regression analyses that follow, we may regard these differences as possibly attenuated.

Table 3 reports regression coefficients on residential distance to Reid-Hillview Airport. Recall, our response variable of child BLL is measured in  $\mu\text{g}/\text{dL}$  units. Distance is measured categorically with our reference group being children residing within 0.5 miles of

Table 1: Comparison of Variable Means by Residential Distance, (t-Test)

	Home <0.5 Miles	Home 0.5-1.5 Miles	<i>p</i> value
PEA Traffic Exposure	0.50	0.51	0.239
Residence East of RHV	0.06	0.07	0.098
Age (years)	2.71	2.82	0.057
Female	0.48	0.49	0.373
Capillary Blood Draw	0.24	0.26	0.024
Sample Order	0.83	0.82	0.369
Tri Facilities < 2 miles	2.38	2.51	<0.001
Neighborhood % Stock < 1960	23.80	27.94	<0.001
Neighborhood SES	-0.21	-0.25	0.006
Year of Sample	2015.4	2015.5	0.094

Note: *p* values correspond to one-tailed t-tests with equal variances assumed across variables.

Table 2: Cross-tabulations of BLLs by Distance, Near Angle, and PEA Traffic at RHV

Distance	Blood Lead Level ( $\mu\text{g/dL}$ )	Near Angle	Blood Lead Level ( $\mu\text{g/dL}$ )	Operations	Blood Lead Level ( $\mu\text{g/dL}$ )
0-0.5 Miles	1.93	North	1.83	Low	1.72
	(1.93)		(1.27)		(1.91)
0.5-1 Miles	1.85	East	1.94	Medium	1.81
	(2.01)		(1.49)		(1.37)
1-1.5 Miles	1.81	South	1.77	High	1.96
	(1.41)		(2.24)		(1.63)
Total	1.83	Total	1.82	Total	1.83
	(1.69)		(1.59)		(1.66)

Notes: Mean blood lead values are in  $\mu\text{g/dL}$ ; Standard deviations in parentheses; The unconditional sample mean is shown as Total; Near angle groups are assigned using Equation 1 and calculated from residential address relative to Reid-Hillview Airport; Airport operations are calculated as PEA traffic terciles;

Reid-Hillview Airport. Reported coefficients therefore have the interpretation of an estimated difference in mean BLLs (in  $\mu\text{g}/\text{dL}$  units) for children at 0.5 to 1 mile and 1 to 1.5 miles, respectively, vis-à-vis children most proximate to Reid-Hillview Airport.

Coefficients are reported from seven different models that graduate in their saturation of control variables. Coefficients pertaining to both outer distances behave relatively consistently across models of varying saturation. Focusing our interpretation on model (7) including all possible control variables, we find that sampled children at 0.5 to 1 mile present with BLLs that are  $0.179 \mu\text{g}/\text{dL}$  lower on average than sampled children nearest to Reid-Hillview Airport ( $< 0.5$  miles). This observed difference is statistically distinguishable from chance. Other things held equal, we also find that blood lead samples of children at 1 to 1.5 miles are, on average,  $0.202 \mu\text{g}/\text{dL}$  lower than statistically similar children proximate to Reid-Hillview Airport. Even though coefficients appear to decrease with distanced categories, the estimated difference in BLLs of sampled children at 0.5 to 1 mile vs 1 to 1.5 miles is not statistically significant.

Figure 9 displays predicted BLLs by categories of distance to Reid-Hillview Airport. Predicted values are from model (7) in Table 3 where all other model variables are fixed at their sample means. Under this prediction scenario, we find that sampled children most proximate to Reid-Hillview Airport ( $< 0.5$  miles) present with BLLs that are 9.8% and 11.2% higher than sampled children at 0.5 to 1 mile and 1 to 1.5 miles, respectively.

Next, Table 4 reports results involving the estimation of a series of linear models with residential distance measured continuously and applying various transformations to both distance and child BLLs. All things held equal, we find that no matter the measurement or transformation – distance measured linearly, log or square root transformed and child BLLs measured linearly or log transformed – child BLLs decrease statistically significantly with residential distance from Reid-Hillview Airport.



Table 3: Residential Distance to Reid-Hillview Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Distance (Reference < 0.5 miles)							
0.5 to 1 miles	-0.148*	-0.152**	-0.143*	-0.149*	-0.175**	-0.179**	-0.179**
	(0.078)	(0.077)	(0.078)	(0.078)	(0.074)	(0.074)	(0.074)
1 to 1.5 miles	-0.162**	-0.167**	-0.163**	-0.165**	-0.182**	-0.192**	-0.202***
	(0.079)	(0.080)	(0.079)	(0.079)	(0.075)	(0.075)	(0.075)
Constant	1.977***	1.797***	1.789***	1.703***	2.043***	1.988***	2.131***
	(0.075)	(0.076)	(0.080)	(0.086)	(0.097)	(0.094)	(0.308)
Observations	17,241	17,162	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

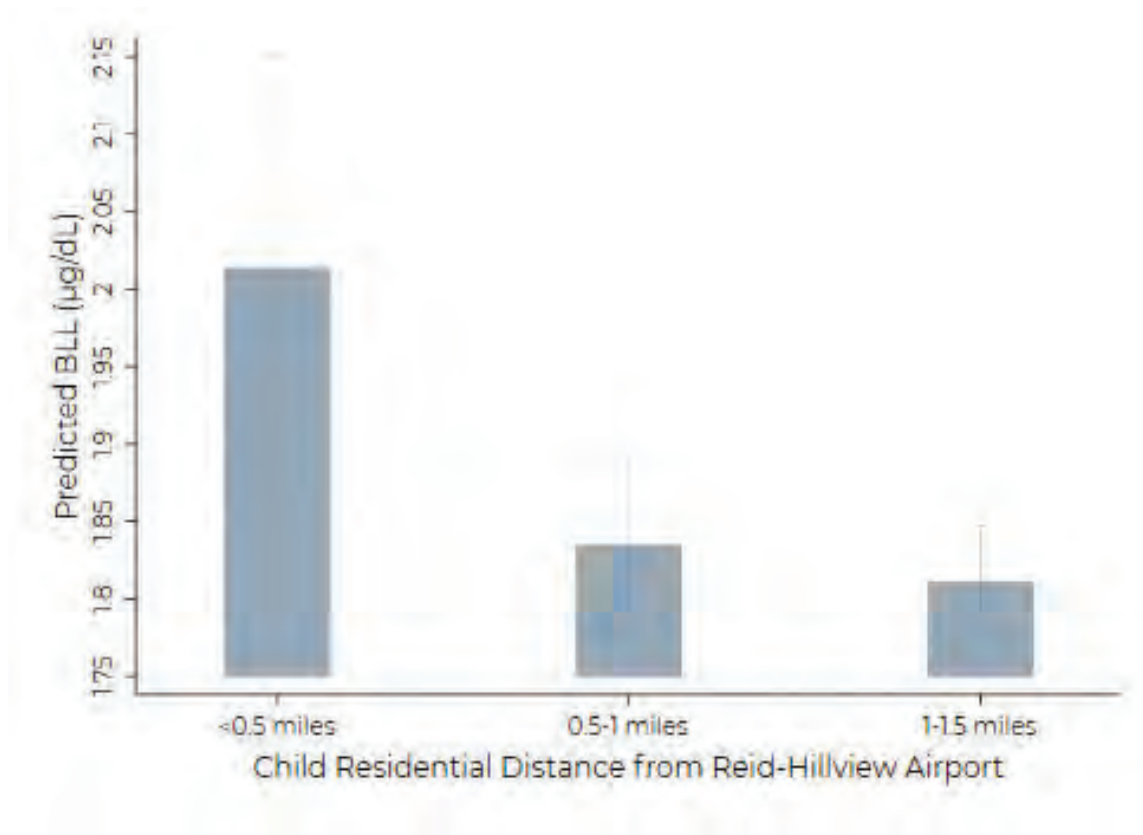
Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Distance groups are assigned using the distance (miles) between RHV and the child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table 4: Functions of Residential Distance to Reid-Hillview and Child BLLs

	(1)	(2)	(3)	(4)	(5)	(6)
	BLL	BLL	BLL	Log BLL	Log BLL	Log BLL
Linear Distance	-0.102** (0.047)			-0.040*** (0.012)		
Sqrt Distance		-0.197** (0.086)			-0.077*** (0.022)	
Log Distance			-0.090** (0.037)			-0.034*** (0.010)
Constant	2.057*** (0.325)	2.144*** (0.327)	1.940*** (0.329)	0.845*** (0.101)	0.879*** (0.101)	0.800*** (0.102)
Observations	17,162	17,162	17,162	17,162	17,162	17,162
Fully Saturated	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable in Models (1) to (3) is child BLL ( $\mu\text{g}/\text{dL}$ ); Dependent variable in Models (4) to (6) is the natural log of child BLL ( $\mu\text{g}/\text{dL}$ ); Distances are assigned using the distance (miles) between RHV and the child's place of residence; Full saturation of controls includes: child's age (years) and sex (1=female, 0=otherwise), draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times), count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ , neighborhood socioeconomic status index, and a set of indicators for season and year-quarter of the date of draw;

Figure 9: Residential Distance to Reid-Hillview Airport and Predicted Child BLLs



Note: Predictions are from model (7) in Table 3, with all other model variables fixed at their sample means.

#### 4.2.1 Results Summary, Section 4.2

The evidence presented in Table 3 and Figure 9 indicates that children proximate to Reid-Hillview Airport present with systematically higher BLLs, net of other measured sources of lead exposure risk, child demographic characteristics, and observed and unobserved neighborhood conditions. This result is compatible with exposure risk to aviation gasoline, and consistent in both direction and magnitude with previous studies (Miranda et al., 2011; Zahran et al., 2017a).

To contextualize the meaning of estimated conditional mean differences in BLLs by categories of distance, we compare our results to the estimated increase in BLLs of children in Flint during the much publicized Flint Water Crisis (FWC). At the height of the FWC, child BLLs surged by an estimated 0.35 to 0.45  $\mu\text{g}/\text{dL}$  over baseline levels (Zahran et al., 2017c)<sup>11</sup>. As shown in Table 3, children within 0.5 miles of RHV have BLLs that are about 1/5<sup>th</sup>  $\mu\text{g}/\text{dL}$  higher than statistically similar children more distant from Reid-Hillview Airport. This difference is equivalent to about 50% of the estimated increase in BLLs of sampled children at the height of the FWC.

#### 4.3 Residential Near Angle

Regression results of residential near angle relative to Reid-Hillview Airport are presented in Table 5. Again, the response variable is child BLL and is measured in  $\mu\text{g}/\text{dL}$  units. As detailed in Section 2.2.2, the near angle groups are mutually exclusive and correspond to the four cardinal directions. Parameter estimates have the interpretation of an estimated difference in mean BLLs (in  $\mu\text{g}/\text{dL}$  units) for sampled children in their respective near angle group, relative to sampled children North of Reid-Hillview Airport.

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<sup>11</sup>With over 21,000 time-stamped blood lead samples from children in Genesee County drawn from January 01, 2013 to July 19, 2016, Zahran et al. (2017c) pursued a series of quasi-experimental tests to identify the causal effects of water-lead exposure, finding that the switch in water source in Flint caused child BLLs to increase by about 0.35 to 0.45  $\mu\text{g}/\text{dL}$  from a pre-crisis baseline of about 2.3  $\mu\text{g}/\text{dL}$ .

As in the analysis of residential distance above, Table 5 presents a series of models with increasing degrees of saturation in terms of included control variables. Coefficient estimates across all models behave as expected, with sampled children residing East of Reid-Hillview Airport having higher BLLs relative to their counterparts North of Reid-Hillview Airport, all else equal. The estimated difference in mean BLLs for sampled children to the South and West of Reid-Hillview Airport relative to children North of the airport are near zero and indistinguishable from chance. Focusing on saturated model (7), we find that mean BLLs among sampled children in the East near angle group have an estimated mean BLL that is 0.4  $\mu\text{g}/\text{dL}$  higher than those to the North of Reid-Hillview Airport, all else equal.

Using the estimates from Table 5 and fixing control variables at their means, Figure 10 illustrates the difference in predicted mean BLL across near angle groups. Other things held equal, children predominantly downwind of Reid-Hillview Airport (East) present with BLLs that are 25.5% higher than sampled children living North of Reid-Hillview Airport. Estimated mean BLL values for children in the North, South, and West near angle groups are not statistically different from one another. Consistent with these results, analyses involving the calculation of downwind days show that BLLs increase significantly with the count of wind days drifting in the residential direction of a child from the date of blood draw (see Appendix Figure A.3) An increase from the minimum to maximum number of downwind days is associated with an increase in BLLs of about  $1/4^{\text{th}}$   $\mu\text{g}/\text{dL}$ .

#### **4.3.1 Results Summary, Section 4.3**

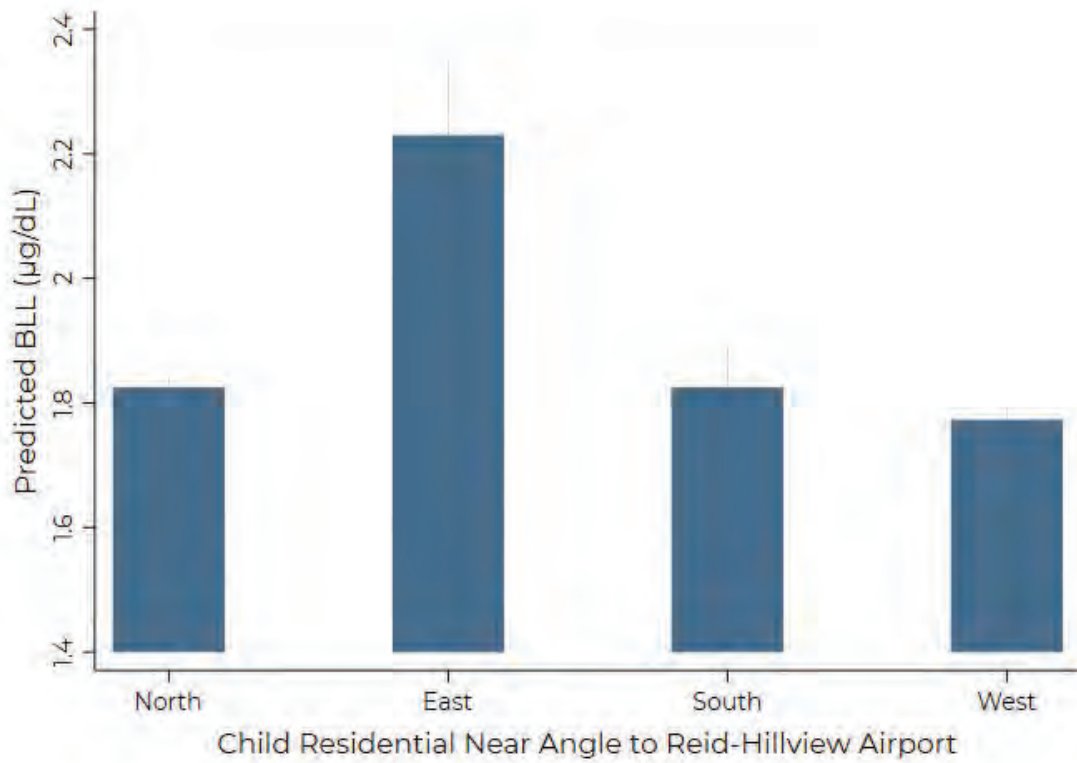
Overall, the findings presented in Table 5 and Figure 10 support the hypothesis that residing predominantly downwind of Reid-Hillview Airport is associated with substantively and statistically significantly higher BLLs. Returning to our comparison with the FWC, the margin of difference ( $\sim 0.4 \mu\text{g}/\text{dL}$ ) in average BLLs of sampled children East (and predominantly downwind) of Reid-Hillview Airport compared to children West (pre-

Table 5: Residential Near Angle to Reid-Hillview Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Near Angle (Reference North)							
East	0.130*** (0.049)	0.131** (0.051)	0.144*** (0.047)	0.139*** (0.047)	0.265*** (0.045)	0.272*** (0.045)	0.405*** (0.060)
South	-0.022 (0.036)	-0.018 (0.038)	-0.014 (0.036)	-0.013 (0.035)	0.027 (0.036)	0.009 (0.035)	0.000 (0.037)
West	-0.022 (0.029)	-0.017 (0.028)	-0.017 (0.030)	-0.013 (0.030)	-0.028 (0.028)	-0.047 (0.031)	-0.052* (0.031)
Constant	1.821*** (0.039)	1.965*** (0.088)	1.794*** (0.083)	1.715*** (0.087)	2.036*** (0.094)	1.983*** (0.092)	2.131*** (0.318)
Observations	17,241	17,241	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Near angle groups are defined in Section 2.2.2 and assigned using the angle between RHV and child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 10: Residential Near Angle to Reid-Hillview Airport and Predicted Child BLLs



Note: Predictions are from model (7) in Table 5, with all other model variables fixed at their sample means.

dominantly upwind) of Reid-Hillview Airport is approximately equal to the margin of difference between children sampled at the peak of the FWC relative to children sampled before the crisis. These results are also supported by ancillary analyses involving the calculation of downwind days, showing that BLLs increase significantly with the count of downwind days from the date of blood draw (see Appendix Figure A.3).

#### 4.4 PEA Traffic Exposure

Table 6 reports regression coefficients on piston-engine aircraft traffic to Reid-Hillview Airport. Recall, because the half-life for lead in blood is about 30 days (Lidsky and Schneider, 2003), we measure PEA traffic exposure as a rolling average of PEA operations over 60 days from the date of a child's blood draw. This quantity is converted to a percentile ranging from 0 to 1. Reported coefficients therefore have the interpretation of the estimated change in child BLLs (in  $\mu\text{g}/\text{dL}$  units) associated with an increase in PEA traffic exposure from the observed minimum to the maximum.

As before, we present coefficients from seven different models that increase successively in the saturation of control variables. Across models (1) through (7), we find that an increase in piston-engine aircraft exposure from the min to the max is associated with a 0.163 to 0.387  $\mu\text{g}/\text{dL}$  increase in child BLLs, depending on the presence of control variables. For reference, a change in PEA traffic exposure from the min to max is equivalent to a 2.5 $\times$  increase in the daily volume of PEA traffic. All estimated coefficients are distinguishable from chance occurrence, with  $p < 0.01$ .

Figure 11 shows predicted BLLs over the observed range of child PEA traffic exposure at Reid-Hillview Airport. Predicted values are from model (6) in Table 6 where, again, all other model variables are fixed at their sample means. Under this prediction scenario, we find that child BLLs increase measurably with the volume of PEA traffic exposure, other factors held equal. In going from the minimum to the maximum of child PEA traffic exposure, we find that child BLLs increase by about 0.3  $\mu\text{g}/\text{dL}$ .

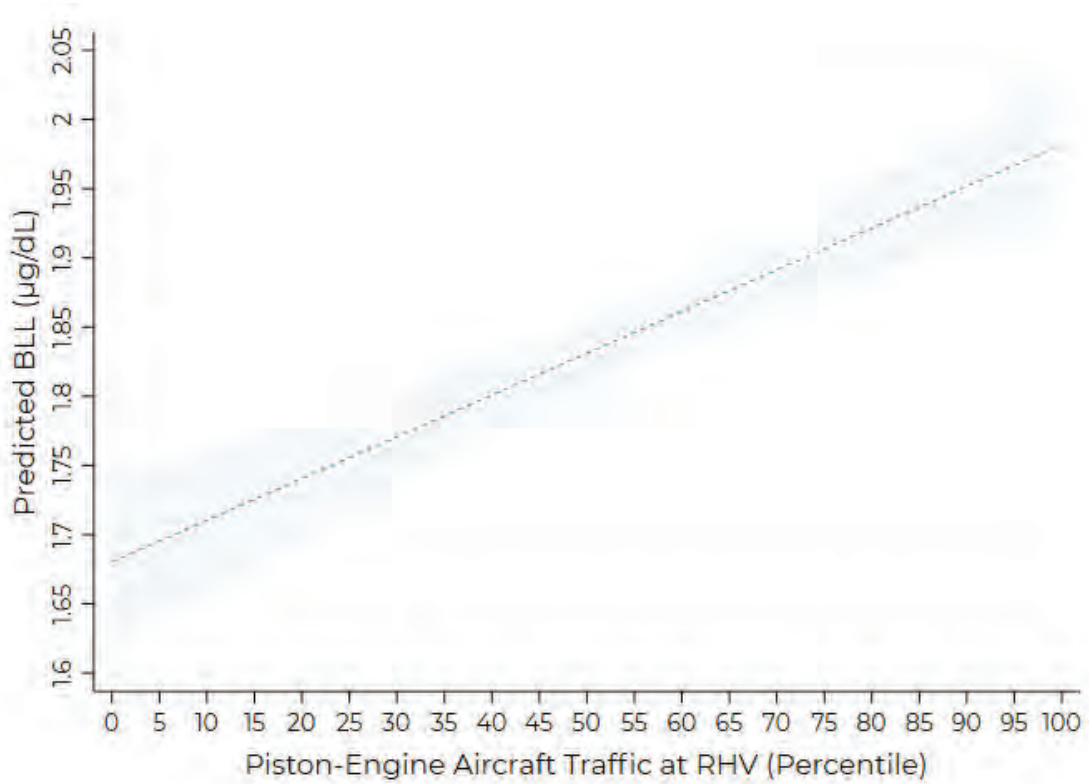


Table 6: Piston-Engine Aircraft Traffic to Reid-Hillview Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PEA Traffic	0.370*** (0.054)	0.371*** (0.054)	0.374*** (0.053)	0.387*** (0.054)	0.296*** (0.056)	0.302*** (0.054)	0.163*** (0.058)
Constant	1.640*** (0.047)	1.798*** (0.080)	1.794*** (0.083)	1.715*** (0.087)	2.036*** (0.094)	1.983*** (0.092)	2.131*** (0.318)
Observations	17,162	17,162	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

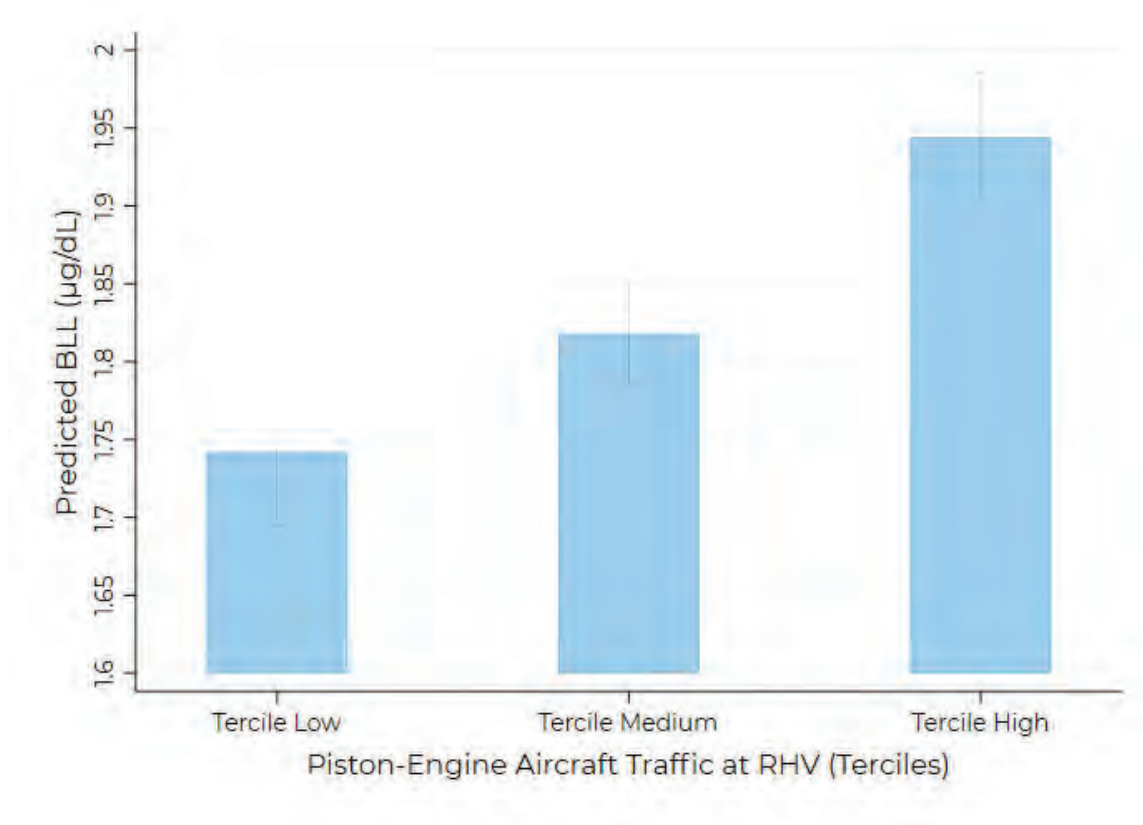
Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); PEA traffic is average daily PEA operations at RHV, calculated over 60 days from child's date of draw and converted to percentiles; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 11: Piston-Engine Aircraft Traffic at Reid-Hillview Airport and Child BLLs



Note: Predictions are from model (6) in Table 6, with all other model variables fixed at their sample means.

Figure 12: Piston-Engine Aircraft Traffic Terciles at Reid-Hillview and Child BLLs



Note: Predictions are from model (6) in Table 6, with all other model variables fixed at their sample means.

Figure 12 provides evidence of the dose-responsiveness of results reported in Table 6 and Figure 11, showing predicted child BLLs at terciles of low, medium and high PEA traffic exposure. Terciles are derived by dividing the distribution of PEA traffic exposure into three equal-sized groupings in terms of the count of blood samples observed. Other things held equal, we find that child BLLs graduate upward with PEA traffic exposure terciles, increasing from 1.74 to 1.82 to 1.94  $\mu\text{g}/\text{dL}$ , respectively.

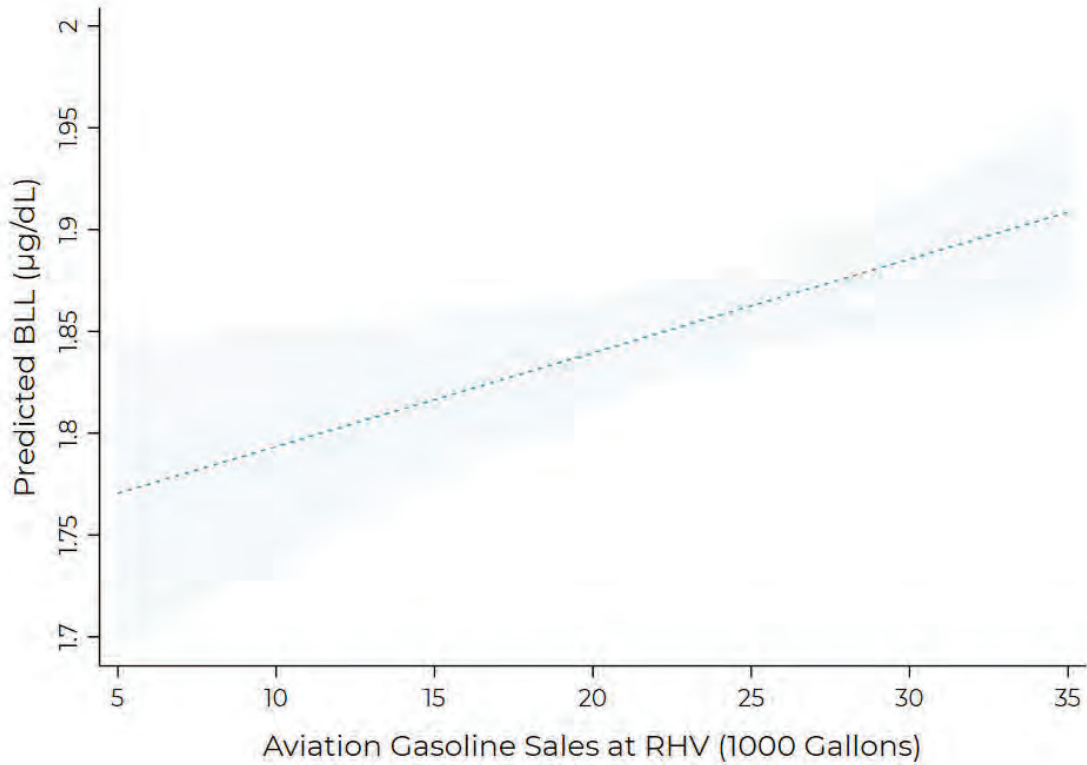
Substituting PEA traffic exposure for aviation gasoline sales (in 1,000s of gallons) and recapitulating model (7) in Table 6, Figure 13 shows predicted BLLs over the observed range of aviation gasoline sold at Reid-Hillview Airport. Predicted values are derived with all other model variables fixed at their sample means. As with PEA traffic, we find that the BLLs of sampled children increase linearly with the quantity of aviation gasoline sold to fixed-base operators at Reid-Hillview Airport, other factors held equal. A change in the quantity of aviation gasoline sold from the observed minimum to the maximum is associated with an increase in child BLLs by about 0.18  $\mu\text{g}/\text{dL}$ .

#### **4.4.1 Results Summary, Section 4.4**

On balance, the evidence presented in Table 6, Figure 11 indicates that the BLLs of sampled children increase with exposure to piston-engine aircraft operations at Reid-Hillview Airport, net of all other factors. This result holds with the division of PEA traffic into terciles, suggesting that child BLLs increase dose-responsively with PEA traffic. Moreover, as evidenced in Figure 13, the estimated positive association between child BLLs and PEA traffic is robust to the substitution of PEA traffic for the quantity of aviation gasoline sold at Reid-Hillview Airport, an analogous and independent indicator of lead exposure. The size of the estimated increase in child BLLs in going from the minimum to maximum PEA traffic exposure is on par with the increase in child BLLs caused by failures in the water system during the FWC.

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Figure 13: Aviation Gasoline Sales at Reid-Hillview Airport and Child BLLs



Note: Predictions are from model (6) in Table 6, with all other model variables fixed at their sample means.

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## 4.5 Robustness

In Table A.9, Table A.10, Table A.11, Table A.12, and Table A.13 of our appendices, we report results from various robustness tests involving successively restricting observations to highest-confidence geo-coded residences, highly sampled neighborhoods ( $\geq 100$  blood lead samples), introducing a new variable that accounts for possible variation in BLL measurement precision across laboratories, the inclusion of clustering of standard errors by sample order, the restriction of observations to children  $\leq 6$  years of age, and the introduction of a series of single imputation operations for test results at or below the limit of quantification. Across all robustness tests rendered, results pertaining to our main indicators of aviation gasoline exposure risk behave similarly.

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## 5 Extended Results

While results reported in Section 4 on child residential distance, residential near angle, and exposure to piston-engine aircraft traffic all support the supposition that child BLLs are statistically associated with the risk of exposure to aviation gasoline, in this section we report results from various exercises involving the reconstitution of child BLLs in ordered categorical terms to analyze threshold effects, tests involving the statistical interaction of residential distance and piston-engine aircraft traffic, a natural experiment exploiting an observed contraction in PEA aircraft at Reid-Hillview Airport following social distancing measures enacted countywide, a test of school-aged children that exploits relative distances to Reid-Hillview Airport from a child's place of residence and nearest assigned school, and from a battery of tests involving the inclusion of sampled children proximate to other airports in Santa Clara County.

### 5.1 Blood Lead Thresholds

We begin with the analysis of threshold effects. We reconstitute our response variable in ordered categorical terms, defining mutually exclusive BLL categories ranging from 0 to the exceedance of the CDPH-defined threshold of  $4.5 \mu\text{g}/\text{dL}$ . The purpose here is to investigate threshold effects with respect to our main operations of aviation gasoline exposure risk and to relax the assumption of precisely measured BLLs, given uncertain laboratory test precision.

Under the premise that a given blood lead concentration is an imperfectly observed variable, we execute an ordered logistic regression, modeling BLL as a set of ordinal categories. Moving in increments of  $1.5 \mu\text{g}/\text{dL}$  we convert the continuous measure of blood



lead concentration  $Y_{it}$  to a categorical variable  $B_{it}$ , with cutpoints defined as:

$$B_{it} = \begin{cases} 1, & \text{if } Y_{it} < 1.5, \\ 2, & \text{if } 1.5 \leq Y_{it} < 3, \\ 3, & \text{if } 3 \leq Y_{it} < 4.5, \\ 4, & \text{if } Y_{it} \geq 4.5, \end{cases}$$

where  $Y_{it}$  is in units of  $\mu\text{g}/\text{dL}$ .<sup>12</sup> Within this framework, one can estimate the proportional odds a given blood lead concentration is in exceedance of a specified blood lead category. For child  $i$  with corresponding BLL observation in time  $t$ ,  $B_{it}$  takes on the ordinal values  $k = 1, \dots, 4$ , then we define the cumulative response probabilities as:

$$b_{itk} = \text{Prob}(B_{it} \leq k | \mathbf{X}_{it}), \quad k = 1, \dots, 4 \quad (3)$$

where  $\mathbf{X}_{it}$  is a vector of explanatory values related to child  $i$  in time  $t$ . Using Equation 3, we can represent a generalized logistic model as:

$$\begin{aligned} \text{logit}(b_{itk}) &= \ln\left(\frac{b_{itk}}{1 - b_{itk}}\right) \\ &= \theta_k + \mathbf{X}_{it}'\beta \end{aligned} \quad (4)$$

where  $\theta_1 \leq \theta_2 \dots \leq \theta_k$ . Taking the generalized model in Equation 4 and the suite of covariates defined in Equation 2, the fully specified model used to estimate the log-odds of sampled child  $i$  in neighborhood block  $j$  at time  $t$  being in BLL category  $B_{it}$  becomes:

$$\begin{aligned} \text{logit}(b_{ijt}) &= \theta_k + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\ &\quad + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ &\quad + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j, \quad k = 1, \dots, 4 \end{aligned} \quad (5)$$

<sup>12</sup>For sampled children within 1.5 miles of Reid-Hillview, we observe 7,341 records at  $< 1.5 \mu\text{g}/\text{dL}$ , 7,980 records at  $1.5$  to  $< 3 \mu\text{g}/\text{dL}$ , 1,633 records at  $3$  to  $< 4.5 \mu\text{g}/\text{dL}$ , and 287 records at  $\geq 4.5 \mu\text{g}/\text{dL}$ .

Our expectation is that the exponentiated log-odds corresponding to  $D_{it}^n$  and  $D_{it}^f$  will be  $< 1.0$  reflecting lower risk of exceeding the threshold of  $4.5 \mu\text{g/dL}$  among children in outer orbits of Reid-Hillview Airport relative to children nearest to Reid-Hillview Airport. We also expect that exponentiated log-odds corresponding  $W_{it}^e$  to be  $> 1.0$ , reflecting higher odds of maximum categorical blood lead for sampled children East of Reid-Hillview Airport relative to children North of Reid-Hillview Airport. Similarly, we expect the exponentiated coefficient on  $T_{it}$  to be  $> 1.0$ , indicating that the risk of exceeding the CDPH-defined threshold of  $4.5 \mu\text{g/dL}$  increases with exposure to piston-engine aircraft traffic.

Table 7 reports odds ratios and 95% intervals of confidence in square brackets for our main indicators of aviation gasoline exposure risk. Given the ordered categorical measurement of our response variable, reported odds ratios have the interpretation of the expected change in the odds of a child's blood lead sample exceeding  $4.5 \mu\text{g/dL}$  relative to the combined odds of appearing in lower BLL categories. Focusing on saturated model (3), as compared to children  $< 0.5$  miles of Reid-Hillview Airport, sampled children residing 0.5 to 1 mile from Reid-Hillview Airport have  $0.858\times$  lower odds of superseding  $4.5 \mu\text{g/dL}$  relative to the combined odds of lower BLL categories. For children at 1 to 1.5 miles, the probability of a blood lead sample exceeding  $4.5 \mu\text{g/dL}$  is 22.1% lower than statistically similar children at  $< 0.5$  miles. With respect to residential near angle, children residing East of Reid-Hillview Airport are  $2.37\times$  (95% Confidence Intervals: 1.98, 2.85) more likely to present with BLLs  $\geq 4.5 \mu\text{g/dL}$  than children residing North of Reid-Hillview Airport, all else held equal. On the question of PEA traffic exposure, we find that an increase from minimum to maximum exposure increases the odds of eclipsing  $4.5 \mu\text{g/dL}$  relative to the combined odds of presenting with a lower BLL category by a multiplicative factor of 1.30 (95% CI: 1.12, 1.50).

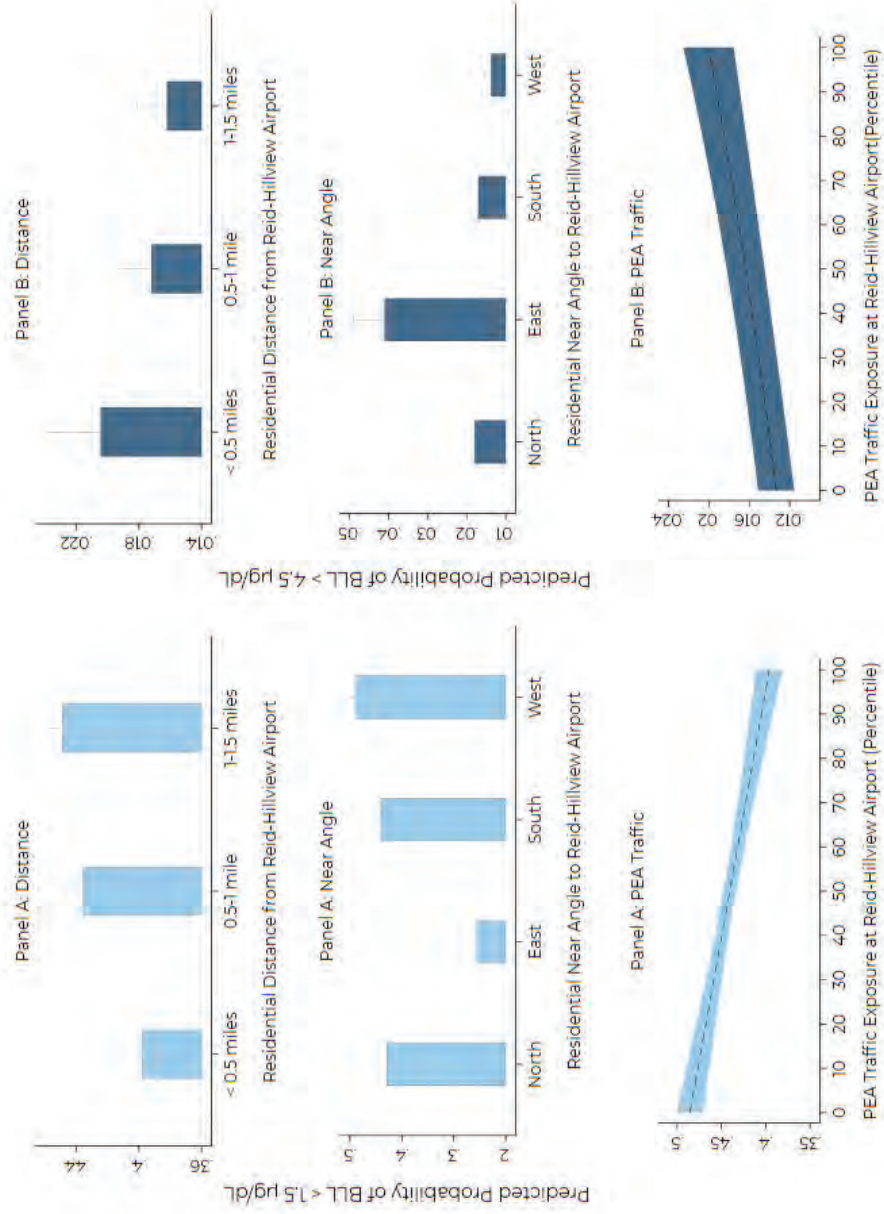
Figure 14 shows predicted probabilities of a sampled child appearing in the minimum ( $< 1.5 \mu\text{g/dL}$ ) and maximum ( $\geq 4.5 \mu\text{g/dL}$ ) specified categories of blood lead. Predicted probabilities are from model (3) in Table 7 where all other model variables are set to their

Table 7: Distance, Near Angle, PEA Traffic and Child BLL Categories, Proportional Odds

BLL Category	(1)	(2)	(3)
Distance RHV (Reference < 0.5 miles)			
0.5 to 1 miles	0.858** [0.740, 0.996]	0.823** [0.707, 0.957]	0.830** [0.713, 0.966]
1 to 1.5 miles	0.830** [0.716, 0.963]	0.793*** [0.681, 0.924]	0.779*** [0.668, 0.909]
Near Angle RHV (Reference North)			
East	1.768*** [1.533, 2.048]	1.888*** [1.626, 2.193]	2.374*** [1.979, 2.848]
PEA Traffic	2.020*** [1.811, 2.252]	2.030*** [1.817, 2.267]	1.298*** [1.122, 1.502]
Observations	17,162	17,162	17,162
Block FE	Yes	Yes	Yes
Distance	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes
Demography	Yes	Yes	Yes
Draw Controls	Yes	Yes	Yes
Other Exposures	No	Yes	Yes
SES	No	No	Yes
Timing Controls	No	No	Yes

Notes: Estimates are presented as odds ratios; 95% Confidence intervals in square parentheses, bootstrapped standard errors \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL categories defined in Section 5.1; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 14: Predicted Probabilities of Child BLLs by Distance, Near Angle, and PEA Traffic



Note: Across all panels, predictions are from model (3) in Table 7, with all other model variables fixed at their sample means.

means. Results displayed in Panels A (light blue) for each test variable of interest – distance, near angle, and PEA traffic exposure – correspond to predicted probabilities that a sampled child presents with a BLL  $<1.5 \mu\text{g/dL}$ . Results in Panels B (dark blue) pertain to predicted probabilities of a sampled child exceeding the CDPH-defined threshold of action of  $\geq 4.5 \mu\text{g/dL}$ . Graphics in Panels A versus B by indicator of aviation gasoline exposure risk are mirror-like opposites of each other.

Focusing on Panels B, we find that the probability of a sampled child presenting with a BLL in excess of the CDPH-defined threshold decreases measurably with distance from Reid-Hillview Airport, all else held equal. Specifically, we estimate that the probability of exceedance for sampled children in the nearest orbit is 20% and 27% higher than children in outer orbits of 0.5 to 1 mile and 1 to 1.5 miles, respectively. With respect to near angle, the probability of a blood lead sample taken from a child East (and predominantly downwind) of Reid-Hillview Airport is about 200% higher than samples from children West (and predominantly upwind) of Reid-Hillview Airport. With respect to PEA traffic exposure, children exposed to maximum traffic have an estimated probability of exceeding  $4.5 \mu\text{g/dL}$  that is about 29% higher than children sampled in moments of minimum PEA traffic exposure.

#### **5.1.1 Results Summary, Section 5.1**

Overall, results on threshold effects reported in Table 7 and Figure 14 are consistent with linear model results reported in Section 4. All indicators of aviation gasoline exposure risk – residential proximity to Reid-Hillview Airport, residing East and predominately downwind of Reid-Hillview Airport, and exposure to high PEA traffic – meaningfully increase the odds that a sampled child presents with a BLL  $\geq 4.5 \mu\text{g/dL}$  relative to combined odds of presenting with a lower category of blood lead.

## 5.2 PEA Traffic Exposure × Residential Distance

Next, we consider a statistical interaction between piston-engine aircraft traffic exposure and residential distance. Insofar as aviation gasoline exposure is a source of risk, we expect that the BLLs of sampled children proximate to Reid-Hillview Airport will be more responsive to the flow of PEA traffic than children more distant from the airport. Toward this analytic aim, we estimate the following:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 D_{it}^{nf} + \beta_2 CT_{it} + \beta_3 W_{it}^e + \beta_4 W_{it}^s + \beta_5 W_{it}^w + \delta \left( D_{it}^{nf} \times CT_{it} \right) \\
 & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\
 & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (6)
 \end{aligned}$$

where, the meaning of all terms carry from Equation 2 with the exception of  $D_{it}^{nf}$  that now assumes a value of 1 if a sampled child resides in the outer orbit of 0.5-1.5 miles of Reid-Hillview Airport and 0 if a sampled child resides within 0.5 miles of Reid-Hillview Airport. Outer orbits are collapsed given insignificance of difference observed in Table 3. We expect  $\beta_1$  corresponding  $D_{it}^{nf}$  to be negative, reflecting lower BLLs among distant children (0.5-1.5 miles) relative to proximate children (< 0.5 miles).  $CT_{it}$  is the statistically centered value of PEA traffic exposure that is equal to  $T_{it} - \bar{T}_{it}$  or the observed PEA traffic exposure ( $T_{it}$ ) minus the mean of PEA traffic exposure ( $\bar{T}_{it}$ ). We expect the corresponding parameter  $\beta_2$  to be positive, indicating that BLLs increase with the PEA traffic exposure. Finally, we expect  $\delta$  corresponding to  $D_{it}^{nf} \times CT_{it}$  to be negative, indicating that the BLLs of sampled children proximate to Reid-Hillview Airport (< 0.5 miles) are more responsive to PEA traffic than children distant from Reid-Hillview Airport (0.5-1.5 miles).

As before, Table 8 presents coefficients for many different models that increase successively in the saturation of control variables. Across models (1) through (6), estimated coefficients behave as theoretically expected and are distinguishable from chance. Concentrating interpretation on model (6), the main effect of residential distance indicates that sampled children at 0.5 to 1.5 miles from Reid-Hillview Airport present with BLLs

Table 8: PEA Traffic × Residential Distance at Reid-Hillview Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)
Distance (Reference < 0.5 miles)						
0.5 to 1.5 miles	-0.164** (0.077)	-0.158** (0.076)	-0.161** (0.076)	-0.183** (0.072)	-0.190*** (0.072)	-0.196*** (0.072)
PEA Traffic	1.002*** (0.195)	1.005*** (0.196)	1.009*** (0.195)	0.964*** (0.192)	0.970*** (0.193)	0.833*** (0.190)
0.5 to 1.5 miles × PEA Traffic	-0.670*** (0.205)	-0.670*** (0.206)	-0.661*** (0.206)	-0.709*** (0.201)	-0.711*** (0.202)	-0.712*** (0.202)
Constant	1.986*** (0.075)	1.980*** (0.081)	1.902*** (0.087)	2.197*** (0.094)	2.147*** (0.096)	2.238*** (0.302)
Observations	17,162	17,162	17,162	17,162	17,162	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Distance groups are assigned using the distance (miles) between RHV and the child's place of residence; PEA traffic is average daily PEA operations at nearest airport, calculated over 60 days from child's date of draw and converted to percentiles then centered (mean=0) for ease of interpretation; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

that are about  $1/5^{th}$  of a  $\mu\text{g}/\text{dL}$  lower than children nearest to the airport. Because PEA traffic is centered at the mean, the coefficient on PEA traffic exposure indicates that a doubling of PEA traffic from the mean is associated with a  $0.833 \mu\text{g}/\text{dL}$  increase in child BLLs, all else held equal. The estimated coefficient of interaction is negative ( $\hat{\delta} = -0.712$ ), implying that an increase in PEA traffic exposure affects the BLLs of sampled children more distant from Reid-Hillview Airport less than children proximate to Reid-Hillview Airport.

Figure 15 visualizes the effects reported in Table 8, showing predicted BLLs of sampled children at two distances – within 0.5 miles and 0.5-1.5 miles from Reid-Hillview Airport – over the range of observed PEA traffic exposure. Predictions are from model (6) in Table 8, with all other model covariates set to their means. Figure 15 shows that, all else held equal, a movement from the minimum to maximum PEA traffic exposure increases the BLLs of sampled children proximate to Reid-Hillview Airport by  $0.83 \mu\text{g}/\text{dL}$  ( $1.60$  to  $2.43 \mu\text{g}/\text{dL}$ ). By comparison, children more distant from Reid-Hillview Airport (0.5 to 1.5 miles) experience a more modest increase in BLLs of about  $1/10^{th}$  of  $\mu\text{g}/\text{dL}$  ( $1.76$  to  $1.88 \mu\text{g}/\text{dL}$ ) for an increase in PEA traffic from the minimum to the maximum.

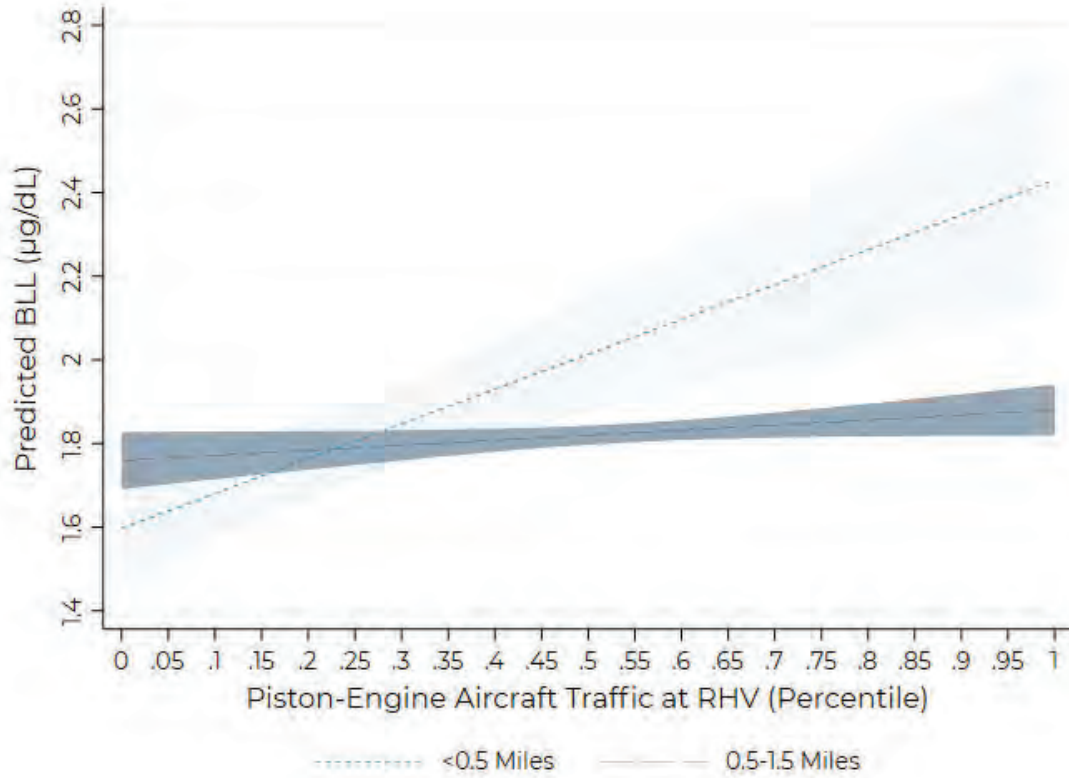
In Figure 16 we visualize results where we substitute our PEA traffic variable for aviation gasoline sales at Reid-Hillview Airport. Recall, the quantity of lead-formulated gasoline sold to fixed-base operators at Reid-Hillview Airport is measured monthly and available from January 2011 till July of 2019. As before, predicted BLLs are from model (6) with other model covariates set at their sample means. Results in Figure 16 are qualitatively similar to results displayed in Figure 15, showing that BLLs of sampled children proximate to Reid-Hillview Airport increase more substantially in response to aviation gasoline sales than children more distant from the airport.

### **5.2.1 Results Summary, Section 5.2**

On balance, the evidence suggests that children residing within 0.5 miles of Reid-Hillview Airport are especially vulnerable to increases in PEA traffic. Increasing the distance of

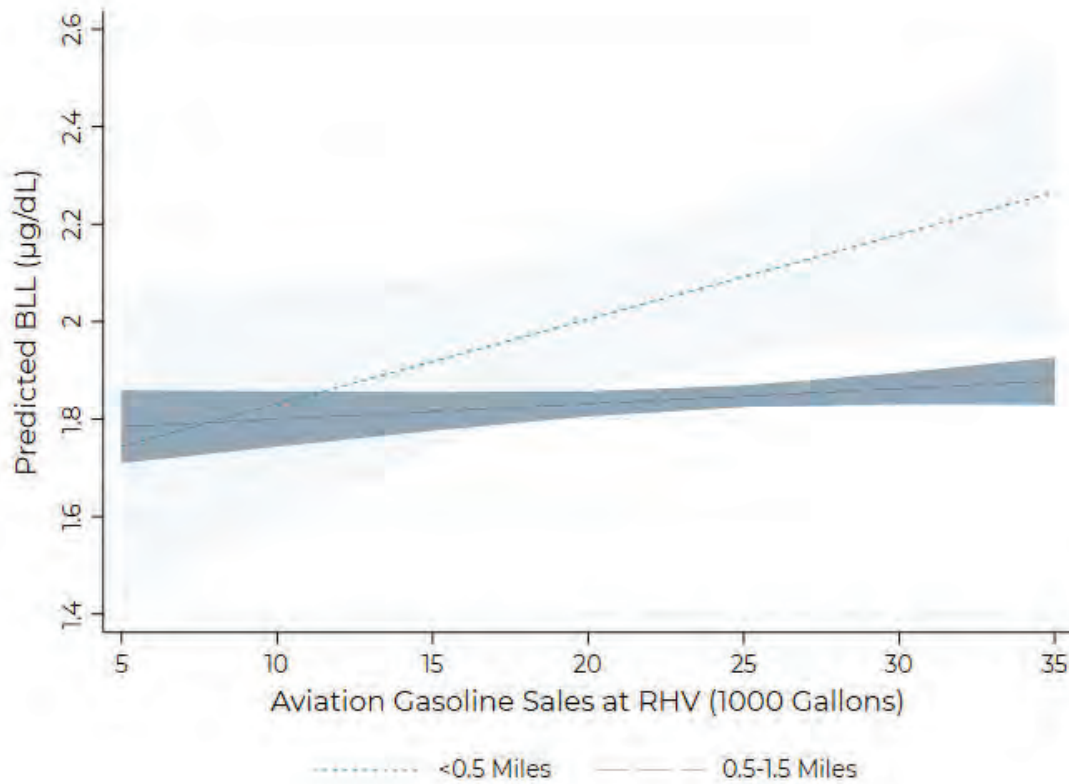


Figure 15: PEA Traffic × Residential Distance and Predicted Child BLLs



Note: Predictions are from model (6) in Table 8, with all other model variables fixed at their sample means.

Figure 16: Aviation Gasoline Sales × Residential Distance and Predicted Child BLLs



Note: Predictions are based on model (6) in Table 8 with aviation gasoline sales replacing PEA traffic. All other model variables fixed at their sample means.

a child from Reid-Hillview Airport (beyond 0.5 miles) appears to insulate that sampled child from the BLL effects of an increase in the volume of PEA traffic. Children more distant from Reid-Hillview Airport (0.5 to 1.5 miles) experience a modest increase in BLLs of about  $1/10^{th}$  of  $\mu\text{g}/\text{dL}$  from an increase in PEA traffic from the minimum to the maximum. By contrast, among children at  $< 0.5$  miles of Reid-Hillview Airport, an increase from the minimum to maximum exposure to PEA traffic is associated with an estimated  $0.83 \mu\text{g}/\text{dL}$  increase in BLLs. These results are supported by ancillary analyses involving the statistical interaction between distance and aviation gasoline sales at Reid-Hillview Airport.

### 5.3 PEA Traffic Contraction

As the COVID-19 pandemic gripped the country, state and local governments enacted various restrictions on the behavior of households and firms to limit the spread of the disease. Corresponding with these efforts, PEA traffic declined measurably at Reid-Hillview Airport over the months of February to July of 2020. As compared to three baseline control periods – 2011-2019, 2015-2019, and 2018-2019 – PEA traffic declined by 34 to 44%. Intriguingly, PEA traffic at Reid-Hillview Airport returned to pre-pandemic levels in August to December of 2020. The pandemic-caused dynamics in piston-engine aircraft operations at Reid-Hillview Airport present us with a natural experiment.

Insofar as aviation gasoline exposure is a source of risk, then we should observe a reduction in the BLLs of children sampled in this PEA traffic contraction period, other things held equal. To test whether child blood levels behaved differently in the contraction moment, we estimate the following linear model:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w + \beta_7 COV_t \\
 & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\
 & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (7)
 \end{aligned}$$

where, all terms carry from Equation 2 with the exception  $COV_t$  that is an indicator variable equal to 1 if a child is sampled in the PEA traffic contraction moment and 0 otherwise. Other things held equal, we expect the coefficient  $\beta_7$ , corresponding to  $COV_t$ , to be negative, indicating that children sampled in the PEA traffic contraction moment present with lower BLLs than children not sampled in this period.

A reasonable concern with this analytic exercise is that the kind of children sampled in the PEA contraction moment may be characteristically different than children sampled outside this moment. Table 9 compares means on model variables by children sampled in versus out of the PEA traffic contraction period. Sampled children are statistically indistinguishable in terms of residential distance to Reid-Hillview Airport (0.93 vs 0.94 miles,  $p = 0.442$ ), fraction living East of Reid-Hillview Airport (0.07 vs 0.07,  $p = 0.294$ ), child age (2.81 vs 2.91,  $p = 0.180$ ), the proportion children that are female (0.49 vs 0.51,  $p = 0.199$ ), and sample order (0.82 vs 0.87,  $p = 0.136$ ). We do observe significant differences on the proportion of samples drawn by capillary method (0.27 vs 0.17,  $p < 0.001$ ), the percentage of housing stock in a child's residential neighborhood at-risk of presenting with lead-based paint (27.79 vs 24.41,  $p < 0.001$ ), and neighborhood socioeconomic status (-0.27 vs 0.33,  $p < 0.001$ ). Importantly, across every variable for which we observe differences, all function to increase the BLLs of children sampled outside the contraction period relative to children sampled in the PEA traffic contraction period, likely rendering our test results conservative.

Table 10 presents estimated coefficients pertaining to the PEA traffic contraction period. As expected from an aviation gasoline exposure risk standpoint, and other things held equal, the BLLs of sampled children in the PEA traffic contraction moment are significantly lower vis-à-vis children sampled outside this moment. Across models (1-6), we find that BLLs decreased by 0.22 to 0.35  $\mu\text{g}/\text{dL}$ , depending on the presence of control variables. The period indicator coefficient attenuates intuitively with the inclusion of measured PEA traffic exposure in model (7). Figure 17 illustrates results from model (6) in Table 10, showing predicted BLLs for children sampled inside versus outside the PEA

Table 9: Comparison of Means on Variables by Contraction Period, (t-Test)

	Non-Contraction Period	Contraction Period	<i>p</i> value
PEA Traffic Exposure	0.52	0.15	<0.001
Distance to RHV	0.93	0.94	0.442
Residence East of RHV	0.07	0.07	0.294
Age (years)	2.81	2.91	0.180
Female	0.49	0.51	0.199
Capillary Blood Draw	0.27	0.17	<0.001
Sample Order	0.82	0.87	0.136
Tri Facilities < 2 miles	2.50	2.55	0.059
Neighborhood % Stock < 1960	27.79	24.41	<0.001
Neighborhood SES	-0.27	0.33	<0.001

Note: *p* values correspond to one-tailed t-tests with equal variances assumed across variables.

traffic contraction period. Fixing other covariates at their means, we find that child BLLs decreased by around  $1/4^{th}$   $\mu\text{g}/\text{dL}$  in the contraction period.

### 5.3.1 Results Summary, Section 5.3

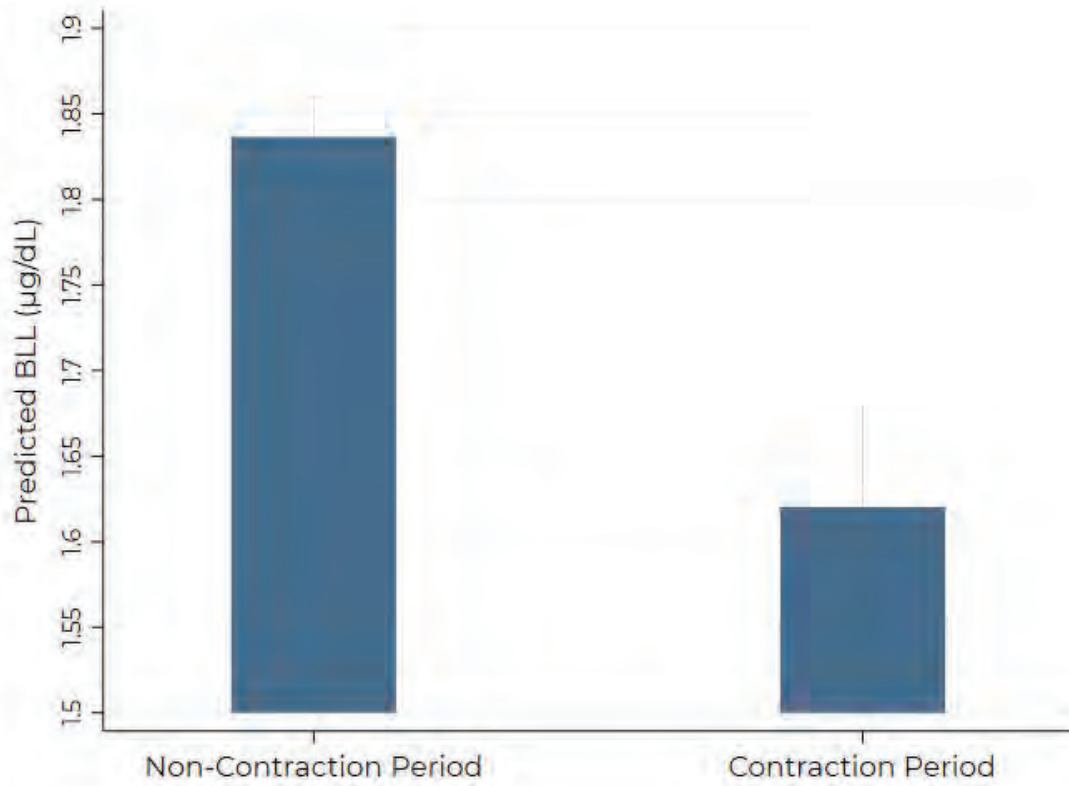
PEA traffic at Reid-Hillview Airport declined measurably from February to July in 2020, recovering to historically normal levels in August through December. Children sampled in this PEA traffic contraction period presented with significantly lower BLLs – about  $1/4^{th}$  of a  $\mu\text{g}/\text{dL}$  lower – than children not sampled in this contraction window. Given the reduction in PEA traffic of  $\sim 34$  to  $44\%$ , the size of the estimated reduction in BLLs of  $1/4^{th}$  of a  $\mu\text{g}/\text{dL}$  is approximately equal in magnitude to what we observe in main results pertaining to PEA traffic. The estimated statistical association may be understated given characteristic differences in children sampled across periods.

Table 10: PEA Traffic Contraction Period at Reid-Hillview and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Contraction Period	-0.348*** (0.040)	-0.348*** (0.040)	-0.349*** (0.040)	-0.352*** (0.040)	-0.217*** (0.034)	-0.216*** (0.034)	-0.066 (0.051)
Constant	1.840*** (0.013)	1.987*** (0.075)	1.983*** (0.081)	1.905*** (0.087)	2.192*** (0.094)	2.167*** (0.094)	2.084*** (0.323)
Observations	17,241	17,241	17,241	17,241	17,241	17,241	17,162
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	No	No	No	No	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles of RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Contraction period is an indicator equaling 1 if draw date occurs February, 2020 thru July, 2020, zero otherwise; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Figure 17: PEA Traffic Contraction Period at RHV and Predicted Child BLLs



Note: Predictions are from model (6) in Table 10, with all other model variables fixed at their sample means.

## 5.4 Relative School Distance

When schools are in session, school-aged children spend a considerable amount of their day away from home. In our context, the school a child attends may be more or less distant from Reid-Hillview Airport than their place of residence. Insofar as aviation gasoline exposure is a source of risk, school-aged children that commute away from Reid-Hillview Airport to attend school might present with lower BLLs, other things held constant.

With a complete inventory of elementary, middle and high schools in Santa Clara County from the National Center for Education Statistics, we assigned each school-aged child ( $\geq 4$  years of age) at the time of blood draw to the nearest grade-serving school. This matching process assumes that a child attends the nearest available school, and that all children are in typical age-based grades. To test whether the blood lead levels of sampled children behave differently by the relative distance of their residence and assigned school to Reid-Hillview Airport, we estimate the following linear model:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w + \beta_7 SC_{it} \\
 & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\
 & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \varepsilon_{ijt} \quad (8)
 \end{aligned}$$

where, all terms carry from Equation 2 with the exception  $SC_{it}$ , our school commute variable, measuring the relative distance between a child's assigned school and residence in time  $t$  to Reid-Hillview Airport. Relative distance is calculated by subtracting the residential distance of a sampled child to Reid-Hillview Airport from the distance of the assigned school to Reid-Hillview Airport. Negative values indicate that a child commutes toward Reid-Hillview Airport during the school day, and positive values mean that a child commutes away from Reid-Hillview Airport during the school day. Other things held equal, we expect the coefficient of  $\beta_7$  corresponding to  $SC_{it}$  to be negative, indicating that the BLLs of children decrease as one increases the distance that they commute away from Reid-Hillview Airport during the school day.

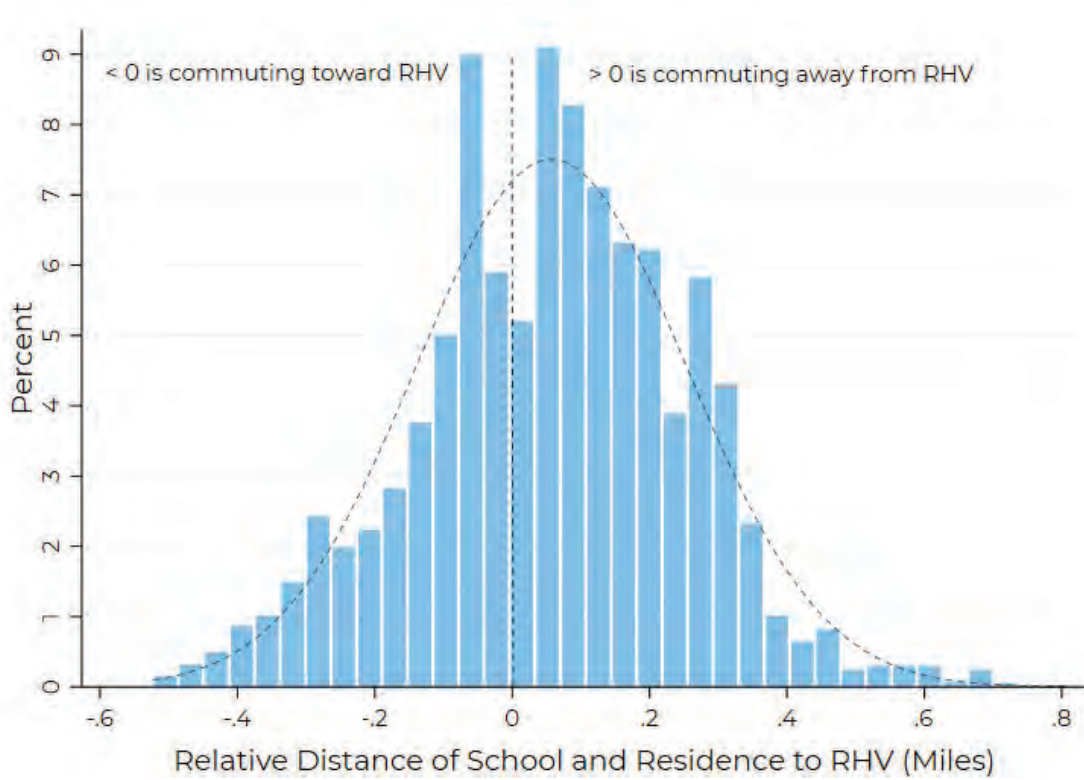


We extend this test by reconstituting our school commute variable into a series of tercile indicators, dividing the distribution into three even piles. Denoting medium ( $m$ ) and high ( $h$ ) terciles of school commuting and letting the first tercile be the reference group, we modify Equation 8 by replacing the continuous variable  $SC_{it}$  with dummy variables  $SC_{it}^m$  and  $SC_{it}^h$  for medium and high commuting terciles, respectively. We expect  $\beta_{3a}$  and  $\beta_{3b}$ , corresponding to  $SC_{it}^m$  and  $SC_{it}^h$ , to be negative, indicating that BLLs are lower among sampled children that commute longer distances away from Reid-Hillview Airport than children that commute toward Reid-Hillview Airport for school, other things held equal.

Figure 18 is a histogram of the school commuting behavior of elementary and middle school-aged children that reside within 1.5 miles of Reid-Hillview Airport. On the x-axis we plot relative distance, which recall is the distance of the assigned school to Reid-Hillview Airport minus the distance of residence to Reid-Hillview Airport. The distribution is approximately normal with faint kurtosis ( $K = 3.13$ ) and the absence of skew ( $S = -0.05$ ). Of all observable characteristics, only child age and residential distance are correlated with relative distance, with older children (particularly children of high school age) traveling longer distances away from Reid-Hillview Airport, and with children residing 1 to 1.5 miles being more likely to travel toward Reid-Hillview Airport for school. With these exceptions, moving toward or away from Reid-Hillview Airport appears to be statistically independent of observable child characteristics.

Table 11 reports coefficients for relative distance measured continuously (in miles) – models (1) to (3) – and categorically (in terciles) in models (4) to (6). Models (1) and (4) report results for all school-aged children. Beginning with model (1), we find that a 1-mile increase in relative distance is associated with a reduction in child BLLs of  $0.32 \mu\text{g}/\text{dL}$ . Sampled children that commute away from Reid-Hillview Airport to attend school witness a reduction in their BLLs, and vice-versa. The results in model (4) show that as compared to children that commute toward RHV for school – our reference group of Low Tercile – children in the Medium Tercile (that commute shorter distances away from RHV) and the High Tercile (that commute longer distances away from Reid-Hillview Airport)

Figure 18: Histogram of Relative Distance of School and Residence to RHV



Note: The calculation of relative distance involves taking the distance of the assigned nearest school to Reid-Hillview Airport minus the residential distance of the sampled child to Reid-Hillview Airport. Negative values indicate that a child commutes toward Reid-Hillview Airport and a positive value indicates that a child commutes away from Reid-Hillview Airport during the school day.

Table 11: School and Residential Distance Difference to Reid-Hillview Airport and Child BLLs

BLLs ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)
Difference (miles)	-0.318*** (0.069)	-0.340*** (0.080)	-0.248 (0.152)			
Difference (Reference Low Tercile)						
Medium Tercile				-0.190** (0.081)	-0.225*** (0.085)	0.055 (0.182)
High Tercile				-0.330*** (0.075)	-0.359*** (0.084)	-0.131 (0.139)
Constant	2.550*** (0.572)	2.743*** (0.655)	3.033*** (1.140)	2.812*** (0.568)	3.005*** (0.655)	2.962** (1.197)
Observations	4,347	3,352	995	4,315	3,325	990
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes
Demography	Yes	Yes	Yes	Yes	Yes	Yes
Draw Controls	Yes	Yes	Yes	Yes	Yes	Yes
Other Exposures	Yes	Yes	Yes	Yes	Yes	Yes
SES	Yes	Yes	Yes	Yes	Yes	Yes
Timing Controls	Yes	Yes	Yes	Yes	Yes	Yes
School in Session	Yes	Yes	No	Yes	Yes	No

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Difference is distance from child's place of residence to RHV less the distance of assigned school to RHV (miles); Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

present with BLLs that are -0.19 and -0.33  $\mu\text{g}/\text{dL}$  lower, respectively.

Models (2) and (5) restrict analysis to children sampled in periods when school *is* in session. Models (3) and (6) censor observations to children sampled in periods when school *is not* in session.<sup>13</sup> As expected, and as compared to models (1) and (3) where all school-aged children are observed, coefficients in models (2) and (5) amplify with the *exclusion* of children sampled in periods when school is not session. In models (3) and (6), we observe an attenuation of relative distance coefficients when restricting to children sampled in periods when school is not in session. Subgroup analyses behave logically, with the relative distance mechanism operating statistically significantly in periods when school is in session.

Figure 19 and Figure 20 visualize results from models (1) and (4) in Table 11. On the x-axis in Figure 19 we plot the relative distance of a child's assigned school and residence to Reid-Hillview Airport, and on the y-axis we have predicted BLL. As before, all other model covariates in Equation 8 are fixed at their sample means. Other things held equal, sampled children that *commute toward* Reid-Hillview Airport for school by 1 mile have predicted BLLs of 2.37  $\mu\text{g}/\text{dL}$  (95% CI: 2.15, 2.59). By contrast, sampled children that *commute away* Reid-Hillview Airport for school by 1 mile have predicted BLLs of 1.72  $\mu\text{g}/\text{dL}$  (95% CI: 1.53, 1.92). Figure 20 divides our distribution of relative distance into terciles. In support of the linear dose-response displayed in Figure 19, we find that the predicted BLLs of sampled child decrease incrementally across relative distance terciles, going from 2.20 to 2.03 to 1.85  $\mu\text{g}/\text{dL}$ , respectively.

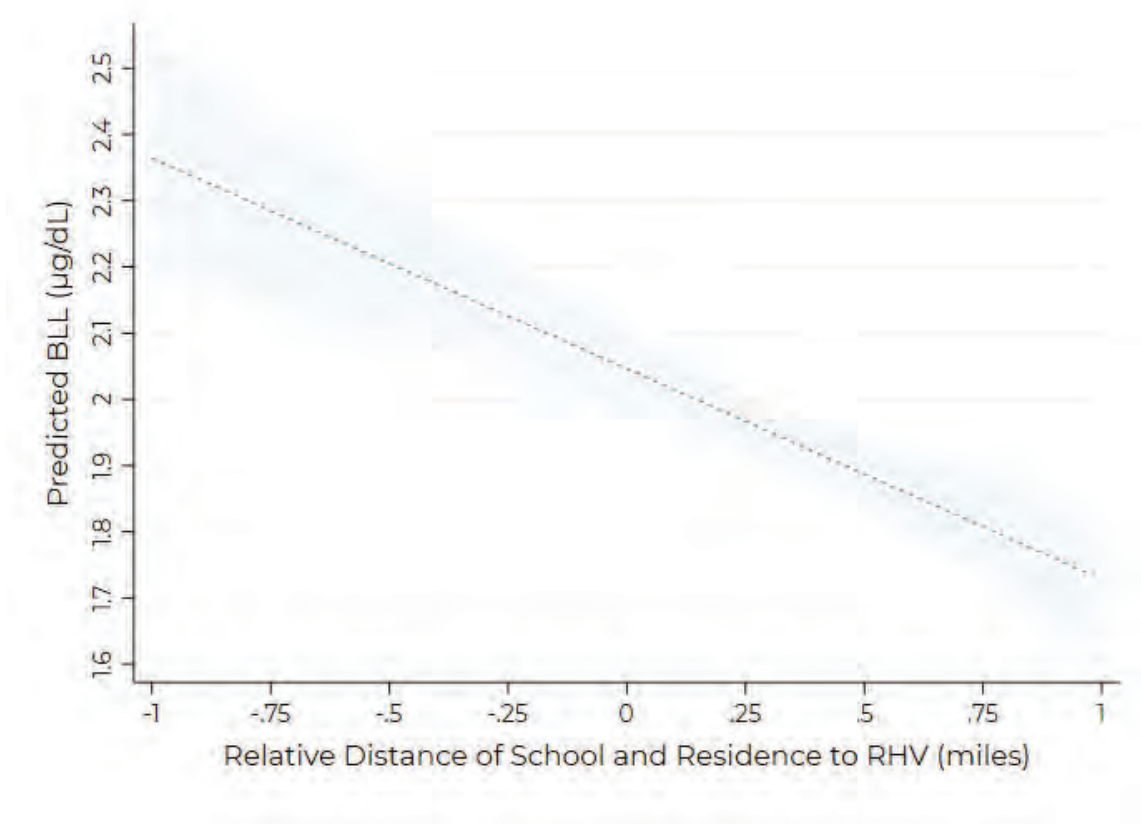
#### **5.4.1 Results Summary, Section 5.4**

By matching school-aged children to the nearest grade-serving school, we tested whether the blood lead levels of sampled children decline measurably with the distance that they

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<sup>13</sup>In Santa Clara County, public schools are typically not in session from the first week of June till the second week of August – extended summer break – and closed from the third week of December till the first week of January – extended winter break.

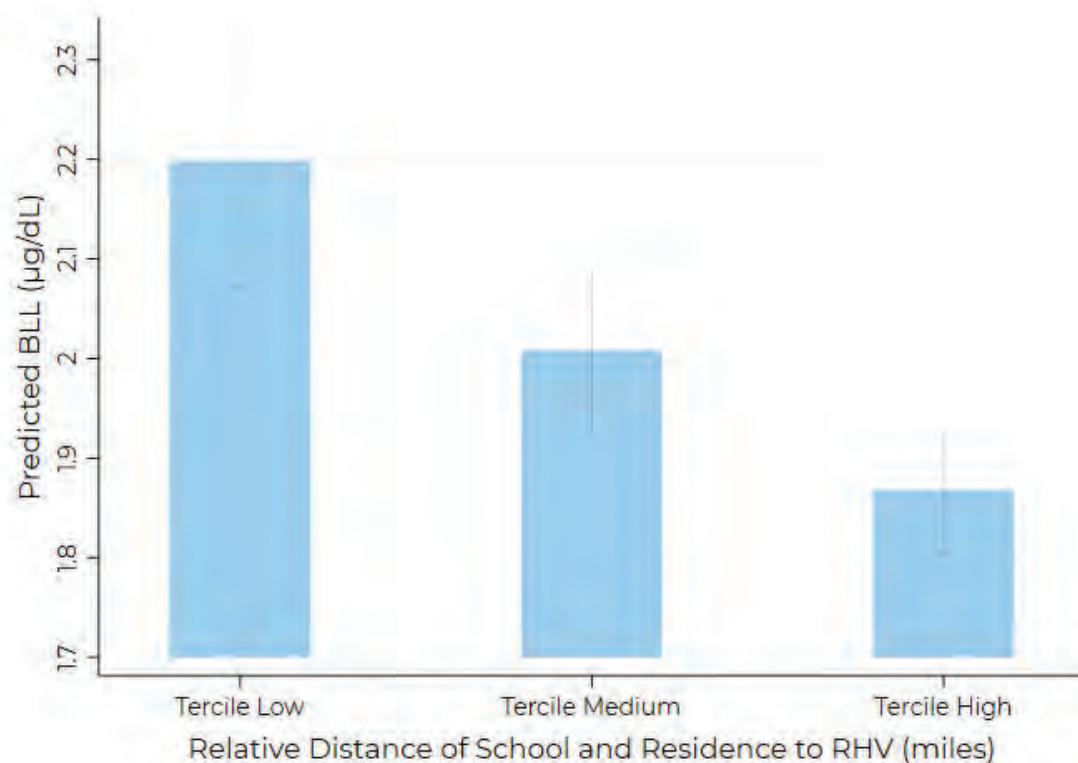
Figure 19: Relative Distance of School and Residence to RHV and Predicted Child BLLs



Note: Predictions are from model (1) in Table 11, with all other covariates fixed at their sample means. The calculation of relative distance involves taking the distance of the assigned nearest school to Reid-Hillview Airport minus the residential distance of the sampled child to Reid-Hillview Airport. Negative values indicate that a child commutes toward Reid-Hillview Airport and a positive value indicates that a child commutes away from Reid-Hillview Airport during the school day.

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Figure 20: Relative Distance Terciles of School and Residence to RHV and Predicted Child BLLs



Note: Predictions are from model (4) in Table 11, with all other covariates fixed at their sample means. Terciles divide the distribution of relative of school and residence to Reid-Hillview Airport into three even piles. The average relative distances in Terciles Low, Medium and High are -0.17, 0.07, and 0.32 miles, respectively.

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commute away from Reid-Hillview Airport to attend school. Results reported in Table 11 and Figure 19 corroborate the notion that exposure to aviation gasoline is likely a statistically independent source of risk. Children commuting toward Reid-Hillview Airport to attend school present with substantially higher BLLs than sampled children commuting away from Reid-Hillview Airport for school. This relative distance effect appears to be dose-responsive.

## 5.5 Extension to All Airports

As indicated in FAA data, four other airports located in Santa Clara County service piston-engine aircraft, including NUQ, PAO, SJC, and E16. As with RHV, we extracted all valid CDPH records on children  $\leq 18$  years of age, residing within 1.5 miles of acnuq, PAO, SJC, or E16, and sampled in the last 10 years (January 1, 2011 to December 31, 2011). By adding the 2,500 records obtained from this extraction process to our set of observations, we test the persistence of results reported in Section 4 and Section 5 pertaining to Reid-Hillview Airport.

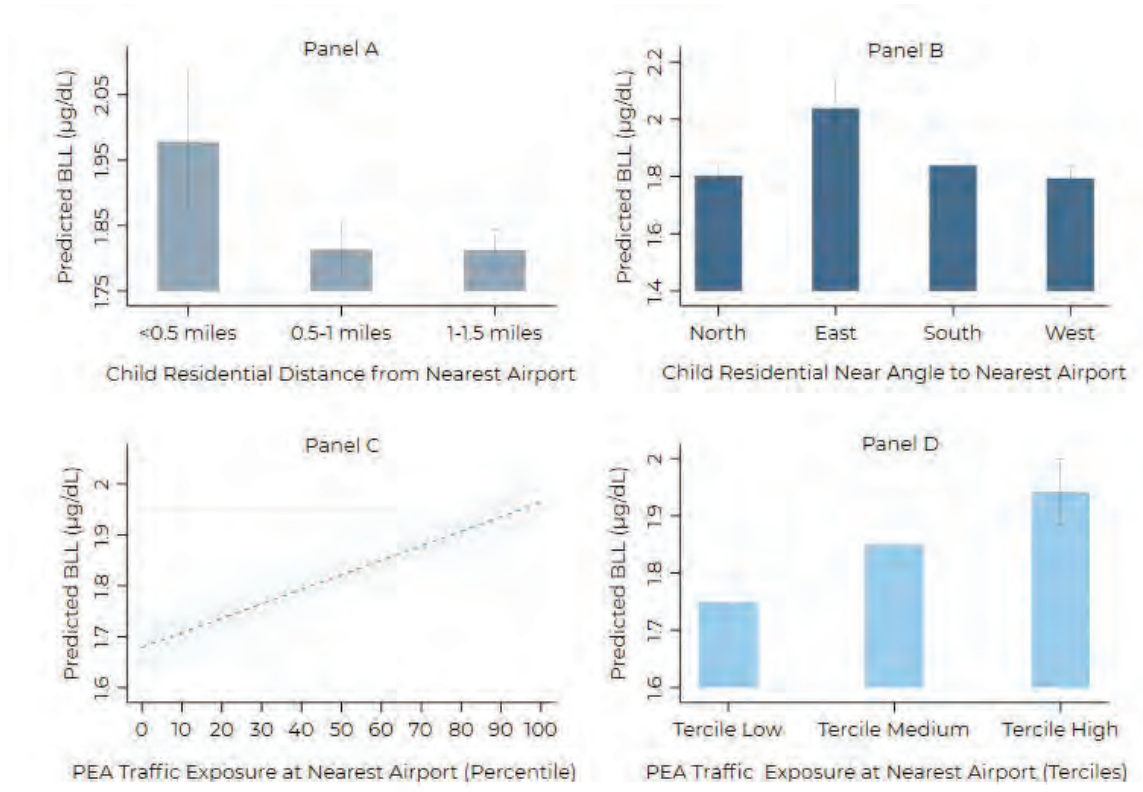
Figure 21 displays the medley of analyses pursued in Section 4, pertaining to residential distance (Panel A), residential near angle (Panel B), and piston-engine aircraft traffic exposure (Panels C and D). Detailed tables with estimated coefficients corresponding to Panels A through D in Figure 21 are presented in the Appendix.<sup>14</sup>

As shown in Figure 21, the results reported in Section 4 are robust to the inclusion of children proximate to other airports in Santa Clara County that service piston-engine aircraft. Again, we find that child BLLs decrease with distance from the nearest airport, are significantly higher among children residing East (and predominantly downwind) of the nearest airport, and increase with the volume of PEA traffic (whether measured continuously or categorically).

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<sup>14</sup>See Appendix Table A.2, Table A.3, Table A.4, Table A.5, Table A.6, and Table A.7.

Figure 21: Main Results on Aviation Gasoline Exposure Risk at Nearest Airports



Note: Residential distance (Panel A) and residential near angle (Panel B) pertain to the nearest airport. PEA traffic in percentile terms (Panel C) and division into terciles (Panel D) correspond to observed PEA traffic at the nearest airport. Across predictions, other model variables are fixed at their sample means.



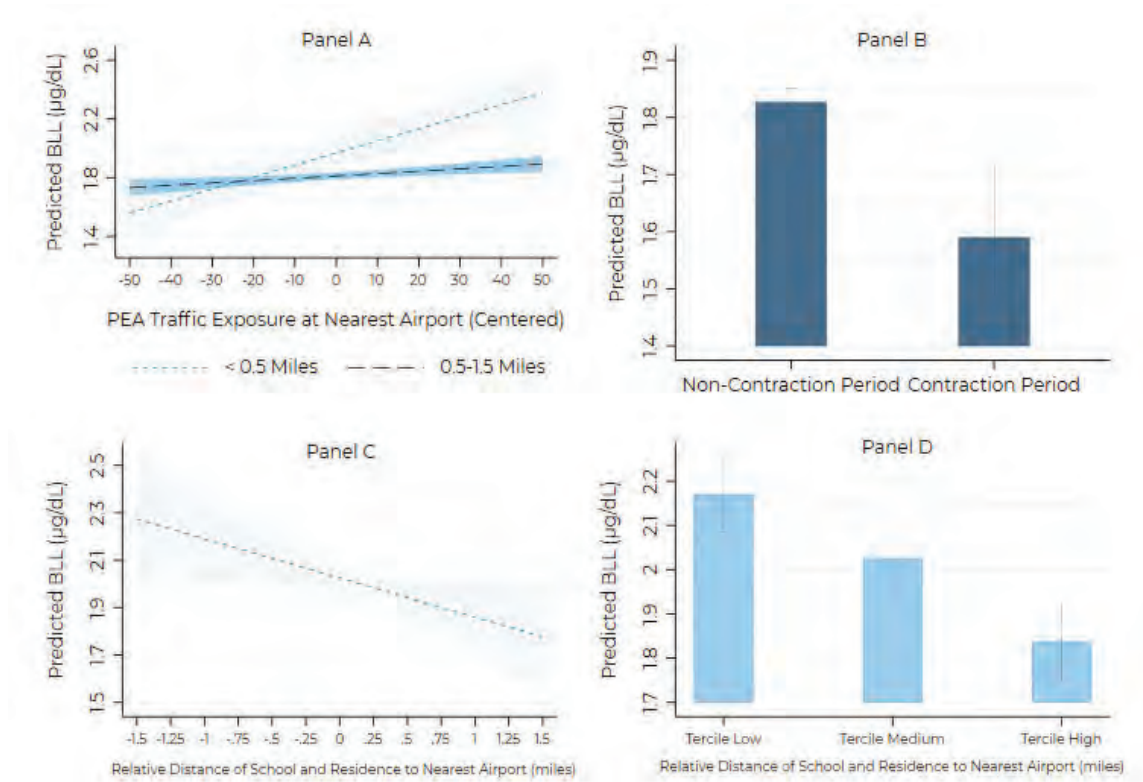
Figure 22 presents an assortment of extended analyses pursued in Section 5, including the statistical interaction of piston-engine aircraft traffic and residential distance (Panel A), the behavior of BLLs of sampled children during the PEA traffic contraction period in 2020 corresponding with the onset of protection efforts to limit the spread of COVID-19 (Panel B), and exposure insulation effects of commuting away from the nearest airport to attend school (Panels C and D). Again, detailed tables with estimated coefficients corresponding to Panels A through D in Figure 22 are presented in the Appendix.

With the inclusion of sampled children proximate to other airports in Santa Clara County, Panel A in Figure 22 shows, once again, that children residing within 0.5 miles of the nearest airport are especially vulnerable to fluctuations in PEA traffic. In Panel B we find that children sampled in the PEA traffic contraction moment present with substantially lower BLLs than statistically similar children sampled outside this moment. In Panels C and D we find that school-aged children commuting away from the nearest airport to attend school realize substantially lower BLLs than children commuting toward PEA-servicing airports for school.

### **5.5.1 Results Summary, Section 5.5**

Across an ensemble of tests that incorporate children proximate to other airports in Santa Clara County with non-zero piston-engine aircraft activity, we find that all results reported in Section 4 and Section 5 pertaining to Reid-Hillview Airport are statistically upheld. Estimated coefficients are similar in direction and magnitude, supporting the hypothesis that exposure to aviation gasoline is a significant source of risk for children proximate to PEA-servicing airports.

Figure 22: Extended Results on Aviation Gasoline Exposure Risk at Nearest Airports



Note: PEA Traffic × Residential distance (Panel A) and contraction period (Panel B) pertain to the nearest airport. Relative distance (Panel C) and division into terciles (Panel D) correspond to relative distances from residence and assigned school to the nearest airport. Across predictions, other model variables are fixed at their sample means.

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## 6 Reduction Scenario

To provide additional quantitative meaning to our results, we conservatively estimate the social benefits of a simulated reduction in PEA traffic from the 50<sup>th</sup> (observed median) to the 1<sup>st</sup> percentile (observed minimum). Social benefits are quantified with a standard syllogism in environmental health economics (PEA Traffic → Child BLLs → IQ → Lifetime Earnings) linking lead exposure source to child BLLs to IQ points and to the net present value of future earnings (Schwartz, 1994; Gould, 2009; Grosse et al., 2002).

With coefficients from our Distance × PEA Traffic test reported in Table 8 and visualized in Figure 15, we calculate that a reduction in PEA traffic from the 50<sup>th</sup> to the 1<sup>st</sup> percentile results in an estimated reduction in average BLLs from 2.01 to 1.60  $\mu\text{g}/\text{dL}$  among sampled children residing within 0.5 miles of Reid-Hillview Airport, and a reduction of 1.82 to 1.76  $\mu\text{g}/\text{dL}$  among sampled children within 0.5-1.5 miles of the airport. These expected reductions in average BLLs are a health benefit conferred on the population of children ( $\leq 18$  years) residing around Reid-Hillview Airport. This calculation completes the first step of the syllogism of PEA Traffic → Child BLLs.

In an international pooled analysis of low-level environmental lead exposure and children's intellectual function, Lanphear et al. (2005) report that 1  $\mu\text{g}/\text{dL}$  increase of lead in a child's bloodstream is statistically associated with a 0.56 point (95% CI: 0.35, 0.78) reduction in measured IQ<sup>15</sup>. With the Lanphear et al. (2005) estimate of 0.56 IQ points (95% CI: 0.35, 0.78) for every  $\mu\text{g}/\text{dL}$  of lead, one can translate the estimated reduction in average BLLs from our PEA traffic reduction scenario of 0.41  $\mu\text{g}/\text{dL}$  into an expected gain in IQ for children within 0.5 miles of RHV, and 0.06  $\mu\text{g}/\text{dL}$  for children at 0.5-1.5 miles, completing the second step of the syllogism of Child BLLs → IQ.

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<sup>15</sup>It should be noted that this coefficient of 0.56 IQ points is likely underestimated in the context of aviation gasoline exposure at Reid-Hillview Airport. Recall, Figure 1 showing that the relationship between IQ and child BLL is non-linear, with the steeper losses in IQ at lower BLLs. At  $\leq 5 \mu\text{g}/\text{dL}$ , the relationship approaches and possibly exceeds 1 to 1. Therefore, we may regard the final tally of potential gains from a reduction in PEA traffic presented in Table 12 as likely conservative.

The final step of the syllogism, IQ  $\rightarrow$  Lifetime Earnings, involves the known statistical relationship between IQ and lifetime earnings. Following other (Schwartz, 1994; Salkever, 1995; Grosse et al., 2002; Nevin et al., 2008), each IQ point gained corresponds to an estimated gain in the present discounted value of lifetime earnings of \$22,871 (2020 U.S.\$). One can complete the social benefits exercise by translating the expected gain in IQ over the estimated number of children residing around Reid-Hillview Airport (over the observation period of January 1st, 2011 to December 31st, 2020) to get the expected gain in lifetime earnings resulting from a simulated reduction in piston-engine aircraft traffic from the 50<sup>th</sup> to 1<sup>st</sup> percentile.

Table 12 summarizes calculated social benefits for a simulated reduction in PEA traffic from the 50<sup>th</sup> (observed median) to the 1<sup>st</sup> percentile (observed minimum). To illustrate the logic, take the first row corresponding to children residing within 0.5 miles of Reid-Hillview. Column (A) is the estimated number of children  $\leq$  18 years of age residing  $<$  0.5 miles of Reid-Hillview Airport from January 1st, 2011 to December 31st, 2020 of 3,000. Column (B) is the expected reduction in child BLLs of 0.41  $\mu\text{g}/\text{dL}$  resulting from the simulated reduction in piston-engine aircraft traffic from the 50<sup>th</sup> to 1<sup>st</sup> percentile. Column (C) is the expected gain in IQ for each  $\mu\text{g}/\text{dL}$  reduced in a child's bloodstream of 0.56 IQ points. In parentheses we report the interval of confidence around this estimated gain of 0.56 IQ points (of 0.35 to 0.78). Data in Column (C) are from the Lanphear et al. (2005) international pooled analysis of low-level environmental lead exposure and children's intellectual function.

Column (D) is the estimated IQ points gained over the cohort of children  $\leq$  18 years of age residing within 0.5 miles of Reid-Hillview Airport from the simulated reduction in piston-engine aircraft traffic from the 50<sup>th</sup> to the 1<sup>st</sup> percentile. The number of 347 is derived by Column (A)  $\times$  Column (B)  $\times$  Column (C). The numbers in parentheses in Column (D) of 213 and 481 correspond to the intervals of confidence in Column (C), providing a range estimate of the cohort gain in IQ from the PEA traffic reduction scenario.

Table 12: Estimated Gain in Cohort Lifetime Earnings from IQ Gain from PEA Traffic Reduction of 50th to 1st Percentile

Distance	(A) Cohort ≤ 18 yrs	(B) Expected BLL Decrease	(C) IQ Gain per μg/dL	(D) Cohort IQ Points Gained	(E) Lifetime \$ per IQ Point	(F) Cohort Benefit (\$ Millions)
0-0.5 Miles	1,500	0.41 μg/dL	0.56 (0.35, 0.78)	347 (213, 481)	\$22,871	\$7.9 (\$4.9, \$11.0)
0.5-1.5 Miles	13,000	0.06 μg/dL	0.56 (0.35, 0.78)	440 (270, 610)	\$22,871	\$10.1 (\$6.2, \$14.0)

Notes: The cohort of potentially affected children in Column A is estimated from American Community Survey data on age structure for neighborhoods around RHV over the ten-year period of Jan 1st, 2011 to December 31st, 2020. Column D is derived by A × B × C. Column F is calculated by D × E. Estimated range in Column F is from the estimated intervals on BLL to IQ relationship in (C).

Finally, Column (F) completes the syllogism by taking the cohort gain in IQ in column (D) and multiplying by the estimated gain in lifetime earnings for a unit gain in IQ (E). From this, we arrive at the estimated gain in discounted net present value of earnings of \$11.0 to \$24.9 million for the cohort of children ≤ 18 years of age residing within 0.5 miles of Reid-Hillview Airport. If one assumes that this PEA traffic reduction scenario is permanent, the estimated gain in lifetime earnings would benefit all subsequent cohorts of children in the vicinity of Reid-Hillview Airport going forward.

We repeat the exercise but this time imagining a reduction in monthly aviation gasoline sales at Reid-Hillview Airport from the 50<sup>th</sup> (25,000 gal) to the 1<sup>st</sup> (9,000 gal) percentile. This reduction aviation gasoline usage is approximately equal to what is accomplishable by the percentage of piston-engine aircraft that can safely transition to an unleaded fuel alternative (Kessler, 2013). Leveraging underlying coefficients in Figure 16, Table A.8 summarizes calculations, indicating a cohort gain of about \$15.3 million for a reduction in aviation gasoline sales at Reid-Hillview Airport from the 50<sup>th</sup> to the 1<sup>st</sup> percentile.

Importantly, these estimates are not meant to be a full accounting of the social bene-

fits associated with a reduction in population exposure to leaded aviation gasoline. Our estimates are not comprehensive since they reflect gains to a subset of the population (children  $\leq 18$  years of age), and only one benefit channel (lifetime earnings from an expected gain in IQ). Including health care and special education costs averted, as well as behavioral, physical health, and mortality costs saved, and more than one age stratum of the population would lead to substantially higher estimates (Schwartz, 1994; Gould, 2009).

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## 7 Conclusions

In this study, we assessed whether the BLLs of sampled children around Reid-Hillview Airport are statistically associated with indicators of aviation-related lead exposure, net of other lead exposure pathways. In service of this assessment effort, data were amassed from various sources and analyzed with established statistical and econometric technologies. The conclusions one can reach with applied statistical analyses of this kind rest on the consistency of an ensemble of evidence.

### 7.1 Main Results

Controlling for other known sources of lead exposure both explicitly and indirectly, demographic characteristics, and neighborhood conditions, the evidence from main analyses (in Section 4) of a statistical link between aviation gasoline exposure risk and child blood lead levels includes:

1. As evidenced in Section 4.2, the BLLs of sampled children increase significantly and dose-responsively with proximity to Reid-Hillview Airport. As shown in Table 4, this relationship between child BLLs and distance to Reid-Hillview Airport is robust to various linear and nonlinear transformations of both input and response variables. Children residing within 0.5 miles of Reid-Hillview Airport present with significantly higher BLLs than children more distant of Reid-Hillview Airport.
2. As evidenced in Section 4.3, BLLs are significantly and substantively higher among sampled children residing East (and predominantly downwind) of Reid-Hillview Airport, and significantly increase in the estimated downwind days drifting in the residential direction of a sampled child from the date of blood draw.
3. As evidenced in Section 4.4, the BLLs of sampled children increase significantly with the volume of measured piston-engine aircraft traffic at Reid-Hillview Airport from the date of blood draw. Moreover, the BLLs of sampled children increase sig-

nificantly with monthly quantities of aviation gasoline sold to fixed-base operators at Reid-Hillview Airport from the date blood draw.

Estimated relationships between BLLs and our main indicators of aviation gasoline exposure risk are quantitatively similar to results of other studies (Miranda et al., 2011; Zahran et al., 2017a). As shown in Table A.9 all main results are robust to the use of clustered errors by sample order, high confidence geo-coded records, richly sampled neighborhoods, and the inclusion of lab fixed effects to account for unmeasured factors present in laboratories performing blood lead tests. Results across main indicators also behave similarly when limiting the analysis to children  $\leq 6$  years of age, as shown in Table A.10, Table A.11, and Table A.12. Finally, results are robust to various single imputation operations in accounting for possible biases from test detection, as shown in Table A.13.

## 7.2 Extended Results

Again, controlling for other known sources of lead, child demographic characteristics and neighborhood conditions, the evidence for a statistical link between child BLLs and aviation gasoline exposure from extended analyses (in Section 5), include:

1. As evidenced in Section 5.1 the probability that a sampled child's BLL exceeds the CDPH-defined threshold of  $4.5 \mu\text{g}/\text{dL}$  increases significantly with proximity to Reid-Hillview Airport, is higher among children residing East of Reid-Hillview Airport, and increases with the volume of piston-engine aircraft traffic.
2. As evidenced in Section 5.2, the BLLs of sampled children proximate to Reid-Hilview are significantly more dose-responsive to piston-engine aircraft traffic and aviation gasoline sales at Reid-Hillview Airport than quantitatively similar children more distant from the airport.
3. Subsequent to social distancing efforts in Santa Clara County to stem the spread of COVID-19, piston-engine aircraft traffic declined significantly in the months of

February to July at Reid-Hillview Airport. As evidenced in Section 5.3, the BLLs of children sampled in this PEA traffic contraction period declined significantly.

4. As evidenced in Section 5.4, children commuting toward Reid-Hillview to attend school present with substantially higher BLLs than sampled children commuting away from Reid-Hillview for school.
5. As evidenced in Section 5.5, all main and extended results pertaining to Reid-Hillview are statistically upheld with the inclusion of sampled children proximate to other piston-engine aircraft servicing airports in Santa Clara County.

While it is statistically improbable that the ensemble of evidence presented above arises for chance alone, there are important caveats to note. First, the generalization of our analysis to San Martin Airport (E16) independent of observations from Reid-Hillview is limited. In CDPH data, we observe only 68 blood lead samples for children  $\leq 18$  years of age and residing  $< 0.5$  miles of E16 over the 10 year window of analysis. Future analyses of other GA airports in California on the list of EPA-tracked airports (i.e., McClellan-Palomar Airport, San Carlos Airport) can help adjudicate the generalization question.

Second, and following the EPA's (2020) procedure of taking 3-month averages, we find that the measured count of piston-engine aircraft traffic in Federal Aviation Administration data as well as the monthly quantity of aviation gasoline sold to fixed-base operators at Reid-Hillview Airport are puzzlingly modestly positively correlated with measured levels of atmospheric lead at Reid-Hillview Airport (from Feb 2012 to March 2018). While beyond the scope of the current study, more research is needed in the direction of atmospheric sampling and modeling of lead emissions in and around general aviation airports.

More research on the BLLs of sampled children proximate to other general aviation airports in California tracked by the EPA, coupled with research on best atmospheric sampling and modeling of lead emissions around PEA-servicing airports can help provide

scientific support on options for reducing aviation-related lead exposure. On the matter of aviation gasoline exposure risk to families and children proximate to general aviation airports, the National Academies of Sciences, Engineering, and Medicine maintains: “Because lead does not appear to exhibit a minimum concentration in blood below which there are no health effects, there is a compelling reason to reduce or eliminate aviation lead emissions.” The ensemble evidence compiled in this study supports the “compelling” need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children.

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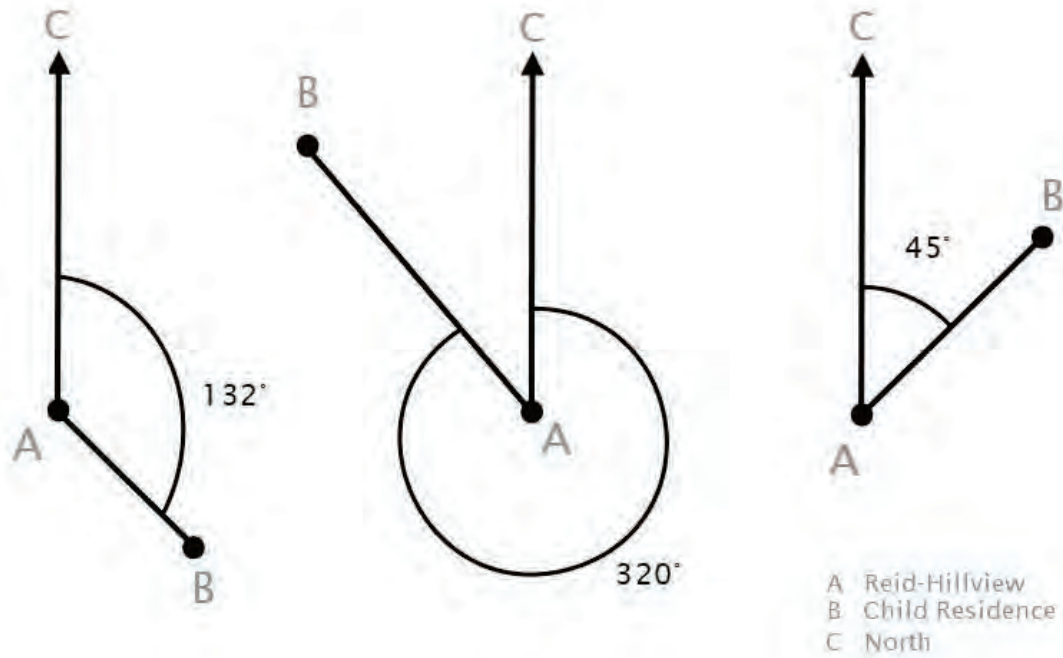
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## Appendix

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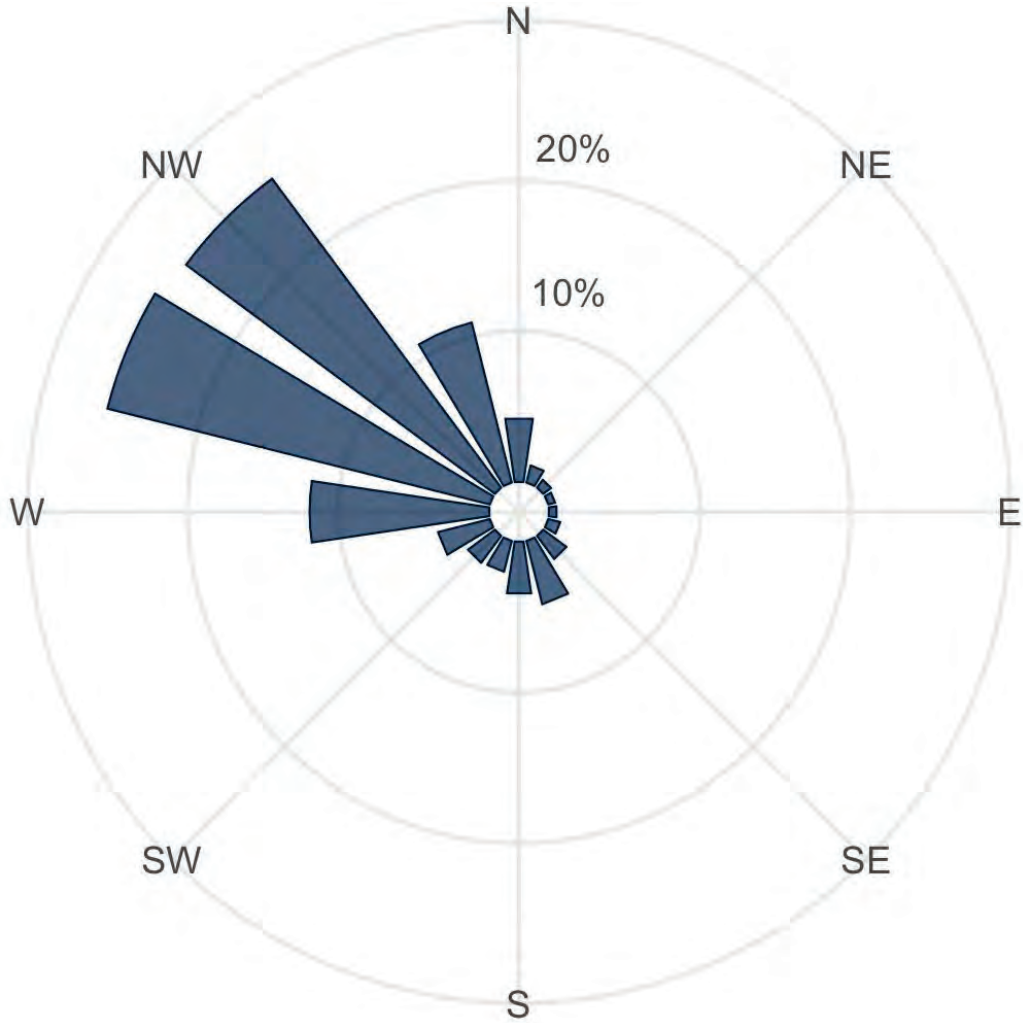
Figure A.1: Examples of Residential Near Angle Calculations at Reid-Hillview Airport



Note: Near angles are calculated relative to Reid-Hillview Airport (A), and the angle created between due North (vector C) and a given address (B).

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Figure A.2: Prevailing Wind Direction at Reid-Hillview Airport



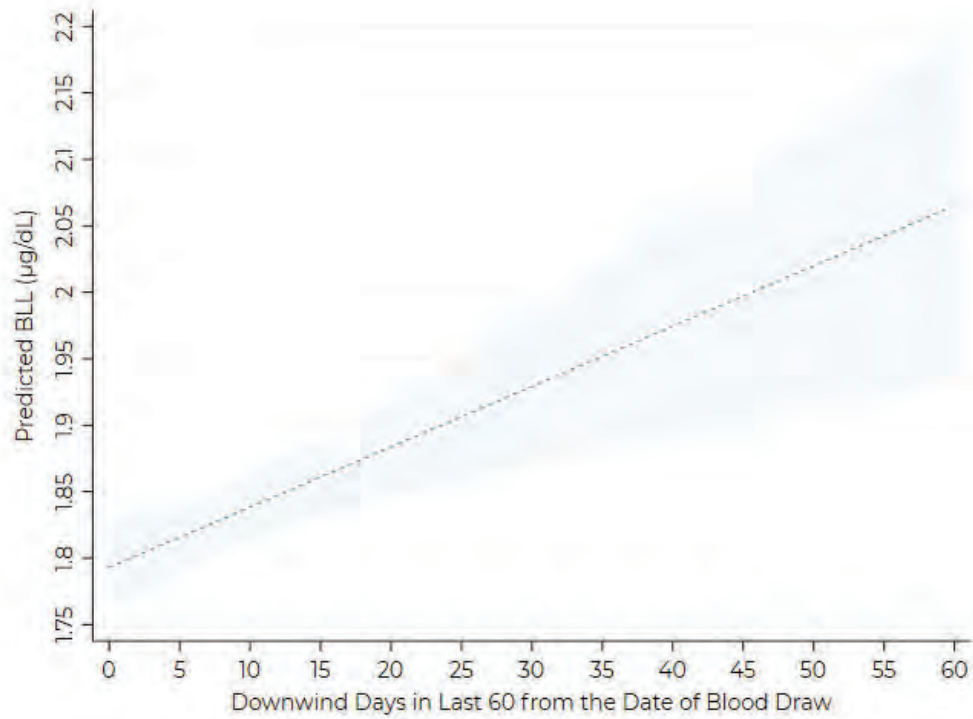
Note: Prevailing wind data are over observation period 1/1/2011 to 12/31/2020 as measured from Reid-Hillview Airport. Wind direction reflects the compass bearing of origination relative to the origin. Data collected from ©Dark Sky API.

Table A.1: Sample Descriptive Statistics

	Mean	Std. Dev.		Mean	Std. Dev.
Response Variables			Demographic Variables		
BLL ( $\mu\text{g}/\text{dL}$ )	1.83	1.689	Age (Years)	2.816	2.29
BLL (< 1.5)	0.426	0.494	Male	0.512	0.5
BLL (1.5 to 3)	0.463	0.499	Female	0.488	0.5
BLL (3 to 4.5)	0.095	0.293	Timing Controls		
BLL (> 4.5)	0.017	0.128	2011	0.1	0.301
Exposure Risk Variables			2012	0.094	0.291
Distance to RHV (Miles)	1.019	0.315	2013	0.088	0.284
Distance (0-0.5 miles)	0.062	0.241	2014	0.083	0.276
Distance (0.5-1 miles)	0.375	0.484	2015	0.119	0.323
Distance (1-1.5 miles)	0.563	0.496	2016	0.125	0.33
PEA Traffic (Percentile)	0.505	0.289	2017	0.12	0.325
Tercile (low)	0.346	0.476	2018	0.106	0.308
Tercile (Medium)	0.328	0.47	2019	0.103	0.305
Tercile (High)	0.325	0.469	2020	0.06	0.238
Aviation Gasoline (1,000 Gallon)	23.935	5.72	2021	0.001	0.038
North	0.346	0.476	Spring	0.255	0.436
East	0.068	0.252	Summer	0.274	0.446
South	0.203	0.402	Fall	0.246	0.431
West	0.384	0.486	Winter	0.225	0.418
Draw Controls			Neighborhood SES		
Non-Capillary Draw	0.737	0.44	Median Household Income	\$69,147.62	\$19,888.28
Capillary Draw	0.263	0.44	Median Home Values	\$456,985.9	\$118,451.1
Sample Order	0.822	1.074	College Educated	13.101	5.981
			Other Exposure Sources		
			Pre-1960 Homes	27.688	21.444
			TRI Facilities (<2 Miles)	2.503	0.73

Notes: Data for all children residing  $\leq 1.5$  miles of RHV with a valid address, date of birth, and date of sample between Jan 1st, 2011 and Dec. 31st, 2020. Total sample size of 17,241 observations;

Figure A.3: Downwind Days in Last 60 and Predicted Child BLLs



Note: Predictions are from model (7) in Table 5, with all other model variables fixed at their sample means.



Table A.2: Residential Distance to Nearest Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Distance (Reference < 0.5 miles)							
0.5 to 1 miles	-0.138*	-0.137**	-0.127*	-0.133**	-0.159**	-0.171***	-0.172***
	(0.073)	(0.064)	(0.065)	(0.065)	(0.062)	(0.062)	(0.062)
1 to 1.5 miles	-0.137*	-0.136**	-0.131**	-0.136**	-0.145**	-0.171***	-0.173***
	(0.072)	(0.067)	(0.066)	(0.066)	(0.063)	(0.063)	(0.063)
Constant	1.950***	1.756***	1.746***	1.673***	2.027***	1.966***	2.393***
	(0.068)	(0.067)	(0.071)	(0.075)	(0.087)	(0.091)	(0.298)
Observations	19,818	19,725	19,725	19,725	19,725	19,725	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Distance is child's place of residence to nearest airport (miles); Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.3: Residential Near Angle to Nearest Airport and Child BLLs

BLL ( $\mu\text{g/dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Near Angle (Reference North)							
East	0.127*** (0.046)	0.124*** (0.048)	0.123*** (0.044)	0.118*** (0.044)	0.225*** (0.045)	0.255*** (0.044)	0.238*** (0.048)
South	-0.008 (0.033)	-0.006 (0.035)	0.008 (0.036)	0.01 (0.036)	0.052 (0.036)	0.039 (0.034)	0.034 (0.035)
West	-0.021 (0.028)	-0.018 (0.027)	-0.013 (0.029)	-0.008 (0.029)	-0.028 (0.028)	-0.032 (0.027)	-0.029 (0.027)
Constant	1.821*** (0.017)	1.943*** (0.074)	1.746*** (0.071)	1.673*** (0.075)	2.027*** (0.087)	1.966*** (0.091)	2.393*** (0.298)
Observations	19,818	19,818	19,725	19,725	19,725	19,725	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g/dL}$ ); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Near angle groups are defined in Section 2.2.2 and assigned using the angle between nearest airport and child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.4: Piston-Engine Aircraft Traffic at Nearest Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PEA Traffic	0.387*** (0.054)	0.387*** (0.054)	0.385*** (0.053)	0.396*** (0.053)	0.287*** (0.057)	0.313*** (0.056)	0.216*** (0.053)
Constant	1.628*** (0.033)	1.756*** (0.067)	1.746*** (0.071)	1.673*** (0.075)	2.027*** (0.087)	1.966*** (0.091)	2.590*** (0.291)
Observations	19,725	19,725	19,725	19,725	19,725	19,725	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; PEA traffic is average daily PEA operations at nearest airport, calculated over 60 days from child's date of draw and converted to percentiles; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.5: PEA Traffic × Residential Distance at Nearest Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)
Distance (Reference < 0.5 miles)						
0.5 to 1.5 miles	-0.130** (0.062)	-0.123** (0.061)	-0.128** (0.061)	-0.144** (0.058)	-0.164*** (0.058)	-0.164*** (0.058)
PEA Traffic	1.038*** (0.192)	1.043*** (0.191)	1.044*** (0.190)	0.956*** (0.184)	0.948*** (0.184)	0.859*** (0.180)
Distance × PEA Traffic	-0.689*** (0.202)	-0.696*** (0.202)	-0.686*** (0.201)	-0.708*** (0.193)	-0.674*** (0.193)	-0.684*** (0.193)
Constant	1.944*** (0.061)	1.932*** (0.067)	1.865*** (0.071)	2.165*** (0.079)	2.119*** (0.082)	2.706*** (0.291)
Observations	19,725	19,725	19,725	19,725	19,725	19,725
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	Yes	Yes	Yes
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Other Exposures	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing < 1.5 miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Distance is child's place of residence to nearest airport (miles); PEA traffic is average daily PEA operations at nearest airport, calculated over 60 days from child's date of draw and converted to percentiles then centered (mean=0) for ease of interpretation; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.6: School and Residential Distance Difference to Nearest Airport and Child BLLs

BLLs ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)
Difference (miles)	-0.156*** (0.060)	-0.170** (0.068)	-0.227 (0.146)			
Difference (Reference Low Tercile)						
Medium Tercile				-0.177** (0.072)	-0.221*** (0.073)	0.087 (0.167)
High Tercile				-0.304*** (0.068)	-0.320*** (0.075)	-0.169 (0.124)
Constant	2.863*** (0.505)	2.733*** (0.593)	5.072*** (0.985)	2.986*** (0.470)	2.827*** (0.565)	5.056*** (0.996)
Observations	4,980	3,804	1,176	4,929	3,762	1,167
Block FE	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes
Demography	Yes	Yes	Yes	Yes	Yes	Yes
Draw Controls	Yes	Yes	Yes	Yes	Yes	Yes
Other Exposures	Yes	Yes	Yes	Yes	Yes	Yes
SES	Yes	Yes	Yes	Yes	Yes	Yes
Timing Controls	Yes	Yes	Yes	Yes	Yes	Yes
School in Session	Yes	Yes	No	Yes	Yes	No

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; Models limited to children  $\leq 18$  years at blood draw, residing  $< 1.5$  miles to Santa Clara County, CA airport, and observed from 1/1/2011 to 12/31/2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Nearest airport is minimum distance between child's residence to each airport (RHV, E16, SJO, NUQ, PAO); Difference is distance from child's residence to nearest airport less the distance of school to child's nearest airport; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: TRI facilities  $\leq 2$  miles from child address, and % of neighborhood housing stock built  $\leq 1960$ ; SES is neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.7: PEA Traffic Contraction Period at Nearest Airport and Child BLLs

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Contraction Period	-0.327*** (0.040)	-0.327*** (0.040)	-0.328*** (0.040)	-0.329*** (0.040)	-0.197*** (0.036)	-0.194*** (0.036)	-0.069 (0.052)
Constant	1.830*** (0.012)	1.959*** (0.068)	1.952*** (0.074)	1.886*** (0.078)	2.176*** (0.085)	2.134*** (0.088)	2.537*** (0.312)
Observations	19,818	19,818	19,818	19,818	19,818	19,818	19,725
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	No	No	No	No	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 18$  years of age at the time of blood draw, residing  $< 1.5$  miles to Santa Clara County, CA airport, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Nearest airport is assigned by the minimum distance between child's place of residence to each airport, among: RHV, E16, SJO, PAO; Contraction period is an indicator equaling 1 if draw date occurs February, 2020 thru July, 2020, zero otherwise; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.8: Estimated Gain in Cohort Lifetime Earnings from IQ Gain from Aviation Gasoline Sales Reduction of 50th to 1st Percentile

Distance	(A) Cohort ≤ 18 yrs	(B) Expected BLL Decrease	(C) IQ Gain per μg/dL	(D) Cohort IQ Points Gained	(E) Lifetime \$ per IQ Point	(F) Cohort Benefit (\$ Millions)
0-0.5 Miles	1,500	0.27 μg/dL	0.56 (0.35, 0.78)	228 (140, 317)	\$22,871	\$5.2 (\$3.2, \$7.2)
0.5-1.5 Miles	13,000	0.06 μg/dL	0.56 (0.35, 0.78)	440 (270, 610)	\$22,871	\$10.1 (\$6.2, \$14.0)

Notes: The cohort of potentially affected children in Column A is estimated from American Community Survey data on age structure for neighborhoods around RHV over the ten-year period of Jan 1st, 2011 to December 31st, 2020. Column D is derived by A × B × C. Column F is calculated by D × E. Estimated range in Column F is from the estimated intervals on BLL to IQ relationship in (C).

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## A.1 Robustness Tests: Restrictions and Clustering

We begin with a recapitulation of Equation 2, then successively restrict observations to highest-confidence geocoded residences, then highly sampled neighborhoods ( $\geq 100$  blood lead samples), and then introducing a new variable that accounts for possible variation in BLL measurement precision across laboratories. We also introduce clustering of standard errors by sample order.

Again, we estimate the responsiveness of child blood lead  $Y_{ijt}$  to indicators of aviation gasoline exposure risk with the following linear model:

$$\begin{aligned}
 Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\
 & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\
 & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_j + \phi_i + \varepsilon_{ijt} \quad (\text{A.3})
 \end{aligned}$$

where, the meaning of all terms carry from Equation 2 with the exception of  $\phi_i$ , which is a fixed effect for one of twenty-three laboratories performing analyses on blood samples from children residing in Santa Clara County. The inclusion of  $\phi_i$  accounts for unobservable factors present in laboratories that may systematically affect measured BLLs in children. Table A.9 summarizes results from four models that successively restrict observations, introduce clustering of errors by sample order, and add our new control variable. Across all tests executed, coefficients with respect to our three main indicators of aviation gasoline risk behave as expected.

Table A.9: Robustness Tests: Restrictions and Clustering

BLL ( $\mu\text{g/dL}$ )	(1)	(2)	(3)	(4)
Distance (Reference < 0.5 miles)				
0.5 to 1 miles	-0.179** (0.074)	-0.183** (0.075)	-0.200** (0.079)	-0.132* (0.077)
1 to 1.5 miles	-0.202*** (0.073)	-0.206*** (0.077)	-0.215*** (0.076)	-0.152** (0.073)
PEA Traffic	0.163** (0.067)	0.167*** (0.062)	0.153** (0.062)	0.243*** (0.076)
Near Angle (Reference North)				
East	0.405*** (0.068)	0.400*** (0.059)	0.393*** (0.065)	0.255*** (0.069)
South	0.00 (0.039)	-0.006 (0.039)	-0.002 (0.040)	0.016 (0.041)
West	-0.052 (0.033)	-0.057* (0.031)	-0.057* (0.031)	0.025 (0.032)
Constant	2.131*** (0.371)	2.114*** (0.349)	2.128*** (0.366)	1.551*** (0.407)
Observations	17,162	16,823	15,807	15,807
Fully Saturated	Yes	Yes	Yes	Yes
Bootstrapped Errors	No	Yes	Yes	No
Clustered Errors	Yes	No	No	Yes
Confident Geocoding	No	Yes	Yes	Yes
Highly Sampled	No	No	Yes	Yes
Lab Effects	No	No	No	Yes

Notes: Standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; Models (1) and (4) standard errors are clustered by sample order; Models (2) and (3) standard errors are bootstrapped; All models limited to children residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020, and  $\leq 18$  years of age unless noted otherwise; Dependent variable is child BLL ( $\mu\text{g/dL}$ ); Fully saturated controls include all covariates; Lab effects include fixed effect indicators for unique lab id;

## **A.2 Robustness Tests: Children Under 6 Years of Age**

Next we recapitulate Equation 2, restricting observations to children  $\leq 6$  years of age. Results are presented in three successive tables, beginning with residential distance, then piston-engine aircraft traffic, and then child residential near angle to Reid-Hillview Airport. Across all tests rendered, results behave similarly to what is reported in the manuscript pertaining to all children  $\leq 18$  years of age.

Table A.10: Distance to Reid-Hillview Airport and Child BLLs, Age 0-6

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Distance (Reference < 0.5 miles)							
0.5 to 1 miles	-0.161**	-0.166**	-0.171**	-0.178**	-0.202**	-0.213***	-0.214***
	-0.082	-0.08	-0.081	-0.081	-0.079	-0.079	-0.078
1 to 1.5 miles	-0.162**	-0.168**	-0.170**	-0.173**	-0.191**	-0.211***	-0.218***
	-0.079	-0.082	-0.081	-0.081	-0.079	-0.078	-0.078
Constant	1.967***	1.770***	1.771***	1.611***	2.000***	1.908***	2.184***
	-0.076	-0.08	-0.085	-0.094	-0.108	-0.103	-0.346
Observations	16,169	16,092	16,092	16,092	16,092	16,092	16,092
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 6$  years of age at the time of blood draw, residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Distance groups are assigned using the distance (miles) between RHV and the child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.11: Piston-Engine Aircraft Traffic to Reid-Hillview Airport and Child BLLs, Age 0-6

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PEA Traffic	0.402*** (0.061)	0.403*** (0.061)	0.403*** (0.061)	0.406*** (0.061)	0.310*** (0.066)	0.317*** (0.063)	0.195*** (0.063)
Constant	1.614*** (0.037)	1.770*** (0.077)	1.771*** (0.081)	1.611*** (0.090)	2.000*** (0.103)	1.908*** (0.094)	2.184*** (0.340)
Observations	16,092	16,092	16,092	16,092	16,092	16,092	16,092
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Near Angle FE	No	No	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 6$  years of age at the time of blood draw, residing  $< 1.5$  miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); PEA traffic is average daily PEA operations at RHV, calculated over 60 days from child's date of draw and converted to percentiles; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

Table A.12: Residential Near Angle to Reid-Hillview Airport and Child BLLs, Age 0-6

BLL ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Near Angle (Reference North)							
East	0.002 (0.030)	0 (0.030)	0.012 (0.031)	0.013 (0.031)	0.148*** (0.033)	0.167*** (0.034)	0.250*** (0.042)
South	-0.039 (0.038)	-0.038 (0.040)	-0.032 (0.040)	-0.03 (0.039)	0.012 (0.041)	-0.01 (0.035)	-0.018 (0.038)
West	0.011 (0.030)	0.017 (0.029)	0.019 (0.031)	0.022 (0.031)	0.005 (0.030)	-0.027 (0.034)	-0.032 (0.033)
Constant	1.819*** (0.017)	1.971*** (0.083)	1.771*** (0.081)	1.611*** (0.090)	2.000*** (0.103)	1.908*** (0.094)	2.184*** (0.340)
Observations	16,169	16,169	16,092	16,092	16,092	16,092	16,092
Block FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance	No	Yes	Yes	Yes	Yes	Yes	Yes
PEA Traffic	No	No	Yes	Yes	Yes	Yes	Yes
Near Angle FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demography	No	No	No	Yes	Yes	Yes	Yes
Draw Controls	No	No	No	No	Yes	Yes	Yes
Other Exposures	No	No	No	No	No	Yes	Yes
SES	No	No	No	No	No	No	Yes
Timing Controls	No	No	No	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children  $\leq 6$  years of age at the time of blood draw, residing  $< 1.5$  miles RHV, and observed from January 1st, 2011 to December 31st, 2020; Dependent variable is child BLL ( $\mu\text{g}/\text{dL}$ ); Near angle groups are defined in Section 2.2.2 and assigned using the angle between RHV and child's place of residence; Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated  $n$  times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; Timing controls include a set of indicators for season and year-quarter of the date of draw;

### A.3 Robustness Tests: Detection Limit

While our statistical models explicitly control for the limit of test detection and the method of blood draw throughout, we nonetheless perform a series of additional tests to address possible concerns that test detection limits drive our reported results. First, we find that the likelihood of a child receiving an under-powered test is statistically independent of child residential distance (Odds Ratio = 0.96, 95% CI: 0.86 to 1.08) and piston-engine aircraft traffic at the point of blood draw (Odds Ratio = 1.01, 95% CI: 0.89 to 1.14). We do find that children residing East of RHV are 1.24X (95% CI: 1.06 to 1.45) more likely to receive an under-powered test, suggesting that absent explicit control for test detection, our near angle coefficients would be overstated. Additionally, we recapitulate Equation 2, introducing a series of standard single imputation operations for test results at or below the limit of quantification, including: 1)  $BLL/2$ ; 2)  $BLL/\sqrt{2}$ ; and an extreme deflation of the observed value by 3)  $BLL/5$ . The results are presented in the table below. With the exception of a deflation in the size of the coefficient pertaining to child residence East of RHV under the extreme suppression scenario of  $BLL/5$ , results behave similarly throughout. Importantly, even under extreme scenario, BLLs are substantively and statistically significantly higher among sampled children East of the airport.

Table A.13: Robustness Tests: Detection Limit

BLL ( $\mu\text{g/dL}$ )	(1)	(2)	(3)	(4)
Distance (Reference < 0.5 miles)				
0.5 to 1 miles	-0.179*** (0.069)	-0.160** (0.067)	-0.168** (0.068)	-0.149** (0.067)
1 to 1.5 miles	-0.202*** (0.073)	-0.177*** (0.071)	-0.187** (0.072)	-0.161** (0.071)
PEA Traffic	0.163*** (0.058)	0.167*** (0.055)	0.166*** (0.056)	0.170*** (0.054)
Near Angle (Reference North)				
East	0.405*** (0.062)	0.268*** (0.058)	0.325*** (0.060)	0.186*** (0.057)
Constant	2.131*** (0.307)	2.254*** (0.293)	2.203*** (0.297)	2.328*** (0.291)
Observations	17,162	17,162	17,162	17,162
All Controls	Yes	Yes	Yes	Yes
BLL/2	No	Yes	No	No
BLL/ $\sqrt{2}$	No	No	Yes	No
BLL/5	No	No	No	Yes

Notes: Bootstrapped standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; All models limited to children residing < 1.5 miles RHV, and observed from January 1st, 2011 to December 31st, 2020, and  $\leq 18$  years of age unless noted otherwise; Distance groups are assigned using the distance (miles) between RHV and the child's residence; Near angle groups are defined in Section 2.2.2 using the angle between RHV and child's residence; PEA traffic is average daily PEA operations at RHV, calculated over 60 days from child's date of draw; Fully saturated controls include: child's age (years) and sex (1=female, 0=otherwise), draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), sample order (0=singleton observation, 1,...,n=repeated n times), TRI facilities  $\leq 2$  miles from residential address, housing stock built  $\leq 1960$ , neighborhood socioeconomic status index, a set of season and year-quarter indicators corresponding to date of draw;



# EXHIBIT C.2

# Leaded aviation gasoline exposure risk and child blood lead levels

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## Abstract

Lead-formulated aviation gasoline (avgas) is the primary source of lead emissions in the United States today, consumed by over 170,000 piston-engine aircraft (PEA). The U.S. Environmental Protection Agency (EPA) estimates that four million people reside within 500m of a PEA-servicing airport. The disposition of avgas around such airports may be an independent source of child lead exposure. We analyze over 14,000 blood lead samples of children ( $\leq 5$  y of age) residing near one such airport—Reid-Hillview Airport (RHV) in Santa Clara County, California. Across an ensemble of tests, we find that the blood lead levels (BLLs) of sampled children increase in proximity to RHV, are higher among children east and predominantly downwind of the airport, and increase with the volume of PEA traffic and quantities of avgas sold at the airport. The BLLs of airport-proximate children are especially responsive to an increase in PEA traffic, increasing by about 0.72  $\mu\text{g}/\text{dL}$  under periods of maximum PEA traffic. We also observe a significant reduction in child BLLs from a series of pandemic-related interventions in Santa Clara County that contracted PEA traffic at the airport. Finally, we find that children's BLLs increase with measured concentrations of atmospheric lead at the airport. In support of the scientific adjudication of the EPA's recently announced endangerment finding, this in-depth case study indicates that the deposition of avgas significantly elevates the BLLs of at-risk children.

**Keywords:** aviation gasoline, child blood lead, piston-engine aircraft

## Significance Statement:

In the United States, hundreds of millions of gallons of tetraethyl lead-formulated gasoline are consumed by piston-engine aircraft (PEA) annually, resulting in an estimated half-million pounds of lead emitted into the environment. About four million persons reside, and about six hundred K-12th grade schools are located, within 500 meters of PEA-servicing airports. In January 2022, the US Environmental Protection Agency launched a formal evaluation of “whether emissions of lead from PEA cause or contribute to air pollution that endangers public health or welfare.” In support of the EPA's draft endangerment finding and request of public comment, an ensemble of evidence is presented indicating that the deposition of leaded aviation gasoline significantly elevates the blood lead levels of at-risk children.

## Introduction

Over the last four decades, the blood lead levels (BLLs) of children in the United States declined significantly, coincident with a series of policies that removed lead from paint, plumbing, food cans, and automotive gasoline. Most effective among these interventions was the phase-out of tetraethyl lead (TEL) from automotive gasoline under provisions of the Clean Air Act of 1970 and amendments in 1990.

While TEL is no longer used as an additive in automotive gasoline, it remains a constituent in aviation gasoline (avgas) used by an estimated 170,000 piston-engine aircraft (PEA) nationwide. TEL is one of the best-known additives for mitigating the risk of engine knocking or detonation, which can lead to sudden engine failure. In the United States, hundreds of millions of gallons of

TEL-formulated gasoline are consumed by PEA annually, resulting in an estimated half-million pounds of lead emitted into the environment. Today, the use of lead-formulated avgas accounts for about half to two thirds of current lead emissions in the United States (1). In a recently published consensus study on options for reducing lead emissions by PEA by the National Academies of Sciences, Engineering, and Medicine, the authors note: “While the elimination of lead pollution has been a U.S. public policy goal for decades, the GA [General Aviation] sector continues to be a major source of lead emissions” (2).

Several studies have linked avgas use to elevated atmospheric lead levels in the vicinity of airports (3–8). The U.S. EPA estimates that four million persons reside, and about six hundred K-12th grade schools are located within 500 meters of PEA-servicing

**Competing Interests:** The authors declare no competing interests.

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**Table 1.** Coefficients of residential distance, near angle, and PEA Traffic vis-à-vis Child BLLs.

BLLs ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3)	(4) <sup>†</sup>
1. Distance RHV (0.5 to 1 miles)	-0.161** (0.070)	-0.231*** (0.082)	-0.234*** (0.067)	-0.055*** (0.018)
2. Distance RHV (1 to 1.5 miles)	-0.173*** (0.065)	-0.233*** (0.080)	-0.235*** (0.066)	-0.058*** (0.018)
3. PEA traffic volume	0.312*** (0.063)	0.319*** (0.063)	0.168** (0.066)	0.073*** (0.015)
4. East residence	0.148*** (0.034)	0.169*** (0.037)	0.237*** (0.036)	0.144*** (0.009)
5. Constant	2.031*** (0.085)	1.893*** (0.107)	2.035*** (0.336)	0.746*** (0.099)
Observations	14,804	14,804	14,804	14,804
R <sup>2</sup>	0.064	0.076	0.176	0.290
Distance	Yes	Yes	Yes	Yes
PEA traffic	Yes	Yes	Yes	Yes
Near angle FE	Yes	Yes	Yes	Yes
Draw controls	Yes	Yes	Yes	Yes
Block FE	No	Yes	Yes	Yes
Demography	No	Yes	Yes	Yes
Other exposures	No	Yes	Yes	Yes
SES	No	No	Yes	Yes
Timing controls	No	No	Yes	Yes
Person RE	No	No	Yes	Yes

Notes: Bootstrapped SE in parentheses \*\*\*  $P < 0.01$ , \*\*  $P < 0.05$ , and \*  $P < 0.1$ ; in columns (1) to (3) BLL is in  $\mu\text{g}/\text{dL}$ ; †, in column (4), we take the natural log of BLL. All models limited to children  $\leq 5$  y of age, residing  $< 1.5$  miles RHV (or 2.4 km); Distance is defined between RHV and the child's residence; Residential near angle is defined in equation [1], with east residence being downwind children; PEA traffic is average daily PEA operations at RHV, calculated over 60 days from child's date of draw and normalized. Demography includes child's age (years) and sex (1=female, 0=otherwise); Draw controls includes: draw method (1=capillary, 0=otherwise), limit of quantification (1=BLL  $\leq$  limit of quantification, 0=otherwise), and repeated sample (0=singleton observation, 1,...,n=repeated n times); Other exposures includes: count of TRI facilities  $\leq 2$  miles from residential address, and percent of neighborhood housing stock built  $\leq 1960$ ; SES is the neighborhood socioeconomic status index; timing controls include indicators for season and year-quarter of the date of draw; inclusion of variables is denoted yes, where applicable.

airports (9). Two studies have statistically linked avgas use to BLLs of children residing in the vicinity of general aviation airports. In their groundbreaking study, Miranda et al (10) reported a striking relationship between child BLLs and airport proximity, noting that “[t]he estimated effect on BLLs exhibited a monotonically decreasing dose-response pattern” with children at 500 and 1,000 meters of an airport at greatest risk of elevated BLLs. In a study involving over 1 million children and 448 airports in Michigan, Zahran et al (11) found that child BLLs: (1) increased dose-responsively in proximity to airports; (2) declined measurably among children sampled in the months after the tragic events of 9-11, resulting from an exogenous reduction in PEA traffic; (3) increased dose-responsively in the flow of PEA traffic across a subset of airports; and (4) increased in the percent of prevailing wind days drifting in the direction of a child's residence.

On the basis of such studies and decades of research on the harm to human health caused by lead, various public interest organizations have petitioned the EPA to make an endangerment finding under Section 231 of the Clean Air Act for aviation gasoline (avgas) emissions. While the EPA recognizes that there is no known safe level of lead exposure, it has cautioned that additional scientific research is needed “to differentiate aircraft lead emissions from other sources of ambient air lead” (12) that may cause elevated BLLs in nearby children.

Subsequent to a report prepared for the County of Santa Clara showing that exposure to leaded avgas contributes to child BLLs

(13), and a new petition by various nonprofit and governmental organizations, in January 2022 the EPA launched a formal evaluation of “whether emissions of lead from PEA cause or contribute to air pollution that endangers public health or welfare.” In recent weeks, the EPA published its draft endangerment finding and is currently accepting public comment. In this paper, we present relevant information for the scientific adjudication of the EPA's draft endangerment finding, supporting the conclusion that emissions from PEA independently contribute to child BLLs, potentially endangering the health and welfare of populations residing near over 21,000 general aviation airports that service avgas-consuming aircraft.

Our paper analyzes the BLLs of children ( $\leq 5$  y of age) over a 10-y observation period (from 2011 January 31 to 2020 December 31) who reside near one PEA-servicing airport—Reid-Hillview Airport (RHV) in Santa Clara County. Of the more than 21,000 airports appearing in the 2017 EPA National Emissions Inventory, RHV ranks 36th in terms of the quantity of emissions released. From 2011 January to 2018 December, 2.3 million gallons of avgas were sold at RHV. At about 2 grams of lead per gallon, and based on an EPA estimate that 95% of lead consumed is emitted in exhaust, over this 8-y period about five metric tons of lead was emitted at RHV.

The purpose of our analysis is to test key indicators of exposure risk, including child residential distance, residential near angle (or downwind residence), and volume of traffic from the date of the blood draw. We follow with extended analyses involving the statistical interaction of residential distance and air traffic, a natural experiment exploiting an observed contraction in PEA traffic at RHV following pandemic-related social distancing measures enacted countywide, and an analysis linking child BLLs to atmospheric lead measurements at the airport. Across all tests, we find consistent evidence that exposure to avgas increases child BLLs, adding a data-rich and in-depth case study to the nascent scientific literature on the epidemiological hazard of leaded avgas.

## Results

### Main analysis

We begin with analysis of our three main indicators of avgas exposure risk: (1) child residential distance, (2) child residential near angle, and (3) child exposure to PEA traffic. Table 1 reports regression coefficients on our main indicators of exposure risk. Our response variable of child BLL is measured in  $\mu\text{g}/\text{dL}$  units. Following others (10,11), residential distance is also divided into intervals:  $< 0.5$  miles (or  $< 0.8$  km), 0.5 to 1 mile (or 0.8 to 1.6 km), and 1 to 1.5 miles (or 1.6 to 2.4 km) from RHV (Our inner orbit of exposure risk at  $< 0.5$  miles conforms to previous research. Miranda et al (10) find that children at 500m to 1km from a general aviation airport in North Carolina are at highest at-risk of presenting with elevated BLLs. Zahran et al (11) find that sampled children within 1km of 448 airports in Michigan are at greatest risk. The EPA (14) maintains that children within 500m of PEA-servicing airports are at highest risk of exposure to aviation-related atmospheric lead. Our inner distance of  $< 0.5$  miles sits between the consensus range of exposure risk at 500m to 1km).

With respect to distance, reported coefficients in Table 1 have the interpretation of an estimated difference in mean BLLs (in  $\mu\text{g}/\text{dL}$  units) for children at 0.5 to 1 mile (or 0.8 km to 1.6 km) and 1 to 1.5 miles (or 1.6 km to 2.4 km), respectively, vis-a-vis children most proximate to northwest tip of RHV (point coordinates 37.336225, -121.8230194) (Supplementary Material Table S2 reports results involving the estimation of a series of

linear models with residential distance measured continuously and applying various transformations to both distance and child BLLs. Other things held equal, we find that no matter the measurement or transformation—distance measured linearly, log or square root transformed and child BLLs measured linearly or log transformed—child BLLs decrease statistically significantly with residential distance from RHV.

For residential near angle, the east parameter estimate has the interpretation of an estimated difference in mean BLLs (in  $\mu\text{g}/\text{dL}$  units) for sampled children residing east (and predominantly downwind), relative to sampled children north of RHV. PEA traffic exposure is measured as a rolling average of PEA operations over 60 days from the date of a child's blood draw. This quantity is converted to a percentile ranging from 0 to 1. With respect to PEA traffic, coefficients have the interpretation of the estimated change in child BLLs (in  $\mu\text{g}/\text{dL}$  units) associated with an increase in PEA traffic exposure from the observed minimum to the maximum.

We report coefficients from four different models that graduate in their saturation of control variables. The coefficients pertaining to our indicators of risk behave relatively consistently across models of varying saturation. Model (4) reports coefficients involving the natural log transformation of child BLL. Focusing our interpretation on models (3) including all possible control variables, we find that sampled children at 0.5 to 1 mile and 1 mile to 1.5 miles present with BLLs that are 0.234 and 0.235  $\mu\text{g}/\text{dL}$  lower on average than sampled children nearest to RHV (< 0.5 miles). With respect to residential near angle, in model (3) we find that sampled children residing east (and predominately downwind) have BLLs that are 0.237  $\mu\text{g}/\text{dL}$  higher than sampled children north of RHV. As shown in model (3), child BLLs are responsive to the measured volume of PEA traffic, increasing an estimated 0.168  $\mu\text{g}/\text{dL}$  with an increase in PEA traffic exposure from the observed minimum to the maximum of traffic.

To contextualize the meaning of estimated differences in BLLs by distance, near angle, and traffic exposure, we compare our results to the estimated increase in BLLs of children in Flint during the much publicized Flint Water Crisis (FWC). At the height of the FWC, child BLLs surged by an estimated 0.35 to 0.45  $\mu\text{g}/\text{dL}$  over baseline levels (15) (With over 21,000 time-stamped blood lead samples from children in Genesee County drawn from 2013 January 01 to 2016 July 19, (15) pursued a series of quasi-experimental tests to identify the causal effects of water-lead exposure, finding that the switch in water source in Flint caused child BLLs to increase by about 0.35 to 0.45  $\mu\text{g}/\text{dL}$  from a precrisis baseline of about 2.3  $\mu\text{g}/\text{dL}$ ). As shown in Table 1, children within 0.5 miles of RHV, children east of RHV, and children exposed to maximum traffic have BLLs that are about 0.2  $\mu\text{g}/\text{dL}$  higher than statistically similar children more distant from RHV, residing north of RHV, and exposed to minimum traffic, respectively. These estimated differences are equivalent to about 50% of the estimated increase in BLLs of sampled children at the height of the FWC over baseline levels in Flint.

Next, we analyze threshold effects. Table 2 reports odds ratios for our main indicators of avgas exposure risk across three models with varying saturation of control variables. Given the ordered categorical measurement of our response variable, the reported odds ratios have the interpretation of the expected change in the odds of a child's blood lead sample exceeding 4.5  $\mu\text{g}/\text{dL}$  relative to the combined odds of appearing in lower BLL categories. Focusing on saturated model (3), as compared to children <0.5 miles of RHV, sampled children residing 0.5 to 1 mile from RHV have

**Table 2.** Proportional odds of residential distance, near angle, and PEA Ttraffic vis-à-vis categorical child BLLs.

	(1)	(2)	(3)
1. Distance RHV (0.5 to 1 miles)	0.847** (0.060)	0.828** (0.070)	0.827** (0.072)
2. Distance RHV (1 to 1.5 miles)	0.819*** (0.055)	0.804*** (0.066)	0.786*** (0.068)
3. PEA traffic volume	1.989*** (0.111)	2.045*** (0.118)	1.311*** (0.099)
4. East residence	1.749*** (0.119)	1.828*** (0.147)	2.182*** (0.218)
Observations	14,804	14,804	14,804
Distance	Yes	Yes	Yes
PEA traffic	Yes	Yes	Yes
Near angle FE	Yes	Yes	Yes
Draw controls	Yes	Yes	Yes
Block FE	No	Yes	Yes
Demography	No	Yes	Yes
Other exposures	No	Yes	Yes
SES	No	No	Yes
Timing controls	No	No	Yes
Person RE	No	No	Yes

See Table 1 Notes.

0.827 $\times$  lower odds of superseding 4.5  $\mu\text{g}/\text{dL}$  relative to the combined odds of lower BLL categories. For children at 1 to 1.5 miles, the probability of a blood lead sample exceeding 4.5  $\mu\text{g}/\text{dL}$  is 21.4% lower than statistically similar children at <0.5 miles. With respect to residential near angle, children residing east of RHV are 2.18 $\times$  more likely to present with BLLs  $\geq 4.5$   $\mu\text{g}/\text{dL}$  than children residing north of RHV, all else held equal. On the question of PEA traffic exposure, we find that an increase from minimum to maximum exposure increases the odds of eclipsing 4.5  $\mu\text{g}/\text{dL}$  relative to the combined odds of presenting with a lower BLL category by a multiplicative factor of 1.31.

## Extended analysis

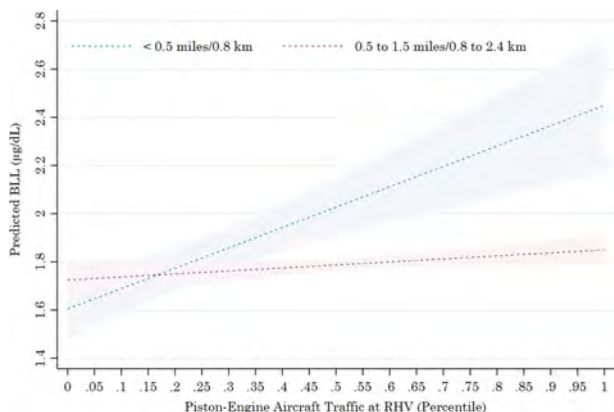
While results reported in Table 1 and Table 2 on child residential distance, residential near angle, and exposure to PEA traffic support the hypothesis that child BLLs are statistically associated with the risk of exposure to avgas, next we report results from additional analyses involving the statistical interaction of residential distance and PEA traffic, a natural experiment involving an observed contraction in PEA aircraft at RHV following social distancing measures enacted countywide, and the substitution of PEA traffic with measured atmospheric concentrations of lead at the airport.

First, we consider a statistical interaction between PEA traffic exposure and residential distance. Insofar as avgas gasoline exposure is a source of risk, we expect that the BLLs of sampled children proximate to RHV will be more responsive to the flow of PEA traffic than children more distant from the airport. As before, Table 3 presents coefficients for different models that increase successively in the saturation of control variables. Across models (1) through (4), estimated coefficients behave as theoretically expected and are distinguishable from chance. Model (4) reports coefficients involving the natural log transformation of child BLL. Concentrating interpretation on model (3), the main effect of residential distance indicates that sampled children at 0.5 to 1.5 miles (or 0.8 to 1.6 km) from RHV present with BLLs that are 0.242  $\mu\text{g}/\text{dL}$  lower than children nearest to the airport. Because PEA traffic is

**Table 3.** Coefficients of PEA traffic × residential distance at RHV vis-à-vis child BLLs.

BLLs (μg/dL)	(1)	(2)	(3)	(4) <sup>†</sup>
1. Distance RHV (0.5 to 1 miles)	-0.175*** (0.066)	-0.241*** (0.079)	-0.242*** (0.064)	-0.059*** (0.018)
2. PEA traffic volume	1.080*** (0.219)	1.034*** (0.211)	0.845*** (0.182)	0.235*** (0.051)
3. Distance RHV × PEA traffic	-0.817*** (0.227)	-0.760*** (0.220)	-0.720*** (0.195)	-0.173*** (0.051)
4. Constant	2.196*** (0.083)	2.063*** (0.109)	2.139*** (0.325)	0.789*** (0.096)
Observations	14,804	14,804	14,804	14,804
R <sup>2</sup>	0.065	0.077	0.177	0.291
Distance	Yes	Yes	Yes	Yes
PEA traffic	Yes	Yes	Yes	Yes
Near angle FE	Yes	Yes	Yes	Yes
Draw controls	Yes	Yes	Yes	Yes
Block FE	No	Yes	Yes	Yes
Demography	No	Yes	Yes	Yes
Other exposures	No	Yes	Yes	Yes
SES	No	No	Yes	Yes
Timing controls	No	No	Yes	Yes
Person RE	No	No	Yes	Yes

See Table 1 Notes.



**Fig. 1.** Predicted child BLLs by residential distance and PEA traffic.

centered at the mean, the coefficient on PEA traffic exposure indicates that a doubling of PEA traffic from the mean is associated with a 0.845 μg/dL increase in child BLLs, all else held equal. The estimated coefficient of interaction is negative ( $\hat{\delta} = -0.720$ ), implying that an increase in PEA traffic exposure affects the BLLs of sampled children more distant from RHV less than children proximate to RHV.

Figure 1 visualizes the effects reported in Table 3, showing predicted BLLs of sampled children at two distances—within 0.5 miles (0.8 km) and 0.5 to 1.5 miles from RHV—over the range of observed PEA traffic exposure. Predictions are from model (3) in Table 3, with all other model covariates set to their means. Figure 1 shows that, all else held equal, a movement from the minimum to the maximum PEA traffic exposure increases the BLLs of sampled children proximate to RHV by 0.92 μg/dL (1.57 to 2.49 μg/dL). By comparison, children more distant from RHV (0.5 to 1.5 miles) experience a more modest increase in BLLs of about 0.16 μg/dL (1.71 to 1.87 μg/dL) for an increase in PEA traffic from the minimum to the maximum.

**Table 4.** Coefficients of PEA traffic contraction period at Reid-Hillview vis-à-vis Child BLLs.

BLLs (μg/dL)	(1)	(2)	(3)	(4) <sup>†</sup>
1. Contraction period	-0.236*** (0.032)	-0.230*** (0.034)	-0.102* (0.061)	-0.037** (0.071)
2. Constant	2.187*** (0.084)	2.082*** (0.107)	1.964*** (0.362)	0.721*** (0.100)
Observations	14,804	14,804	14,804	14,804
R <sup>2</sup>	0.062	0.074	0.176	0.290
Distance	Yes	Yes	Yes	Yes
PEA traffic	No	No	Yes	Yes
Near angle FE	Yes	Yes	Yes	Yes
Demography	Yes	Yes	Yes	Yes
Draw controls	Yes	Yes	Yes	Yes
Block FE	Yes	Yes	Yes	Yes
Other exposures	No	Yes	Yes	Yes
SES	No	No	Yes	Yes
Timing controls	No	No	Yes	Yes
Person RE	No	No	Yes	Yes

See Table 1 Notes.

The interaction effect of piston engine aircraft traffic exposure and residential distance persists when we restrict the sample to toddlers (age 12 to 24 months), that are especially vulnerable to place-based exposures (16). Recapitulating the results of model (3) in Table 3 and limiting to sampled children age 12 to 24 months, we observe an amplification of the distance × traffic effect. The BLLs of sampled toddlers living near RHV increase by 1.60 μg/dL (1.79 to 3.39 μg/dL) with a change from minimum to maximum exposure to PEA traffic (see Supplementary Material Figure S1). Sensitivity tests in which PEA traffic is substituted for monthly quantities of avgas sold at RHV, behave similarly. In going from 5,000 to 35,000 gallons of avgas sold, the BLLs of children who live near the airport increase by an estimated 0.54 μg/dL (see Supplementary Material Figure S2).

Next, we present results of a robustness test that leverages reductions in aircraft traffic following the outbreak of COVID-19. As the pandemic gripped the country, state and local governments enacted various restrictions on the behavior of households and firms to limit the spread of the disease. Corresponding with these efforts, PEA traffic declined measurably at RHV over the months of February to July of 2020. Compared to three baseline control periods—2011 to 2019, 2015 to 2019, and 2018 to 2019—PEA traffic declined by 34% to 44%. PEA traffic at RHV returned to pre-pandemic levels in August to December of 2020. The pandemic-caused dynamics in PEA operations at RHV present us with a natural experiment. If avgas exposure is a source of risk, then we should observe a reduction in the BLLs of children sampled in this PEA traffic contraction period, other things held equal. Table 4 presents estimated coefficients pertaining to the PEA traffic contraction period. As expected, the BLLs of sampled children during the PEA traffic contraction are significantly lower vis-à-vis children sampled before and after the contraction. Across models (1) and (2), we find that BLLs decreased by about 0.23 μg/dL, depending on the presence of control variables. The coefficient attenuates intuitively with the inclusion of measured PEA traffic exposure in model (3) and in model (4) where child BLLs are log transformed.

Last, we evaluate the relationship between child BLLs and measured atmospheric concentrations of lead at the airport with data from the Bay Area Air Quality Management District (BAAQMD). The BAAQMD data covered the period of 2012 February to 2018 March, with an atmospheric reading taken (on average) every

**Table 5.** Coefficients of atmospheric lead concentrations vis-à-vis child BLLs.

BLLs ( $\mu\text{g}/\text{dL}$ )	(1)	(2)	(3) <sup>†</sup>	(4)
1. Atmospheric lead ( $\mu\text{g}/\text{m}^3$ )	4.312*** (1.289)	4.054*** (1.300)	1.625*** (0.348)	2.102 (1.372)
2. Constant	1.470*** (0.403)	1.238** (0.470)	0.086 (0.164)	-0.676 (0.630)
Observations	9,542	9,542	9,542	9,542
R <sup>2</sup>	0.262	0.266	0.266	0.268
Distance	No	Yes	Yes	Yes
Near angle FE	No	Yes	Yes	Yes
PEA traffic	No	No	No	Yes
Draw controls	Yes	Yes	Yes	Yes
Block FE	Yes	Yes	Yes	Yes
Demography	Yes	Yes	Yes	Yes
Other exposures	Yes	Yes	Yes	Yes
SES	Yes	Yes	Yes	Yes
Timing controls	Yes	Yes	Yes	Yes
Person RE	Yes	Yes	Yes	Yes

Dependent variable is BLL in  $\mu\text{g}/\text{dL}$ ; See Table 1 Notes.

6 days. The monitor was located in the aircraft run-up zone (point coordinates, 37.329841, -121.815438). Given the time-abbreviated nature of the air quality data, only 9,542 of the 14,804 blood lead samples used in our analysis could be assigned an atmospheric lead concentration coincident with the timing of blood draw. Results are reported in Table 5. Focusing attention on Model (2), an increase in atmospheric lead of 1 microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ) increases child BLLs by 4.05  $\mu\text{g}/\text{dL}$  (As noted in the methods section, this observed effect corresponds to a measurement of atmospheric lead involving a twomonth moving average (in micrograms per cubic meter) from the date of child blood draw. Restricting to 30 days before blood draw reduces the estimated coefficient to 2.45  $\mu\text{g}/\text{dL}$  (95% CI:0.93, 3.96)). More substantively, an increase from the observed minimum to the observed maximum (of 0.04 to 0.12  $\mu\text{g}/\text{m}^3$ ) is associated with an increase of about 0.21  $\mu\text{g}/\text{dL}$ , an effect size comparable to what we observe with respect to measured PEA traffic. Intuitively, in model (4), the observed atmospheric concentration effect dissipates with the inclusion of measured traffic. Following Richmond-Bryant et al (17), we also render a version Eq. (8) that takes the natural log of child BLL and atmospheric lead. Our estimated elasticity of child BLL vis-a-vis atmospheric lead of 0.123 (95% CI:0.075, 0.170) matches Richmond-Bryant et al (17) near exactly (see Supplementary Material Figure S3).

## Discussion

In this study, we assessed whether the BLLs of sampled children around RHV are associated with indicators of aviation-related lead exposure, net of other lead exposure pathways.

### Main analysis

Controlling for other known sources of lead exposure both explicitly and indirectly (As described in the methods section on control data, statistical models adjust for child proximity to lead-emitting toxic release inventory facilities, legacy use of lead-based paint by measurement of the age of housing stock in the census tract of residence, and include a neighborhood fixed effect to account for unobservables like soil lead accumulation that may influence BLLs that are common to sampled children within a given neighborhood but varying across neighborhoods), demographic

characteristics, and neighborhood conditions, the evidence from main analyses of a statistical link between avgas exposure risk and child BLLs includes:

- (1) The BLLs of the sampled children increase significantly with proximity to RHV. Children residing within 0.5 miles (0.8 km) of RHV present with significantly higher BLLs than children more distant of RHV. As shown Supplementary Material Table S2, this relationship between child BLLs and distance to RHV Airport is robust to various linear and nonlinear transformations of both input and response variables.
- (2) BLLs are significantly and substantively higher among sampled children residing East (and predominantly downwind) of RHV.
- (3) BLLs of sampled children increase significantly with the volume of measured PEA traffic at RHV from the date of blood draw.
- (4) As evidenced in Table 2 the probability that a sampled child's BLL exceeds the CDPH-defined threshold of 4.5  $\mu\text{g}/\text{dL}$ , increases significantly with proximity to RHV, is higher among children residing east of RHV, and increases with the volume of PEA traffic.

Estimated relationships between BLLs and our main indicators of avgas exposure risk are quantitatively similar to results of other studies (10,11).

### Extended analysis

Again, controlling for other known sources of lead, child demographic characteristics, and neighborhood conditions, the evidence for a statistical link between child BLLs and avgas exposure from extended analyses, include:

- (1) As evidenced in Table 3, the BLLs of sampled children proximate to RHV are significantly more responsive to PEA traffic and avgas sales at RHV (see Supplementary Material Figure S1) than quantitatively similar children who live more distant from the airport. Substantively, an increase from minimum to maximum PEA traffic increases the BLLs of proximate children by over 0.70  $\mu\text{g}/\text{dL}$ .
- (2) The interaction effect of child residential distance and volume of PEA traffic amplifies for toddlers 12 to 24 months, a particularly sensitive subpopulation to place-based exposure risk.
- (3) Following efforts to stem the spread of COVID-19, PEA traffic declined significantly in the months of February to July at RHV. As evidenced in Table 4, the BLLs of children sampled in this PEA traffic contraction period declined significantly.
- (4) As shown in Table 5, statistically significant results persist with the substitution of PEA for measured atmospheric concentration of lead at the airport. Our estimated elasticity of child BLL vis-a-vis atmospheric lead corroborates Richmond-Bryant et al (17) finding that child BLLs increase with exposure to airborne lead concentrations (TSP) below 0.15  $\mu\text{g}/\text{m}^3$ .

While it is statistically improbable that the ensemble of evidence presented above arises by chance alone, we briefly consider a possible objection arising from child residential proximity to the San Jose Speedway (SJS). The SJS operated for many decades and was located southwest of RHV (see Supplementary Material Figure 4) (We wish to thank Michael McDonald for alerting us to the history of the SJS and for forwarding this hypothesis). Importantly, the cars racing the oval at SJS were fueled with

lead-formulated gasoline. In a clever natural experiment exploiting the switch from leaded to unleaded gasoline in NASCAR and ARCA racing series in 2007, Hollingsworth and Rudik (2019) (18) found that “(i) ambient airborne lead concentrations increase immediately after a NASCAR race, (ii) counties with leaded NASCAR races have higher rates of child lead poisoning.” Additionally, Bui et al (2022) (19) found that maternal exposure to airborne lead emissions from NASCAR races produced significant adverse pregnancy outcomes. Perhaps, these acute NASCAR effects have a lasting legacy, with the lead emitted from racing events depositing in the soils of neighborhoods of where children now reside. To test this possibility, we calculated the Haversine distance from a sampled child’s residence to the historic location of the SJS (point coordinates 37.3293856, -121.8202305), see Supplementary Material Figure S4 for aerial photo. As we do for distance to RHV, we test the effect of distance to the SJS in both continuous and categorical terms of <0.5 miles, 0.5 to 1 mile, 1 to 1.5 miles, and >1.5 miles (see Supplementary Material Table S3).

Supplementary Material Table S3 shows results from this exercise, with distance to the speedway measured continuously and categorically, and with and without indicators of avgas exposure risk emanating from RHV. Across all models, the effect of proximity to the historic SJS on child BLLs is indistinguishable from chance. Because the historic location of the SJS is west of RHV, the null results are compatible with our finding showing that the BLLs of sampled children west (and predominately upwind) of RHV have lower BLLs than children east (and predominately downwind) of RHV.

As noted in the methods section, our point location decision at the northwest end (The northwest corner of RHV is also home to aircraft maintenance activities known to release lead in significant enough quantities to increase the risk of elevated blood lead in workers and indirectly among children in their care. Chen and Eisenberg (2013) (20) report that “The airborne lead concentration during sandblasting of spark plugs approached an occupational exposure limit for a short-term exposure, [with] small parts, tools, and metal shavings on and around workbench areas, desktops, and open shelving units pos[ing] a safety hazard.”) of the airport was motivated by previous research showing that the bulk of emissions released over the landing-takeoff (LTO) cycle occur at take-off and climb out (8). Pointing to a recently published EPA report with model-extrapolated estimates of airborne lead at RHV, readers may note Section C.2.2 and accompanying figures C-3 to C-5 showing that ground-level lead concentrations appear to collect disproportionately at the Southeast corner of RHV during the run-up phase of the LTO cycle. While very important to the study of ground-level emissions, Carr et al (2011), Feinberg and Turner (2013) (21), and the EPA report itself (2020) (14) note that run-up emissions only account for about 11% of all airport lead emissions.

Still, to address possible concerns that our findings result from our point location decision, we perform a series of analyses involving various other point locations at the airport. Each new point location analyzed required separate distance and near angle calculations to a sampled child’s place of residence. Supplementary Material Table S4 summarizes this statistical exercise. Across all models, the coefficients pertaining to child residential distance, near angle, and PEA traffic are robust to the point location judgment.

On the matter of avgas exposure risk to families and children proximate to general aviation airports, the National Academies of Sciences, Engineering, and Medicine maintains: “Because lead does not appear to exhibit a minimum concentration in blood

below which there are no health effects, there is a compelling reason to reduce or eliminate aviation lead emissions.” The ensemble evidence compiled in this study supports the “compelling” need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children.

## Materials and methods

### Child blood lead data

Permission to analyze blood lead was granted by agreement with the Childhood Lead Poisoning Prevention Branch (CLPPB) of the California Department of Public Health (CDPH). Databases were queried for records with: (1) an indication of residence in Santa Clara County, (2) a date of blood draw occurring within the last 10 y, (3) a date of birth for the sampled person, and (4) a reported blood lead value.

CDPH-records with indication of a residential address in Santa Clara County were independently geo-coded. We normalized each residential address by removing special characters and apartment numbers or letters. The resulting query parameter of this process was a lowercase string in the form of “number street, city, state” that was submitted to the Google Geocode API service to derive longitude and latitude point coordinates for each address record.

Responses from the API service included a confidence label indicating the level of accuracy, with the highest level of accuracy being a “rooftop” match. In all, 94.28% of address records were uniquely matched to rooftop point coordinates. Unmatched addresses were excluded from the final data set. Point coordinates corresponding to each rooftop address was then used to calculate distance and near angle variables. Restricting to children  $\leq 5$  y of age at the time of blood draw, residing < 1.5 miles (or 2.4 km) of RHV, observed from 2011 January 1 to 2020 December 31, and with a rooftop address, we arrived at 14,876 blood lead sample observations for this statistical analysis.

The main response or outcome variable of analytic interest is BLL measured in micro-grams per deciliter of blood ( $\mu\text{g}/\text{dL}$  units). Restricting to children  $\leq 5$  y of age at the moment of blood sample, residing <1.5 miles of Reid-Hillview, and observed from 2011 January 1 to 2020 December 31, the unconditional mean BLL of sampled children was 1.80  $\mu\text{g}/\text{dL}$ . About 1.5% of sampled children present with BLLs  $\geq 4.5 \mu\text{g}/\text{dL}$ , the CLPPB-defined threshold for action.

Five control variables from RASSCLE II/HL7 known to be correlated with child BLLs were collected from CDPH data, including: child gender, child age, method of blood draw, sample detection limit, and sample order. Gender is measured as 1 = female; child age is measured in years (ranging from 0 to 18); the method of blood draw = 1 if capillary, and 0 = otherwise; sample detection limit is measured as 1 = if the reported BLL is at or below the limit of quantification, and 0 = otherwise (In Supplementary Material Table S5 we render a series models where the observed BLLs is adjusted by common single imputation methods involving 1)  $\text{BLL}/\sqrt{2}$ ; 2)  $\text{BLL} \times \log 2$ ; and  $\ln(\text{BLL}/\sqrt{2})$ ); and sample order which codes the count of blood samples (0=singleton observation, 1,...,n = repeated n times).

### Avgas exposure risk data

We test three independent indicators of exposure risk to leaded avgas, including child residential distance, child residential near angle to capture whether a sampled child resides downwind of RHV, and the volume of PEA traffic from the moment of child blood draw. Child exposure risk to leaded avgas (and implied dispersion

of the pollutant) is assumed to decrease linearly with distance, increases with downwind residence, and increases linearly with measured volume of PEA traffic.

### Residential distance

Following others (10,11), we calculate the distance from the residential address of a sampled child to RHV. Using distance information on each child as an indicator of exposure risk, we test whether the BLLs of sampled children increase measurably with proximity to RHV.

Over the LTO cycle, studies find that the bulk of aircraft emissions are released during departure phases of run-up, takeoff, and climb-out (22–24). According to (8), total fuel consumed by piston aircraft in departure phases of the LTO cycle is estimated at 82% for twin-engine aircraft and 85% for single-engine aircraft. About 80% of lead emissions are released during departure phases of the LTO cycle (8).

Given that the bulk of lead emissions are released during departure phases of the LTO cycle, we capture child proximity by calculating the Haversine distance (The Haversine of the central angle, which is  $d$  over the  $r$ , is calculated by:  $\left(\frac{d}{r}\right) = \text{haversine}(2 - 1) + \cos(1)\cos(2)\text{haversine}(\lambda_2 - \lambda_1)$ , where  $r$  is the radius of earth (6,371 km),  $d$  is the distance between a child's residence and RHV,  $\phi_1, \phi_2$  is latitude and  $\lambda_1, \lambda_2$  is longitude of the child's residence and Reid-Hillview, respectively. We solve for  $d$  by the inverse sine function, getting:  $d = r\text{hav}^{-1}(h) = 2r\sin^{-1}(\sqrt{h})$  from the child's residence at the date of blood draw to the northwest tip of RHV (point coordinates 37.3362252, -121.8230194). In addition to measuring distance continuously, residential distance is also divided into three even categories: < 0.5 miles (0.8 km), 0.5 to 1 mile (0.8 to 1.6 km), and 1 to 1.5 miles (1.6 to 2.4 km) from RHV.

Over the period of 2011 January 1 to 2020 December 31, we observe a total of 930 records at <0.5 miles, 5,564 records at 0.5 to 1 mile, and 8,382 at 1 to 1.5 miles from RHV. Insofar as avgas exposure is a source of risk, sampled children in the nearest orbit to RHV should present with higher BLLs as compared to sampled children in outer orbits. Sampled children in our inner orbit of <0.5 miles of are statistically similar to children in outer orbits (0.5 to 1.5 miles) with respect gender, residential near angle, age, PEA traffic exposure, sample order, year or timing of blood draw, and proportion of children sampled by capillary method where  $P > 0.05$ . We do observe statistically significant differences with respect to the percentage of neighborhood homes built prior to 1960 (24.1 vs 28.2,  $P < 0.001$ ), the count of lead-emitting toxic release inventory facilities within 2 miles of a child's residence (2.37 vs 2.51,  $P < 0.001$ ), and neighborhood socioeconomic status ( $-0.22$  vs  $-0.27$ ,  $P = 0.007$ ). On variables where statistically significant differences are observed, all function to inflate the BLLs of sampled children in outer orbits. Therefore, whatever differences in estimated BLLs that may obtain between sampled children by residential distance in regression analyses we may regard these differences as possibly attenuated.

### Residential near angle

The fate and transport of lead emissions depend on the direction of prevailing winds that vary in and across airport facilities. Insofar as avgas is an independent source of lead exposure, two children equidistant to the same airport face different risk of elevated blood lead depending on the child's residential near angle to the airport.

A near angle group was assigned to each address by calculating the compass bearing (degrees) between a child's residential

location and RHV. We define near angle groups by the four cardinal directions: North (N), East (E), South (S), and West (W). For a BLL sample from child  $i$  in time  $t$ , with range of possible compass bearings  $b_{it} \in [0, 360)$ , we assign near angle group  $a_{it}$  as:

$$a_{it} = \begin{cases} E, & \text{if } b_{it} \in [45^\circ, 135^\circ), \\ S, & \text{if } b_{it} \in [135^\circ, 225^\circ), \\ W, & \text{if } b_{it} \in [225^\circ, 315^\circ), \\ N, & \text{otherwise.} \end{cases} \quad (1)$$

Because the direction of prevailing winds at RHV emanate from the West and Northwest, and insofar as exposure to avgas is a source of risk, children residing east of the airport ought to present with higher BLLs (see Supplementary Material Figure S5 for distribution of sampled children by near angle grouping).

### PEA traffic and avgas sales

The volume of PEA traffic varies meaningfully between airports and within an airport in time. Therefore, two children residing in the same household but sampled at different moments in a calendar year may present with different BLLs, depending on the coincidence of PEA traffic. To capture this channel of risk, we collected data on PEA departures and arrivals from TMSC.

Daily PEA data were available for RHV. Because the half-life for lead in blood is about 30 days (25), we back-calculated a rolling average of PEA operations over 60 days from the date of a child's blood draw. In Supplementary Material Table S6 we present results with our measure PEA traffic divided into terciles, showing an apparent dose-responsivity of child BLLs vis-a-vis PEA traffic. With the date of blood draw linked to the quantity of PEA traffic, one can test whether child BLLs are dose-responsive with the volume of PEA traffic. Our measurement of PEA traffic exposure assumes that children have continuity of residence for 60 days.

Also, fuel flowage fee (FFE) data were obtained from personnel at the Roads and Airports Department of Santa Clara County. The FFE data track monthly quantities of avgas (100LL) sold to fixed-base operators at RHV from 2011 to 2019. Each child is matched to the 2-month rolling average of quantities of 100LL sold from the date of blood draw. As with PEA traffic, we test whether child BLLs are dose-responsive with avgas sales at RHV.

### Control data

Lead-emitting industrial facilities are more common in the vicinity of airports (11).

Children that are proximate to airports are therefore simultaneously proximate to other point-source emitters of lead. Failing to account for this spatial coincidence can produce biased estimates of avgas exposure risk vis-à-vis BLLs in children. The U.S. EPA's TRI system tracks the industrial management of over 650 listed chemicals that pose harm to humans and the environment. We collected records on all facilities in Santa Clara County with reported on-site releases of lead between 2011 and 2020. Following (11), with the location of each facility and the year of reported release event, we counted the number of lead-emitting TRI facilities  $\leq 2$  miles (or 3.2 km) of a child's residence in the corresponding year of blood draw. All results pertaining to the assessment of statistical relationships of child BLLs and indicators of avgas exposure risk control for the presence of this alternative source of lead exposure.

Legacy use of lead-based paint remains an exposure risk to children. Exposure to lead-based paint is primarily a problem in older homes. By 1960, use of lead-based paint subsided by more than 90% from peak usage in the 1920s. Still, children in the United



States may ingest paint chips or may be exposed to dust from deteriorating or haphazardly removed lead-based paint in homes built in the era before 1960. We collected American Community Survey data on the fraction of homes in a child's neighborhood built before 1960. In the analyses that follow, each sampled child in our data is assigned a lead-based paint exposure risk according to the neighborhood of residence and year of blood draw, as captured by the percentage of homes built before 1960.

Studies show that children of low socioeconomic status are at greater risk of presenting with elevated BLLs (26,27). Socioeconomic status proxies for household resources, knowledge about the dangers of, and protective actions taken against, lead exposure (11). In addition to demographic information present in CDPH data, we measured the percentage of adults with a college degree, median home prices, and median household incomes to characterize the socioeconomic status of a child's residential neighborhood. These data were also collected from the American Community Survey. Supplementary Material Table S1 provides descriptive statistics.

## Empirical methods

To assess whether the BLLs of sampled children are statistically associated with indicators of avgas exposure risk, we deploy a linear least squares estimator with census block fixed effects, accounting for heteroskedasticity and relaxing distributional assumptions with bootstrapped SE.

The outcome of interest is child BLL, measured as a continuous variable in  $\mu\text{g}/\text{dL}$  (and the natural log of child BLL). For sampled child  $i$  in neighborhood block  $j$  at time  $t$ , we estimate the responsiveness of child blood lead  $Y_{ijt}$  to indicators of avgas exposure risk with the following linear model

$$\begin{aligned} Y_{ijt} = & \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\ & + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ & + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_i + \gamma_j + \varepsilon_{ijt}. \end{aligned} \quad (2)$$

Knowing that relationships of interest are possibly nonlinear, we use a flexible specification where distance  $D$  is measured as a series of dichotomous variables, where  $D_{it}^n = 1$  if child  $i$  in time  $t$  resides 0.5 to 1 miles from RHV, 0 = otherwise, and  $D_{it}^f = 1$  if child  $i$  in time  $t$  resides 1 to 1.5 miles from RHV, and 0 otherwise. Children most proximate to RHV (<0.5 miles) constitute the reference distance. The flow of lead emitted from the aircraft traffic  $T_{it}$  is the count of PEA operations (measured in percentile terms) in the last 60 days relative to the draw date  $t$  of child  $i$ . To account for prevailing wind direction we include a series of dummy variables  $W$  for the location of child  $i$  in time  $t$  relative to the airport, with North being the reference direction, and:  $W_{it}^e = 1$  if a child resides East of RHV, 0 = otherwise,  $W_{it}^s = 1$  if a child resides South of RHV, 0 = otherwise, and  $W_{it}^w = 1$  if a child resides West of RHV, 0 = otherwise.

A series of variables are included to control for the timing, method, quantification limit, and order of blood draw, where  $C_{it}$  is whether or not the method of blood draw is capillary,  $L_{it}$  is whether the measured BLL is at or below the limit of test detection,  $Z_{it}$  is the year and quarter of the blood draw, and  $S_i$  is the order of sample for children sampled repeatedly (For a singleton observation (non-repeated child)  $i$ ,  $S_i = 0$ . Otherwise,  $S_i = 1, \dots, n$  for child  $i$  repeated  $n$  times over the observation period, 2011 January 1 to 2020 December 31. The date of birth, child sex, child name, and date of blood draw were used to identify sample order for each child. The majority of children (53.3%) appearing in CDPH data were sampled

only once). Child demographic characteristics include the child's age  $A_{it}$  measured in years, and an indicator for whether the child is female  $G_i$ .

We include a suite of controls to account for confounding sources of lead exposure and neighborhood socioeconomic status corresponding to the residential location of a sampled child and the date of blood draw.  $F_{it}$  is the count of nearby lead-emitting toxic release inventory facilities  $\leq 2$  miles of a child's residence, and  $H_{jt}$  is the percent of homes built  $\leq 1960$  in child's neighborhood of residence, proxying for lead-based paint exposure risk. Because atmospheric concentrations of lead fluctuate seasonally—in part because of the re-suspension of lead-contaminated surface soils by turbulence (28,29)—our statistical models proxy for this phenomenon with a series of dummy variables corresponding to the season of blood draw,  $Q_{it}$ , with winter as our reference season. Also included is  $I_{jt}$ , estimating the socioeconomic status of a neighborhood by an quantitative index that incorporates measures of educational attainment, median household income, and property values (proxying for household wealth).

Importantly,  $\gamma_i$  is the child random effect measured as the difference between the observed BLL and the child-specific average BLL and  $\gamma_j$  is the neighborhood or census block fixed effect. Inclusion of  $\gamma_j$  accounts for nontime varying unobservable factors, which may influence BLLs that are common to sampled children within a given neighborhood but varying across neighborhoods. Fixed effects absorb omitted variables by estimating a distinct mean BLL value (or intercept) for each neighborhood. Finally,  $\varepsilon_{ijt}$  is the random error term associated to the observed  $Y_{ijt}$ .

## Blood lead thresholds

We also reconstitute our response variable in ordered categorical terms, defining mutually exclusive BLL categories ranging from 0 to the exceedance of the CDPH-defined threshold of  $4.5 \mu\text{g}/\text{dL}$  (For comparison, the current blood lead reference level set by the Centers for Disease Control and Prevention (CDC), adopted on 2021 May 14 is  $3 \mu\text{g}/\text{dL}$ ). The purpose here is to investigate threshold effects with respect to our main operations of avgas exposure risk and to relax the assumption of precisely measured BLLs, given uncertain laboratory test precision.

Under the premise that a given blood lead concentration is an imperfectly observed variable, we execute an ordered logistic regression, modeling BLL as a set of ordinal categories. Moving in increments of  $1.5 \mu\text{g}/\text{dL}$ , we convert the continuous measure of blood lead concentration  $Y_{it}$  to a categorical variable  $B_{it}$ , with cut-points defined as

$$B_{it} = \begin{cases} 1, & \text{if } Y_{it} < 1.5, \\ 2, & \text{if } 1.5 \leq Y_{it} < 3, \\ 3, & \text{if } 3 \leq Y_{it} < 4.5, \\ 4, & \text{if } Y_{it} \geq 4.5, \end{cases}$$

where  $Y_{it}$  is in units of  $\mu\text{g}/\text{dL}$  (For sampled children within 1.5 miles of Reid-Hillview, we observe 6,489 records at  $<1.5 \mu\text{g}/\text{dL}$ , 6,806 records at  $1.5$  to  $<3 \mu\text{g}/\text{dL}$ , 1,361 records at  $3$  to  $<4.5 \mu\text{g}/\text{dL}$ , and 220 records at  $\geq 4.5 \mu\text{g}/\text{dL}$ ). Within this framework, one can estimate the proportional odds a given blood lead concentration is in exceedance of a specified blood lead category. For child  $i$  with corresponding BLL observation in time  $t$ ,  $B_{it}$  takes on the ordinal values  $k = 1, \dots, 4$ , then we define the cumulative response probabilities as

$$b_{itk} = \text{Prob}(B_{it} \leq k | \mathbf{X}_{it}), \quad k = 1, \dots, 4, \quad (3)$$

where  $\mathbf{X}_{it}$  is a vector of explanatory values related to child  $i$  in time  $t$ . Using Eq. (3), we can represent a generalized logistic model as

$$\begin{aligned} \text{logit}(b_{itk}) &= \ln\left(\frac{b_{itk}}{1-b_{itk}}\right) \\ &= \theta_k + \mathbf{X}'_{it}\beta, \end{aligned} \quad (4)$$

where  $\theta_1 \leq \theta_2 \dots \leq \theta_k$ . Taking the generalized model in Eq. (4) and the suite of covariates defined in Eq. (2), the fully specified model used to estimate the log-odds of sampled child  $i$  in neighborhood block  $j$  at time  $t$  being in BLL category  $B_{it}$  becomes

$$\begin{aligned} \text{logit}(b_{ijtk}) &= \theta_k + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s \\ &+ \beta_6 W_{it}^w + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ &+ \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_i + \gamma_j, \quad k = 1, \dots, 4, \end{aligned} \quad (5)$$

Our expectation is that the exponentiated log-odds corresponding to  $D_{it}^n$  and  $D_{it}^f$  will be  $<1.0$  reflecting lower risk of exceeding the threshold of  $4.5 \mu\text{g}/\text{dL}$  among children in outer orbits of RHV relative to children nearest to RHV. We also expect that exponentiated log-odds corresponding  $W_{it}^e$  to be  $>1.0$ , reflecting higher odds of maximum categorical blood lead for sampled children East of RHV relative to children North of RHV. Similarly, we expect the exponentiated coefficient on  $T_{it}$  to be  $>1.0$ , indicating that the risk of exceeding the CDPH-defined threshold of  $4.5 \mu\text{g}/\text{dL}$  increases with exposure to PEA traffic.

### PEA traffic exposure $\times$ residential distance

Next, we consider a statistical interaction between PEA traffic exposure and residential distance. Insofar as avgas exposure is a source of risk, we expect that the BLLs of sampled children proximate to RHV will be more responsive to the flow of PEA traffic than children more distant from the airport. Toward this analytic aim, we estimate the following

$$\begin{aligned} Y_{ijt} &= \beta_0 + \beta_1 D_{it}^{nf} + \beta_2 CT_{it} + \beta_3 W_{it}^e + \beta_4 W_{it}^s + \beta_5 W_{it}^w \\ &+ \delta \left( D_{it}^{nf} \times CT_{it} \right) + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} \\ &+ \Gamma_6 L_{it} + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_i + \gamma_j + \varepsilon_{ijt}, \end{aligned} \quad (6)$$

where, the meaning of all terms carry from Eq. (2) with the exception of  $D_{it}^{nf}$  that now assumes a value of 1 if a sampled child resides in the outer orbit of 0.5 to 1.5 miles of RHV and 0 if a sampled child resides within 0.5 miles of RHV. Outer orbits are collapsed given insignificance of difference observed in Table 1. We expect  $\beta_1$  corresponding  $D_{it}^{nf}$  to be negative, reflecting lower BLLs among distant children (0.5 to 1.5 miles) relative to proximate children ( $<0.5$  miles).  $CT_{it}$  is the statistically centered value of PEA traffic exposure that is equal to  $T_{it} - \bar{T}_{it}$  or the observed PEA traffic exposure ( $T_{it}$ ) minus the mean of PEA traffic exposure ( $\bar{T}_{it}$ ). We expect the corresponding parameter  $\beta_2$  to be positive, indicating that BLLs increase with the PEA traffic exposure. Finally, we expect  $\delta$  corresponding to  $D_{it}^{nf} \times CT_{it}$  to be negative, indicating that the BLLs of sampled children proximate to RHV ( $<0.5$  miles) are more responsive to PEA traffic than children distant from RHV (0.5 to 1.5 miles).

### PEA traffic contraction

As the COVID-19 pandemic gripped the country, state and local governments enacted various restrictions on the behavior of

households and firms to limit the spread of the disease. Corresponding with these efforts, PEA traffic declined measurably at RHV over the months of February to July of 2020. As compared to three baseline control periods—2011 to 2019, 2015 to 2019, and 2018 to 2019—PEA traffic declined by 34 to 44%. PEA traffic at RHV returned to pre-pandemic levels in August to December of 2020. The pandemic-caused dynamics in PEA operations at RHV present us with a natural experiment.

If as avgas exposure is a source of risk, then we should observe a reduction in the BLLs of children sampled in this PEA traffic contraction period, other things held equal. To test whether child blood levels behaved differently in the contraction moment, we estimate the following linear model

$$\begin{aligned} Y_{ijt} &= \beta_0 + \beta_1 D_{it}^n + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w \\ &+ \beta_7 COV_t + \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} \\ &+ \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 I_{jt} + \lambda_4 Q_{it} + \gamma_i + \gamma_j + \varepsilon_{ijt}, \end{aligned} \quad (7)$$

where, all terms carry from Eq. (2) with the exception  $COV_t$  that is an indicator variable equal to 1 if a child is sampled in the PEA traffic contraction moment and 0 otherwise. Other things held equal, we expect the coefficient  $\beta_7$ , corresponding to  $COV_t$ , to be negative, indicating that children sampled in the PEA traffic contraction moment present with lower BLLs than children not sampled in this period (A reasonable concern with this analytic exercise is that the kind of children sampled in the PEA contraction moment may be characteristically different than children sampled outside this moment. Comparing means on model variables by children sampled in versus out of the PEA traffic contraction period, we find that sampled children are statistically indistinguishable in terms of residential distance to RHV (1.02 vs 1.03 miles,  $P = 0.515$ ), fraction living east of RHV (0.07 vs 0.08,  $P = 0.178$ ), child age (2.19 vs 2.09,  $P = 0.10$ ), the proportion children that are female (0.49 vs 0.50,  $P = 0.691$ ), and sample order (0.80 vs 0.82,  $P = 0.702$ ). We do observe significant differences on the proportion of samples drawn by capillary method (0.25 vs 0.19,  $P < 0.001$ ), the percentage of housing stock in a child's residential neighborhood at-risk of presenting with lead-based paint (28.05 vs 24.08,  $P < 0.001$ ), and neighborhood socioeconomic status ( $-0.28$  vs  $0.33$ ,  $-P < 0.001$ ). Importantly, across every variable for which we observe differences, all function to increase the BLLs of children sampled outside the contraction period relative to children sampled in the PEA traffic contraction period, likely rendering our test results conservative).

### Atmospheric lead

Finally, we secured data from the Bay Area Air Quality Management District (BAAQMD) measuring atmospheric concentrations of lead at RHV. The BAAQMD data covered the period of 2012 February to 2018 March, with an atmospheric reading taken (on average) every 6 days. We merged these air quality data with our inventory blood lead samples of children  $\leq 5$  y of age and residing within 1.5 miles of RHV in the last 10 y.

Given the time-abbreviated nature of the air quality data, only 9,542 of the 14,876 blood lead samples used in our analysis could be assigned an atmospheric lead concentration coincident with the timing of blood draw. The loss of more than 1/3rd of observations warrants some caution in the use of BAAQMD data.

With this caution in mind, for a sampled child  $i$  in neighborhood block  $j$  at time  $t$ , we estimate the responsiveness of child

blood lead  $Y_{ijt}$  to atmospheric lead concentration with the following linear model

$$Y_{ijt} = \beta_0 + \beta_1 D_{it}^i + \beta_2 D_{it}^f + \beta_3 T_{it} + \beta_4 W_{it}^e + \beta_5 W_{it}^s + \beta_6 W_{it}^w + \beta_7 PbA_{it} \Gamma_1 G_i + \Gamma_2 A_{it} + \Gamma_3 C_{it} + \Gamma_4 S_i + \Gamma_5 Z_{it} + \Gamma_6 L_{it} + \lambda_1 F_{it} + \lambda_2 H_{jt} + \lambda_3 L_{jt} + \lambda_4 Q_{it} + \gamma_i + \gamma_j + \varepsilon_{ijt}, \quad (8)$$

where, the meaning of all terms carry from Eq. (2), with the exception of  $PbA_{it}$  which captures the 2-month moving average of atmospheric lead (measured in micrograms per cubic meter) from the date of child blood draw. Insofar as exposure to atmospheric lead (measured at RHV) is a source of risk, we expect  $\beta_7$  to be positive.

## Acknowledgments

We wish to thank the County of Santa Clara for sponsoring this research. We also wish to thank staff scientists of the Childhood Lead Poisoning Prevention branch of the California Department of Public Health for their expertise and guidance in developing this research. The views and analysis presented here are those of the authors, and do not necessarily reflect the views of the County of Santa Clara or the California Department of Public Health. Finally, we wish to thank the scientific team at Mountain Data Group for their assistance, including Dawson Eliassen, Ryan Levitt, Salvador Lurbe, and Christopher Sloomaker.

## Supplementary Material

Supplementary material is available at [PNAS Nexus](#) online.

## Funding

County of Santa Clara sponsored this research.

## Data Availability

The child blood lead data supporting the analysis of this study are available from the Childhood Lead Poisoning Prevention Branch of the California Department of Public Health, were used under license for the current study, and are not publicly available.

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# Exhibit D

**County of Santa Clara  
Office of the County Executive**



103282

**DATE:** August 17, 2021

**TO:** Board of Supervisors

**FROM:** Sylvia Gallegos, Deputy County Executive

**SUBJECT:** Recommendations Relating to an Airborne Lead Study of Reid-Hillview Airport

**RECOMMENDED ACTION**

Under advisement from December 4, 2018 (Item No. 19), November 17, 2020 (Item Nos. 12-15), and April 20, 2021 (Item No. 9): Consider recommendations relating to an Airborne Lead Study of Reid-Hillview Airport.

Possible action:

- a. Receive report from the Office of the County Executive relating to the Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California Study.
- b. Approve funding in the amount of \$90,000 for publication of the Study in a peer-reviewed scientific journal.
- c. Direct County Counsel to submit or join a Petition for Rulemaking to the U.S. Environmental Protection Agency under the authority granted by the Administrative Procedure Act, 5 U.S.C. section 553 to make a finding that lead emissions from general aviation aircraft endanger public health and welfare and issue proposed emission standards for lead from general aviation aircraft under Section 231(a)(2)(A) of the Clean Air Act.
- d. Direct Administration to continue working on securing unleaded aviation gasoline for the County Airports System.
- e. Direct Administration to discuss with California Department of Public Health (CDPH) and Mountain Data Group their interest in and the feasibility of undertaking a broader study of airborne lead emissions at general aviation airports with jurisdictions expressing a desire to participate in a study.

**FISCAL IMPLICATIONS**

There are no fiscal implications to the General Fund with receipt of this report and Study. Recommended Action B proposes to fund in the amount of \$90,000 the publication of the Study in a scientific journal, which would be the final phase of work. The Office of Budget

and Analysis is working with the Roads and Airports Department on a funding plan.

## **REASONS FOR RECOMMENDATION**

At the December 4, 2018 Board meeting (Item No. 19), the Roads and Airports Department reported on a proposed County Airports Business Plan Update. In response to concerns expressed at community meetings leading to the Airports Business Plan Update presentation to the Board, the Administration included information in the December 4 Board report on lead and the use of lead-formulated fuel in general aviation piston-engine airplanes.

At that Board meeting, pursuant to a referral by Supervisor Chavez, the Board directed the County Executive to report back with “a plan to study and address airborne lead or any associated concerns.” After spending a year negotiating a three-party data privacy and security agreement with the California Department of Public Health (CDPH) and our consultant, Dr. Sammy Zahran’s Mountain Data Group, the Board approved an Agreement with Mountain Data Group at the February 11, 2020 Board meeting (Item No. 47) for preparation of a Study in an amount not to exceed \$250,000.

At the November 17, 2020 Board meeting (Items 12-15), the Board considered report backs from the December 4, 2018 meeting including the Reid-Hillview Airport (RHV) Vision Plan, Emergency Services at RHV, and San Martin Airport-related items. The Board, at the request of Supervisor Chavez, requested that a RHV Vision Plan community engagement framework be prepared for presentation with the RHV Airborne Lead Study.

At the April 20, 2021 Board meeting (Item No. 9), the Board approved Board President Wasserman’s referral to direct the Administration to evaluate ensuring a supply of unleaded piston-engine aviation gasoline (avgas) for the County Airports system.

## **Executive Summary**

In December 2018, the Board of Supervisors directed the Administration to study whether there was any link between lead-based avgas emissions from airplanes operating at RHV and blood lead levels of children living near the airport. Since August 2020, Dr. Sammy Zahran and Mountain Data Group (a data science consulting company co-founded by Dr. Zahran and Dr. Terry Iverson, both professors at Colorado State University) have endeavored, with input from CDPH, to study lead emissions at Reid-Hillview Airport.

Dr. Zahran’s academic research focuses on the economic, health, and social costs of pollution and environmental risks. Dr. Zahran has published numerous studies on the relationship between various sources of exposure to lead — including lead-based aviation fuel, mine emissions, lead pipes, and soil — and blood lead levels in children.

The Study’s original scope was to review lead emissions at both RHV and San Martin Airports, but there were so few blood lead records of children in proximity to San Martin Airport (68 at San Martin versus 17,000 at RHV) in the ten-year study period that Dr. Zahran could not undertake an analysis of San Martin Airport.

Dr. Zahran analyzed blood lead levels of children within a 1.5-mile distance of Reid-Hillview Airport, piston-engine airplane operations at the airport, and weather and prevailing winds for the study period to interrogate the relationship between RHV aircraft-related emissions and blood lead levels of children. Dr. Zahran reviewed:

- Over 300,000 blood lead test results accessed through CDPH;
- Flight records from the Federal Aviation Administration (FAA); and
- Weather and wind data available from Dark Sky.

Following completion of an initial draft, the Study was reviewed by CDPH and peer reviewed by two academics independently selected by County Public Health with expertise in the field. The Study was updated with additional analyzes pursuant to requests by CDPH and the peer reviewers, and the findings did not change.

Lead exposure in blood is measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The World Health Organization, the U.S. Environmental Protection Agency (EPA), the Centers for Disease Control and Prevention, and CDPH agree that there is no known safe level of lead in a child's blood.

The Study presents numerous conclusions from testing three main indicators of exposure risk (proximity to the airport, residential location relative to prevailing winds, and volume of flight operations) and extended analyses. To make the Study findings meaningful and as a point of reference for the public and because Dr. Zahran published several studies on the Flint Water Crisis, he makes several references to it for context.

- **Sampled children within 0.5 miles of Reid-Hillview Airport have blood lead levels (BLLs) that are about 1/5th of a  $\mu\text{g}/\text{dL}$  higher than statistically similar children more distant from the airport.** This difference is equivalent to about half of the estimated surge in child BLLs at the height of the Flint Water Crisis (0.35-0.45  $\mu\text{g}/\text{dL}$  over baseline BLLs) in Flint, Michigan.
- Compared to sampled children residing upwind (west, northwest) of Reid-Hillview, sampled children residing downwind (east, southeast) of RHV present with BLLs that are 0.4  $\mu\text{g}/\text{dL}$  higher, other things held equal. **This estimated BLL increase is equal to the measured difference between sampled children measured at the peak of the Flint, Michigan Water Crisis relative to sampled children before the Crisis.**
- The Study also presents evidence indicating that going from the minimum to the maximum of airplane operations, **child BLLs increase with exposure to piston-engine aircraft operations at Reid-Hillview Airport, showing an increase of about 0.16 to 0.39  $\mu\text{g}/\text{dL}$ , depending on the presence of control variables.**



- Among sampled children at < 0.5 miles of Reid-Hillview Airport, **an increase from the minimum to maximum exposure to piston-engine traffic is associated with an estimated 0.83 µg/dL increase in BLLs.** This effect is twice as high as the increase in BLLs caused by water system failures during the Flint Water Crisis.

Exposure to even small amounts of lead has an outsized effect on cognition and health, particularly in developing children who absorb lead more efficiently than older children and adults<sup>1</sup>. The highest negative impact on IQ is at a comparatively low BLL, with a diminishing impact as the BLL increases. As negative cognitive and behavioral outcomes in lead-exposed children are higher at lower BLLs, limiting exposure to even small amounts of airborne lead can deliver sizable, immediate, and lasting benefits to children and families.

According to the American Academy of Pediatrics, **a blood lead concentration below 5 µg/dL is a causal risk factor for diminished intellectual and academic abilities, higher rates of neurobehavioral disorders, such as, hyperactivity and attention deficits, and lower birth weights in children.**<sup>2</sup> Further studies have examined the relationship between low BLLs and educational achievement (rather than aptitude). One such study<sup>3</sup> linked blood lead surveillance data to educational testing for fourth grade students, finding an impact on end-of-grade testing for BLLs as low as 2 µg/dL. That study found that a BLL of 5 µg/dL was associated with a decline in scores of approximately 15%, a reduction that, when taken with other negative life factors, such as, poverty, presents a significant impact on a child's educational attainment and resulting life outcomes.

A lowered IQ is likely to have socioeconomic impacts over a child's lifetime including reduced educational opportunities and lifetime earnings. Research in this area has demonstrated an association between greater blood lead levels and a decline in IQ and

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<sup>1</sup> Numerous studies show the deleterious effects of low blood lead:

- Canfield, R. L., Henderson Jr, C. R., Cory-Slechta, D. A., Cox, C., Jusko, T. A., and Lanphear, B. P. "Intellectual impairment in children with blood lead concentrations below 10 µg/per deciliter." *New England Journal of Medicine*, 2003.
- Cecil, K. M. "Effects of early low-level lead exposure on human brain structure, organization and functions." *Journal of Developmental Origins of Health and Disease*, 2011.
- Lanphear, B. P., Dietrich, K., Auinger, P., and Cox, C. "Cognitive deficits associated with blood lead concentrations < 10 µg/dl in US children and adolescents." *Public Health Reports*, 2000.
- Lanphear, B. P., Hornung, R., Khoury, J., Yolton, K., Baghurst, P., Bellinger, D. C., Canfield, R. L., Dietrich, K. N., Bornschein, R., Greene, T., et al. "Low-level environmental lead exposure and children's intellectual function: An international pooled analysis." *Environmental Health Perspectives*, 2005.
- Miranda, M. L., Kim, D., Galeano, M. A. O., Paul, C. J., Hull, A. P., and Morgan, S. P. "The relationship between early childhood blood lead levels and performance on end-of-grade tests." *Environmental Health Perspectives*, 2007.
- Miranda, M. L., Kim, D., Reiter, J., Galeano, M. A. O., and Maxson, P. "Environmental contributors to the achievement gap." *Neurotoxicology*, 2009.

<sup>2</sup> AAP Council on Environmental Health; Prevention of Childhood Lead Toxicity Policy Statement: Pediatrics, 2016; 138(1):e20161493.

<sup>3</sup> Miranda, et al. (2007) "The relationship between early childhood blood lead levels and performance on End of Grade Tests." *Environmental Health Perspective* 2007;115(8):1242-7.

socioeconomic status from childhood to adulthood,<sup>4</sup> and that IQ loss can be calculated as a loss of real earnings over the child's lifetime, and, inversely, the value of reducing childhood lead exposure can be shown to positively impact health economics, societal productivity, and gross earnings.<sup>5</sup> **The Study estimates a gain of \$11 to \$25 million in lifetime earnings for the cohort of children  $\leq$  18 years of age residing within 1.5 miles of Reid-Hillview Airport in an airport closure simulation.** This benefit would be enjoyed by succeeding cohorts of children.

There is only one currently available unleaded aviation gasoline, UL94 (94-octane unleaded) avgas, approved for use in an estimated 57% of piston-engine aircraft<sup>6</sup> in the market. To provide unleaded fuel at RHV and San Martin Airports, it would be necessary to secure a reliable supply, and, at present, the one supplier is in Indiana. Currently, the cost of truck transport from Indiana is an additional expense (approximately \$1+ per gal.) not associated with lead-based fuels produced locally, making UL94 less attractive to pilots than its less expensive, lead-based counterpart.

To try to reduce use of lead-formulated avgas at our County airports, the Administration is proposing a set of measures that includes endeavoring to establish a reliable supply of unleaded fuel, engaging in education efforts with airport users to promote unleaded fuel for those aircraft that can use it, and providing possible incentives to encourage its use including price per gallon, convenience, and availability.

With the Board's receipt of this Study, the Administration is requesting to fund publication of the Study in a peer-reviewed scientific journal. Adding this Study to the body of published scientific literature would allow for its findings to be considered by the EPA in future reviews of the National Ambient Air Quality Standards for lead, which occurs every five years, and to compel the EPA to acknowledge that lead emissions from general aviation aircraft endanger public health and welfare.

The Administration recommends that the Board direct County Counsel to submit or join a petition to the EPA to make a finding that lead emissions from piston-engine aircraft endanger public health and welfare and to issue proposed emissions standards for lead from piston-engine aircraft under Section 231 of the Clean Air Act. The Administration further recommends that the County engage environmental groups and other affected jurisdictions to initiate these long-overdue proceedings to regulate lead composition of avgas.

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<sup>4</sup> Reuben, A., et al. (2017). "Association of Childhood Blood Lead Levels with Cognitive Function and Socioeconomic Status at Age 38 Years and with IQ Change and Socioeconomic Mobility Between Childhood and Adulthood." JAMA. 2017; 317(12):1244-1251

<sup>5</sup> Zhou, Y., Grosse, S. (2019). "Valuing the Benefits of Reducing Childhood Lead Exposure—Human Capital, Parental Preferences, or Both?"

<sup>6</sup> The National Academies of Sciences, Engineering, and Medicine, "Options for Reducing Lead Emissions from Piston-Engine Aircraft" 2021 p. 2.

The Administration also recommends continuing work on securing unleaded avgas at our County Airports and discussions with CDPH and Mountain Data Group about the feasibility of using the data mining model developed for the Study to evaluate lead emissions at other GA airports where the jurisdiction expresses a desire to participate in a study. CDPH would be the lead for any future study. A broader study with possible similar findings may serve as a basis for collaborating on pursuing emission standards for lead-formulated avgas at the Federal level.

## Overview of Lead

Lead is a metal with no known biological role or benefit. As a metal, it has been used since antiquity because it is easily worked and resistant to corrosion, making it still attractive for certain uses including in car batteries and ammunition.

Lead is a potent neurotoxin that can accumulate in the body and cause harmful health, cognitive, and behavioral effects. Once introduced into the body, lead travels via the blood to the organs before being stored in the brain, bones, and teeth, where it can remain, in the case of the brain, for up to two years, and in bones and teeth for decades.<sup>7</sup> About 99% of lead taken into the body of an adult will be excreted through waste (if not subject to ongoing lead exposure) within 1-2 months, but only about 32% of that taken into the body of a child will leave in waste in that time.<sup>8</sup>

## Sources of Lead Exposure

Lead has been used historically in a variety of industrial applications, from pipes, paint, cosmetics to hair dyes. Lead was also used in automotive fuels to boost fuel octane and prevent valve seat recession but was phased out of use through Federal government action over two decades due to the health risk associated with lead exposure. Currently, lead is used in components, such as, batteries, radiators, roofing materials, and solder for joints and in medical and dental radiology for radiation shields. There is a legacy of lead paint in older homes, which continues to be a common source of lead exposure.

## Lead-based Fuel in Aviation

While lead-based fuels have been phased out of automotive use, lead-based avgas continues to be used in piston-engine aircraft. Avgas, which is petroleum-based, is **only** used in piston-engine aircraft, and not in jet aircraft, which use a kerosene-based jet fuel. Lead emissions from piston-engine aircraft are now the largest

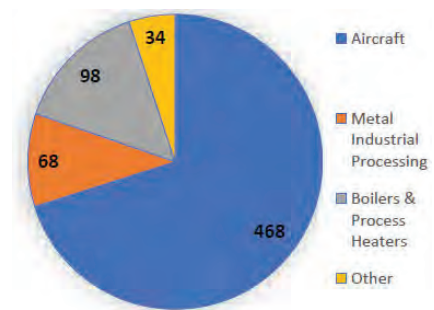


Fig. 1: Lead Emissions to Air (2017 tons)

<sup>7</sup> Centers for Disease Control, Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, Public Health Statement on Lead, August 2007

<sup>8</sup> Ibid, p 5

source of airborne lead, with approximately 468 tons emitted nationwide in 2017 (Fig 1).<sup>9</sup>

As with automotive engines, lead has been used in avgas to boost the fuel octane rating (a measure of fuel stability) to ensure safe operation of piston-engine airplanes. In 2019, on a national scale, 436,000 gallons of avgas were sold or delivered each day by prime suppliers across the United States, and in 2020 an average of 417,000 gallons were sold per day (based on data to November, 2020).<sup>10</sup>

### **Qualifications of Study Investigators**

Mountain Data Group is a data science consulting company co-founded by Dr. Sammy Zahran and Dr. Terry Iverson, professors at Colorado State University (CSU). Dr. Zahran is a Professor of Demography and Associate Chair in the Department of Economics at CSU and holds a joint appointment in the Department of Epidemiology, Colorado School of Public Health, and serves as the Senior Academic for the County's study.

Dr. Zahran is an expert in causal inference and applied statistical and econometric tools, and his academic research focuses on the economic, health and social costs of pollution and environmental risks. Dr. Zahran's academic research has been funded by various agencies, including the National Science Foundation, the National Oceanic and Atmospheric Administration, the Robert Wood Johnson Foundation and Columbia University, and the National Institute of Standards and Technology.

Dr. Zahran is eminently qualified as one of the few researchers in the United States to have conducted studies on the relationship between varying sources of transmission and blood lead levels (BLLs), including lead-based aviation fuel<sup>11</sup>, mine emissions<sup>12</sup>, lead pipes<sup>13</sup>, and soil.<sup>14</sup>

Dr. Zahran's 2017 study on the effect of lead-based aviation gasoline on blood lead levels in children examined data that linked blood lead data from over a million children to 448 nearby airports in Michigan. Across a series of tests, and adjusting for other known sources of lead exposure, the research found that child BLLs increased in proximity to airports with piston-engine aircraft, and that BLLs increased in relation to the percentage of days the prevailing wind drifted in the direction of a child's residential location.

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<sup>9</sup> Source: National Academies of Sciences, Transportation Research Board, "Options for Reducing Lead Emissions from Piston-Engine Aircraft"; accessed at <http://nap.edu/26050>

<sup>10</sup> US Energy Information Administration

<sup>11</sup> Zahran, S., Iverson, T., McElmurry, SP., Weiler, S. (2017). "The effect of leaded aviation gasoline on blood lead in children." *Journal of Association of environmental and Resource Economists*. 4(2): 575-610

<sup>12</sup> Dong, C., Taylor, MP, Zahran, S. (2018). "The effect of contemporary mine emissions on children's blood lead levels." *Environment International*. 122; 91-103.

<sup>13</sup> Zahran, S., Mushinski, D., McElmurray, SP., Keyes, C. (2020). "Water lead exposure risk in Flint, Michigan after switchback in water source: Implications for lead service line replacement policy." *Environmental Research*. 181: 108928.

<sup>14</sup> Zahran, S., Magzamen, S., Berunig, IM, Mielke, HW. (2014). "Maternal exposure to neighborhood soil Pb and eclampsia risk in New Orleans, Louisiana (USA): Evidence from a natural experiment in flooding." *Environmental Research*. 133: 274-81.

Board of Supervisors: Mike Wasserman, Cindy Chavez, Otto Lee, Susan Ellenberg, S. Joseph Simitian

County Executive: Jeffrey V. Smith

Agenda Date: August 17, 2021

Further expertise is provided by Dr. Bruce Lanphear, a public health physician and pediatric epidemiologist specializing in environmental exposures including lead. Dr. Lanphear has an M.D. from the University of Missouri at Kansas City and a M.P.H. from Tulane School of Public Health and Tropical Medicine. He is currently a Professor in the Faculty of Health Sciences at Simon Fraser University, and a Clinician Scientist at the Children's Hospital Research Institute with the University of British Columbia. Dr. Lanphear's work focuses on the impacts of fetal and early childhood exposure to environmental toxic chemicals, and he has published numerous studies relating to the effects of exposure to lead in childhood, cited throughout this report.

### **Research Study Design and Peer Review**

Mountain Data Group conducted the Study that consists of the review and analysis of indicators as described below to interrogate whether there is a relationship between lead emissions and blood lead levels in sampled children residing within the RHV Study Area. The initial scope of the Study was to include both Reid-Hillview and San Martin Airports, but there were too few blood lead sample data (68 records at San Martin versus 17,000 at RHV) over the ten-year period to undertake an analysis of San Martin Airport. The areas of focus include:

- Blood lead levels in children residing within a 1.5-mile orbit of Reid-Hillview Airport;
- Piston-engine aircraft operations; and
- Weather and prevailing winds for the study period.

These data are either publicly available or have been obtained from CDPH, the FAA, and Dark Sky. For the purpose of obtaining and analyzing blood lead data, the Administration entered into a three-party data use agreement with Mountain Data Group and CDPH. Under this agreement, CDPH provided Mountain Data Group with access to data collected pursuant to the Childhood Lead Poisoning Prevention Act, including over 300,000 blood lead test results. This agreement has also been of benefit to CDPH by providing it with access to the data analytic expertise provided by the Mountain Data Group investigators.

Mountain Data Group studied the available data to interrogate whether a distance gradient exists (i.e., whether BLLs in children are highest nearest the airport, decreasing as distance grows), whether BLLs increase or fall with changes in volume of flight operations, and whether BLLs are higher southeast of the airport, which is downwind.

### Peer Reviewers

The County Public Health Department independently selected experts to peer review Mountain Data Group's findings, and those researchers include Dr. Rebecca Anthopolos and Dr. Mark Cullen. In addition, CDPH also reviewed the Study.

- Dr. Rebecca Anthopolos, PhD., is an Assistant Professor in the Division of Biostatistics within the Department of Population Health at New York University Grossman School of Medicine. Her clinical areas of focus include environmental

health, type 2 diabetes, and social determinants of health. She has methodological expertise in longitudinal data analysis, Bayesian methods, and methods for complex sample surveys. She has published on the risk of early childhood lead exposure in relation to aviation gasoline. She has also consulted with the Connecticut Department of Education and the California State Senate with regard to the relationship of early childhood lead exposure with aviation gasoline and academic performance.

- Dr. Mark Cullen, M.D., is a retired professor of Medicine, Epidemiology, and Biomedical Data Sciences at Stanford University from 2009-2020. At Stanford, he served as Division Chief of General Medicine, Founding Director of the Center for Population Health Sciences, and as Senior Associate Dean for Research for the School of Medicine. Dr. Cullen's primary research focus centered on understanding the relative contributions of and interactions among the social, environmental, behavioral, and bio-medical determinants of morbidity and mortality in adults, emphasizing the contributions of workplace social and physical environment.
- CDPH Childhood Lead Poisoning Prevention Branch provided Mountain Data Group access to blood lead level data, answered questions about these data, and reviewed and offered feedback on the research design, presentations, and report.

## Study Conclusions

As presented in the attached Study, the evidence indicates that children living near Reid-Hillview Airport present with systematically higher BLLs, net of other measured sources of lead exposure risk, child characteristics, and neighborhood conditions.

### Distance Measure

**Children within 0.5 miles of Reid-Hillview Airport have BLLs that are about 1/5th of a  $\mu\text{g}/\text{dL}$  higher than statistically similar children more distant from the airport.** This difference is equivalent to about 50% of the estimated surge in child BLLs at the height of the Flint Water Crisis (0.35-0.45  $\mu\text{g}/\text{dL}$  over baseline BLLs) in Flint, Michigan.

### Near Angle Measure

**Sampled children residing East (and southeast, predominantly downwind) of Reid-Hillview Airport have substantively higher BLLs, 0.4  $\mu\text{g}/\text{dL}$  higher, than children residing West (and northwest, predominantly upwind).** This estimated margin of difference is equal to the difference seen in children at the peak of the Flint Water Crisis as compared to pre-peak levels.

### Piston-Engine Traffic Exposure

**The Study also presents evidence indicating that child BLLs increase with exposure to piston-engine aircraft operations at Reid-Hillview Airport. Going from the minimum to maximum traffic, child BLL increases of 0.16 to 0.39  $\mu\text{g}/\text{dL}$ , depending on control variables.** Moreover, the estimated positive association between child BLLs and GA aircraft traffic is supported by analysis of the relationship between BLLs and the quantity of avgas

sold at the airport: a change in the quantity of avgas sold from the observed minimum to the maximum is associated with an increase in child BLLs of about 0.18 µg/dL.

#### Distance × Piston-Engine Traffic Exposure

The Study presents evidence indicating that children residing within 0.5 miles of Reid-Hillview Airport are especially vulnerable to increases in piston-engine aircraft traffic. **An increase from the minimum to maximum traffic exposure is associated with a 0.83 µg/dL increase in BLLs among sampled children in close proximity to the airport.**

Taken together, the following factors increase the odds that a sampled child presents with a BLL greater than the CDPH's reference value of 4.5 µg/dL:

- Children living in the nearest orbit (within 0.5-mile) to the airport have an increased probability when compared to children living in further orbits (20% higher than those living 0.5 to 1-mile away and 27% higher than those living 1 to 1.5-miles away) from RHV;
- Children residing east, southeast (downwind) of the airport have a 200% higher probability when compared to children residing west, northwest (upwind); and
- Children sampled during periods of maximum piston-engine aircraft traffic have an estimated probability that is 29% higher than children sampled in moments of minimum piston-engine airplane operations.

#### Reductions in Piston-Engine Operations

Further, the Study shows an additional relationship between piston-engine aircraft traffic and BLLs, where a decrease in operations correlated to a decrease in BLLs. During the Shelter-in-Place Order in 2020, piston-engine airplane traffic declined between February and July 2020 from historical levels by 34-44%. **Children sampled during this traffic contraction period presented with significantly lower BLLs – about 0.25 µg/dL lower – than children sampled outside of the contraction period.** This correlates closely with the relationship between BLLs and piston-engine airplane operations (an effect of approximately +0.3 µg/dL) and fuel sales (about +0.18 µg/dL).

#### Effects of School Commutes to and from Airport Area

Similarly, the movement of sampled children toward and away from the airport area is shown to have a relationship with their BLLs. The Study presents evidence indicating a correlation between commuting to or away from the airport area to attend school. Children who travel away from the airport area to attend school have lower BLLs, supporting the notion that exposure to avgas is a statistically independent source of risk. **Sampled children who commute toward RHV for school by one mile from their place of residence have predicted BLLs that are 0.65 µg/dL higher than sampled children commuting away from the airport by one mile.**

In summary, children living near Reid-Hillview Airport experience an increase in BLLs similar to that seen in child BLLs during the peak of the Flint Water Crisis. As negative cognitive and behavioral outcomes in lead-exposed children are higher at lower BLLs, limiting exposure to lead can deliver sizable and lasting social benefits. The evidence assembled in the Study supports the need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children living near Reid-Hillview Airport.

### Outsized Effects on Cognition and Health of Low BLLs

Lead is a neurotoxin, and even low levels of lead in blood can result in stunted physical and cognitive development in children, leading to lower IQ scores, poor academic performance, poor attention and impulse control, and numerous physical health complications.<sup>15</sup> In adults, elevated blood lead levels are associated with kidney and brain damage, increased blood pressure, miscarriages, stillbirths, and infertility.

At low BLLs, the primary effects on children are cognitive. Studies have concluded that deficits in cognitive and academic skills associated with lead exposure occur at blood lead concentrations lower than 5  $\mu\text{g}/\text{dL}$ <sup>16</sup>, and there is accumulating data suggesting that there are toxicological effects at increasingly low levels of exposure.<sup>17</sup> Studies have shown the highest impact on IQ at the lowest BLL (Fig 2).<sup>18</sup> Further analysis has shown a decline of up to 7.4 IQ points for an increase in lifetime mean BLLs from <1 to 10  $\mu\text{g}/\text{dL}$ , or 1.37 points per 1  $\mu\text{g}/\text{dL}$  for children whose maximal lead concentrations remained below 10  $\mu\text{g}/\text{dL}$ .<sup>19</sup>

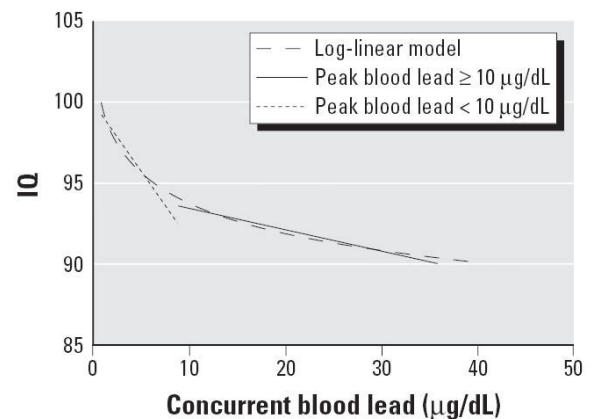


Fig. 2: Relationship between IQ & BLL

While an individual's loss of, for example, five IQ points may be considered minor where the resulting IQ is still in the average range, when considered in terms of a population, the effect is pronounced. Among the population, most individuals will fall within the average IQ range of 70-130, with a small but roughly equal portion in each of the "gifted" upper range (above 130) and "challenged" lower range (below 70). The mean, or average, IQ is 100 (see Fig. 3<sup>20</sup>).

<sup>15</sup> US Dept. of Health and Human Services, National Toxicology Program, NTP Monograph, "Health Effects of Low-level Lead."

<sup>16</sup> Lanphear, B., Dietrich, K., Auinger, P., Cox, C. (2000). "Cognitive deficits associated with blood lead concentrations <10  $\mu\text{g}/\text{dL}$  in US children and adolescents." Public Health Rep. 2000;115:521-529.

<sup>17</sup> Lidsky, T., Schneider, J. (2003). "Lead neurotoxicity in children: basic mechanisms and clinical correlates." Brain 2003;126:5-19.

<sup>18</sup> Lanphear, et al. (2005). "Low-level environmental lead exposure and children's intellectual function: an international pooled analysis." Environmental Health Perspectives. 2005 Jul; 113(7): 894-899.

<sup>19</sup> Canfield, et al. (2003). "Intellectual Impairment in Children with Blood Lead Concentrations Below 10  $\mu\text{g}/\text{dL}$ " New England Journal of Medicine. 2003 Apr 17; 348(16):1517-26.

<sup>20</sup> Haier, R. (2016). "The Neuroscience of Intelligence," Cambridge University Press.



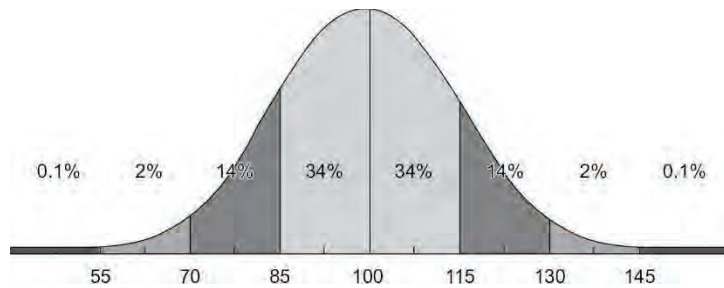


Fig. 3: Average IQ distribution

Where a sampled population has been exposed to lead such that it experiences an IQ deficit affecting the mean IQ by -5 points, the groups at either end of the distribution also shift downward. In this example, the group in the “gifted” range would decrease by 60%, and the “challenged” group would increase by 57%.

Other studies have examined the relationship between low BLLs and educational achievement (rather than aptitude). One such study<sup>21</sup> linked blood lead surveillance data to educational testing for fourth grade students, finding an impact on end-of-grade testing for BLLs as low as 2 µg/dL. That study found that a BLL of 5 µg/dL was associated with a decline in scores of approximately 15%, a reduction that, when taken with other negative life factors such as poverty, presents a significant impact on a child’s educational attainment and resulting life outcomes.

### Impact of Lead Exposure and Intersecting Factors

Even low BLLs can have a negative impact on health and cognition, but with other factors, including environmental and societal factors, such as, poverty or exposure to other toxins, these factors act collectively to significantly reduce a child’s educational opportunities, earning potential, health, and overall quality of life. It has been shown that socioeconomically disadvantaged groups exhibit educational disparities<sup>22</sup> compared with those in higher socioeconomic backgrounds in the United States<sup>23</sup>, starting in childhood, and this achievement gap is at least partly attributable to environmental and social stressors, such as, lower socioeconomic status, exposure to environmental toxins, and racism.<sup>24</sup>

### **Reducing Lead-based Aircraft Operations has Immediate Positive Effects**

As the half-life of lead (i.e., the amount of time for the detected amount of lead to reduce by one-half) in blood and soft tissue is accepted in the scientific community to be approximately 30 days<sup>25</sup>, the blood lead level is primarily an indicator of recent exposure. As noted earlier in the report, a period of low operations at Reid-Hillview in 2020 caused by the imposition of

<sup>21</sup> Miranda, et al. (2007) The relationship between early childhood blood lead levels and performance on End of Grade Tests. *Environ Health Perspect* 2007;115(8):1242-7.

<sup>22</sup> Hart, B., and Risley, T. (1995). *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD; Brookes Publishing Company Inc.

<sup>23</sup> Loeb, S., & Bassok, D. (2007). Early childhood and the achievement gap. In H.F. Ladd & E.B. Fiske (Eds.), *Handbook of Research in Education Finance and Policy* (pp. 517-534). Routledge Press.

<sup>24</sup> See further the Stanford Center for Educational Policy Analysis’s Educational Opportunity Monitoring Project; <https://cepa.stanford.edu/educational-opportunity-monitoring-project/achievement-gaps/race/>

<sup>25</sup> Cf, however, Centers for Disease Control, Lead Biomonitoring Summary, CAS No.7439-92-1, which indicates a half-life of up to two months.

a Public Health Order resulted in a decline in BLLs of 0.25 µg/dL. Previous studies<sup>26</sup> have also shown a decrease in BLLs where the exposure to airborne lead was reduced, such as, in the period following September 11, 2001, when air traffic operations ceased temporarily.

Children will excrete 32% of lead compared to 99% excretion for adults within 1-2 months for lead in blood and soft tissue. Thus, reductions in aircraft lead emissions at RHV would quickly benefit children and families in the vicinity. Conversely, according to the CDC Agency for Toxic Substances and Disease Registry, “[u]nder conditions of continued exposure, not all of the lead that enters the body will be eliminated, and this may result in accumulation of lead in body tissues, especially bone.”<sup>27</sup> With the reduction or removal of a source(s) of exposure, a child’s body can clear more of the toxin as it would not be constantly replenished.

### **Petition EPA to Make Endangerment Finding and Set Emission Standards**

Emissions from aircraft are regulated by the EPA, in consultation with the FAA. Section 231 of the Clean Air Act requires the EPA Administrator to issue proposed standards for emission of any air pollutant which, in the Administrator’s judgment, causes or contributes to air pollution that may reasonably be anticipated to endanger public health or welfare. Before the EPA may propose lead emission standards for avgas, the EPA Administrator must first determine that lead emissions from piston-engine aircraft contribute to air pollution that poses a danger to public health or welfare.

Since the early 2000s, environmental groups have sought to compel the EPA to make an “endangerment finding” for leaded avgas. In 2012, the EPA indicated that further study of demographics and air lead levels at and around general aviation airports was necessary before it could exercise its judgment as to whether lead emissions from piston-engine aircraft endanger public health. Although studies, including by the EPA itself, have documented the risks posed by lead emissions from avgas, the EPA has yet to formally initiate a proceeding to make an endangerment finding for lead-formulated avgas and to promulgate standards for lead composition of aviation fuels. The RHV Airborne Lead Study underscores the urgency of regulation of lead composition of avgas—the only remaining lead-containing transportation fuel—to prevent further harm to communities.

The Administration recommends that the County submit or join a petition to the EPA to undertake its duty to make a finding that lead emissions from piston-engine aircraft endanger public health and welfare and to issue proposed emissions standards for lead from piston-engine aircraft under Section 231 of the Clean Air Act. The Administration further recommends that the County engage environmental groups and other affected jurisdictions to initiate these long-overdue proceedings to regulate lead composition of avgas.

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<sup>26</sup> Zahran, S., Iverson, T., McElmurry, SP., Weiler, S. (2017). The effect of leaded aviation gasoline on blood lead in children. *Journal of Association of environmental and Resource Economists*. 4(2): 575-610

<sup>27</sup> Centers for Disease Control, Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine, Public Health Statement on Lead, August 2007

Board of Supervisors: Mike Wasserman, Cindy Chavez, Otto Lee, Susan Ellenberg, S. Joseph Simitian

County Executive: Jeffrey V. Smith

Agenda Date: August 17, 2021

## **Measures to Promote Unleaded Operations at County Airports**

To try to reduce lead avgas operations at our County airports, the Administration is proposing measures that include endeavoring to establish a reliable supply of unleaded fuel, engaging in education efforts with airport users to promote unleaded fuel for those aircraft that can use it, and providing possible incentives to encourage its use including price per gallon, convenience, and availability.

### Fuel Supply and Infrastructure

The Administration proposes to engage in further discussions with other local airport operators including Palo Alto, San Carlos, and Watsonville to determine the feasibility of joint procurement of unleaded avgas at volume to establish a reliable supply of unleaded avgas at both County airports. Swift Fuels, the producers of the only FAA-approved unleaded avgas, UL94, reports that it is reviewing initial steps to transport UL94 by railcar (rather than by truck) from its production site in Indiana to Fremont, California, which is expected to reduce its overall cost.

Regarding fuel storage, Reid-Hillview has four 10,000-gallon storage tanks located on four individual long-term leaseholds. Staff is evaluating options related to storing unleaded avgas. San Martin Airport has only one storage tank. To create storage for UL94 at San Martin Airport (E16), staff will assess procurement of a new above-ground fuel storage tank and point-of-sale system. This is a cost that the Airports Enterprise Fund likely could not absorb without increasing rates or borrowing from the General Fund.

As described further below, staff is evaluating the possibility to act as an FAA-recognized exclusive proprietor and assume responsibility of the fueling system including the infrastructure (e.g., the pumping equipment, filling stations, and storage tanks) to deliver and supply unleaded fuel at RHV when the long-term lease agreements and their associated fuel permits expire at the end of this calendar year. This would provide the County with maximum opportunities to promote the use of unleaded avgas.

### Education of Airport Users

The Administration proposes to engage all airport users, including Flight Schools and individual aircraft owners, in ongoing education to encourage the use of unleaded aviation fuel for all eligible aircraft. Actions may include assistance and education on the FAA-recognized Supplemental Type Certificate (STC), which is an FAA-issued approval to modify an aeronautical product from its original design that is available and required for unleaded aviation fuel use, the process to obtain a STC, and education regarding the eligibility of certain aircraft to use unleaded avgas.

Swift Fuels in Indiana has a 94-octane unleaded avgas product known as UL94, which is currently the only FAA-approved, commercially available, unleaded avgas supplied in the United States. Swift has also developed an easy, inexpensive STC process that is attractive to aircraft owners.

### Possible Incentives

For San Martin Airport, staff would evaluate the feasibility of setting the Fuel Flowage Fee to make UL94 avgas more price competitive relative to 100-octane low lead avgas. As the fuel provider at RHV beginning in 2022, the County would have discretion to set the retail cost of fuel in such a way that UL94 is competitive with 100LL. These actions would make UL94 a more attractive fuel option to aircraft owners and pilots.

### **RHV Leases**

Complementing the measures described above, County staff endeavored over numerous years to ensure that the nine RHV fixed-base operator leases, most of which have been in place for over fifty years, were aligned to expire on December 31, 2021.

The County would evaluate offering updated lease extensions to current RHV long-term leaseholders to the extent that the leaseholders directly provide aeronautical services.

The leases for long-term leaseholders who utilize their lease primarily as a property manager, while subleasing the property to other businesses, would likely be allowed to expire.

Onsite fixed asset fuel equipment, such as, tanks and dispensers would likely be excluded from potential lease extensions to possibly allow the assets to revert to County ownership.

### Flight Training FBOs

Based on a survey of County-based aircraft owners in which two of four RHV flight schools responded, two flight schools indicated that 9 of 9 and 20 of 22 of their respective aircraft fleet can use UL94 avgas. Staff would propose to establish terms in any new lease extension that would support the flight training schools' use of UL94 avgas.

### County as Fuel Provider

The Roads and Airports Department already operates several fueling facilities, so much of the institutional knowledge to successfully operate fueling at RHV is already available. In addition, the Facilities and Fleet Department has numerous fueling facilities, dispensers, and tanks. However, some administrative changes must occur within the Airports Division for the County to effectively assume fueling operations at RHV. The Job Specifications for the Airport Operations Worker classification would require updating to include fueling and fuel tank operations duties. Staff has performed preliminary work with the Employee Services Agency pending Board approval of this proposal.

Assuming operation of the fueling system would require an additional 1-FTE Airport Operations Worker position. Management of the fuel system and additional property due to the expired long-term leases would also require reactivating and filling the Airports Business Manager position. The job specification for the Airports Business Manager should be updated to include some knowledge of fuel system management and sales.

## **Recent Unleaded Avgas Developments and Challenges**

Currently, 100LL (low lead) avgas is the standard fuel for piston-engine aircrafts across the country, but the FAA and the aviation community acknowledge the need for an unleaded 100-octane avgas alternative.

Swift Fuels based in Indiana has a 94-octane unleaded fuel, UL94, which is currently the only FAA-approved, commercially available, unleaded avgas supplied in the United States. UL94 is approved for specified aircraft but is not a universal unleaded fuel. About one-third of piston-engine aircrafts across the country have turbocharged engines, which require a higher octane-rated fuel and therefore are not compatible with UL94. It is estimated overall that about 57% GA airplanes cannot use the UL94 avgas. Swift Fuels states that it has been conducting extensive scientific research and testing on viable high-octane alternatives to replace 100LL.

The FAA did recently authorize a 100-octane unleaded avgas<sup>28</sup> by GAMI for use in a limited number of engines and airframes for large-scale testing. The FAA also requested GAMI conduct additional testing before its consideration of an expanded authorization for high compression engines and other airframes. The outcome of the testing remains to be known.

While the County would make every effort to support the availability and use of unleaded avgas, it is not possible to ensure lead-free airplane operations at Reid-Hillview and San Martin Airports. Lead emissions around RHV can be reduced but not fully mitigated for the foreseeable future, and additional recommendations by the Administration are presented in the companion report (linked file #107018).

## **CHILD IMPACT**

The recommended actions would have a positive impact on children and youth. The results of this Study may result in efforts to mitigate the potential for lead exposure for children living near Reid-Hillview Airport.

## **SENIOR IMPACT**

The recommended actions would have a positive impact on seniors living near Reid-Hillview Airport.

## **SUSTAINABILITY IMPLICATIONS**

The recommended actions would have positive sustainability implications.

## **BACKGROUND**

At the December 4, 2018 Board meeting (Item No. 19), the Roads and Airports Department reported on a proposed County Airports Business Plan Update. In response to concerns

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<sup>28</sup> The significance of this news is that a 100-octane unleaded avgas is the long-awaited “universal drop-in” solution to replace 100-octane low lead avgas for the vast majority, if not all, general aviation airplane fleet without engine or other modifications.

expressed at community meetings leading to the Airports Business Plan Update presentation to the Board, the Administration included information in the December 4 Board report on lead and the use of lead-formulated fuel in general aviation piston-engine airplanes.

At that Board meeting, the Board directed the County Executive to report back with a plan to study and address airborne lead or any associated concerns. After spending a year negotiating a three-party data privacy and security agreement with the California Department of Public Health (CDPH) and our consultant, Dr. Sammy Zahran's Mountain Data Group, the Board approved an Agreement with Mountain Data Group at the February 11, 2020 Board meeting (Item No. 47) for preparation of a Study in an amount not to exceed \$250,000.

At the November 17, 2020 Board meeting (Items 12-15), the Board considered report backs from the December 4, 2018 meeting including the Reid-Hillview Airport (RHV) Vision Plan, Emergency Services at RHV, and San Martin Airport-related items. The Board requested that a RHV Vision Plan community engagement framework be prepared for presentation with the RHV Airborne Lead Study.

At the April 20, 2021 Board meeting (Item No. 9), the Board approved Board President Wasserman's referral to direct the Administration to evaluate ensuring a supply of unleaded piston-engine aviation fuel (avgas) for the County Airports system.

Lead was introduced in the 1920s as a fuel additive for use in engines to help boost fuel octane and prevent valve seat recession, but was immediately recognized as a significant public health concern. With newer automobile engine and fuel technology, leaded fuels were transitioned out of general use over several decades by government action due to the health risk associated with lead exposure. However, due to the lack of a commercially viable 100-octane unleaded aviation fuel, lead-based aviation fuel continues to be used in GA airplanes.

### **LINKS:**

- References: 99861 : 99861
- Referenced By: 107018 : Direct Administration and County Counsel to take all necessary actions, including closure, to immediately prevent lead contamination from operations at Reid-Hillview Airport.
- References: 104882 : Under advisement from November 17, 2020 (Item No. 12): Receive report from the Facilities and Fleet Department and the Roads and Airports Department relating to the development of a community participation framework for collaborative and transparent stakeholder engagement regarding potential land use changes at the Reid-Hillview Airport site.

# Exhibit E

**BOARD OF SUPERVISORS**

Mike Wasserman, District 1, President  
 Susan Ellenberg, District 4, Vice President  
 Cindy Chavez, District 2  
 Otto Lee, District 3  
 S. Joseph Simitian, District 5



Jeffrey V. Smith  
 County Executive

James R. Williams  
 County Counsel

Tiffany Lennear  
 Acting Clerk of the Board

**MINUTES**  
**August 17, 2021 9:30 AM**  
**Regular Meeting**

BY VIRTUAL TELECONFERENCE ONLY

Tel. (408) 299-5001

Fax (408) 938-4525

TDD (408) 993-8272

SANTA CLARA COUNTY BOARD OF SUPERVISORS  
 SPECIAL DISTRICTS  
 THE FIRE DISTRICTS  
 FINANCING AUTHORITY  
 PUBLIC AUTHORITY OF SANTA CLARA COUNTY  
 VECTOR CONTROL DISTRICT  
 SANITATION DISTRICT NO. 2-3  
 COUNTY LIGHTING SERVICE AREA

## Opening

### 1. Roll Call.

President Wasserman called the meeting to order at 9:31 a.m. A quorum was present via virtual teleconference, pursuant to the provisions of Executive Order N-08-21 issued on June 11, 2021 by the Governor of the State of California.

Attendee Name	Title	Status	Arrived
Mike Wasserman	President	Remote	
Cindy Chavez	Supervisor	Remote	
Otto Lee	Supervisor	Remote	
Susan Ellenberg	Vice President	Remote	
S. Joseph Simitian	Supervisor	Remote	

### 2. Pledge of Allegiance.

The Pledge of Allegiance was recited.

### 3. Invocation by Reverend John Harrison, Chaplain, Director of Spiritual Care for El Camino Health. (Simitian) (ID# 106941)

The Invocation was received.



## Ceremonial Presentations

### 4. Announce Adjournments in Memoriam. (See Item No. 40)

The Adjournments were announced.

- a. Adjourn in honor and memory of Margaret Lybbert. (Wasserman) (ID# 107234)
- b. Adjourn in honor and memory of Laurie Valerie Palomo. (Chavez) (ID# 106890)
- c. Adjourn in honor and memory of Bishop Emeritus John E. Erwin, Sr. (Chavez) (ID# 106891)
- d. Adjourn in honor and memory of Dr. Sofia Jalilie. (Lee) (ID# 107221)
- e. Adjourn in honor and memory of Gurdev (Dave) Singh Mann. (Lee) (ID# 107238)
- f. Adjourn in honor and memory of Paul Nyberg. (Simitian) (ID# 107122)

### 5. Commendations and Proclamations. (See Item No. 104)

The Commendations were presented.

- a. Present Commendation for Sharon Kreider for over ten years of service as a member of Assessment Appeals Board II. (President)  
Item No. 5a was corrected to reflect Ms. Kreider's service as a member of Assessment Appeals Board III.
- b. Present Commendation for Reverend Jethroe Moore II for his years of tireless dedication, commitment, and advocacy for all residents of Santa Clara County. (Chavez)
- c. Present Commendation for Atticus Ginsborg for achieving the highest Boy Scout rank of Eagle Scout. (Chavez)  
Deleted at the request of Supervisor Chavez.
- d. Present Commendation for Barbara Avery in recognition of her efforts to improve the health of Santa Clara County. (Simitian)

## Public Issues

### 6. Public Comment. (ID# 107299)

Thirty individuals addressed the Board.

## 7. Approve Consent Calendar and changes to the Board of Supervisors' Agenda.

Item Nos. 14-18, 22, 23, 26, 27, and 30-33 were added to the Consent Calendar. Item Nos. 21, 25, and 34 were held to August 31, 2021. Item Nos. 29 and 35 were held to September 14, 2021. Item No. 5c was deleted.

Requests were noted for Item Nos. 21, 24, 25, 33, and 106.

Corrections were noted for Item Nos. 5a, 39, 95bi, and 105e.

The Clerk of the Board read an oral summary for the compensation changes for the County of Santa Clara local agency executives as listed in Item No. 124.

**7 RESULT: APPROVED AS AMENDED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Time Certain - To Be Heard No Earlier Than 10:00 a.m.

## 8. Public Hearing - Purchase of real property located at 2001 The Alameda, San Jose. (Office of Supportive Housing)

- a. Public Hearing to consider the purchase of real property located at 2001 The Alameda, San Jose, for a public purpose. (Assessor's Parcel Nos: 230-20-027 and 230-20-025) (Supervisory District Four) (ID# 106819)
  - i. Open public hearing and receive testimony.
  - ii. Close public hearing.

President Wasserman opened the public hearing. Six individuals addressed the Board. President Wasserman closed the public hearing.

**8.a RESULT: HEARING CLOSED**

- b. Adopt Resolution finding the acquisition of the Property is exempt from the California Environmental Quality Act (CEQA); finding the acquisition of the Property located at 2001 The Alameda, San Jose (Assessor's Parcel Nos: 230-20-027 and 230-20-025) serves a public purpose; approving the purchase of the Property; declaring that the Property is exempt surplus land in connection with the option to ground lease for the purposes of the Surplus Land Act, and approving a delegation of authority to the County Executive, or designee, to negotiate, enter into, and sign all agreements and documents necessary or required for the consummation of the purchase of the Property, including but not limited to an assignment of the purchase agreement, an option to ground lease, a ground lease, and the Certificate of Acceptance, and to take all other necessary action to complete the acquisition, in an amount not to exceed \$14,862,500 plus closing costs of up to \$40,000, following approval by County Counsel as to form and legality, and

approval by the Office of the County Executive. Delegation of authority shall expire on December 31, 2026. Resolution # BOS-2021-106 (ID# 106818)

Vice President Ellenberg requested that Administration include Supervisorial District Four neighborhood leaders, stakeholders, and neighborhoods in the community engagement process.

<p><b>8.b RESULT: ADOPTED [UNANIMOUS]</b>  <b>MOVER:</b> Susan Ellenberg, Vice President  <b>SECONDER:</b> Otto Lee, Supervisor  <b>AYES:</b> Wasserman, Chavez, Lee, Ellenberg, Simitian</p>
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### **9. Public Hearing - Purchase of real property located at 2318 Bluebell Avenue, San Jose. (Office of Supportive Housing)**

- a. Public hearing to consider purchase of real property located at 2318 Bluebell Avenue, San Jose, for a public purpose. (Supervisorial District Two) (ID# 106876)
  - i. Open public hearing and receive testimony.
  - ii. Close public hearing.

President Wasserman opened the public hearing. Three individuals addressed the Board. President Wasserman closed the public hearing.

<p><b>9.a RESULT: HEARING CLOSED</b></p>
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- b. Consider recommendations relating to preserving supportive housing for adults with a serious mental illness. Resolution # BOS-2021-107 (ID# 106875)

Possible action:

- i. Adopt Resolution finding the acquisition of the Property located at 2318 Bluebell Avenue, San Jose is exempt from the California Environmental Quality Act (CEQA); finding that the acquisition serves a public purpose; and approving a delegation of authority to the County Executive, or designee, to negotiate, enter into, and sign all agreements and documents necessary or required for the consummation of the purchase of the Property, including but not limited to the Certificate of Acceptance, and to take all other necessary action to complete the acquisition, subject to final appraisal in an amount up to \$775,000, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive, and subject to Administration's review and approval of due diligence matters and other standard requirements set forth in the final documentation. Delegation of authority shall expire on December 31, 2023.
- ii. Approve delegation of authority to the County Executive, or designee, to negotiate, execute, amend or terminate all legal documents including but not

limited to contracts, loan agreements, deeds of trust, promissory notes, subordination agreements, assignment agreements and amendments, and estoppels, relating to one or more loans with Allied Housing, or affiliate, modifying the terms of the loan, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on December 31, 2023.

Supervisor Chavez requested that Administration ensure that the County maintains long-term ownership of the property.

**9.b RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Otto Lee, Supervisor

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**10. Public Hearing - Purchase of real property for a public park purpose as part of Calero County Park, Assessor's Parcel No. 708-33-008. (Parks and Recreation Department)**

- a. Public hearing to consider consummation of purchase of real property for a public park purpose as part of Calero County Park, Assessor's Parcel No. 708-33-008. (ID# 106689)
  - i. Open public hearing and receive testimony.
  - ii. Close public hearing.

President Wasserman opened the public hearing. Three individuals addressed the Board. President Wasserman closed the public hearing.

**10.a RESULT: HEARING CLOSED**

- b. Consider recommendations relating to intent to purchase real property necessary for public park purpose. Resolution # BOS-2021-105 (ID# 106715)

Possible action:

- i. Adopt Resolution finding the acquisition of the Property located at 23100 McKean Road in the unincorporated area of Santa Clara County, California 95120 (Assessor's Parcel No. 708-33-008) serves a public park purpose, is in conformity with the adopted Parks and Recreation Element of the County General Plan, and is exempt from the California Environmental Quality Act (CEQA); approving the purchase of the Property; authorizing the President of the Board of Supervisors to execute the Purchase and Sale Agreement to acquire the Property; and delegating authority to the County Executive, or designee, to negotiate, amend and execute all documents and agreements necessary to consummate the purchase, including but not limited to the Certificate of Acceptance, following approval as to form and legality by

County Counsel and approval by County Executive, and to take all other necessary action to complete the acquisition. Delegation of authority shall expire on June 30, 2023.

- ii. Approve Request for Appropriation Modification No. 18 - \$5,700,000 transferring funds from the Land Acquisition Holding Account to the Acquisition account for Lakeview property at Calero County Park with the Parks and Recreation Department.

**10.b RESULT:APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Otto Lee, Supervisor

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**11. Public Hearing - Exchange of real property interests (easements) located in the City of San Jose on Assessor's Parcel No. 725-08-003. (Parks and Recreation Department)**

- a. Public hearing to consider recommendations relating to the exchange of real property interests (easements) located in the City of San Jose on Assessor's Parcel No. 725-08-003, for a park purpose. (ID# 106317)
  - i. Open public hearing and receive testimony.
  - ii. Close public hearing.

President Wasserman opened the public hearing. Three individuals addressed the Board. President Wasserman closed the public hearing.

**11.a RESULT:HEARING CLOSED**

- b. Adopt Resolution approving the exchange of easements on property located in the City of San Jose, Assessor's Parcel No. 725-08-003; finding that the exchange is exempt from the California Environmental Quality Act (CEQA); authorizing the President of the Board of Supervisors to execute the Easement Exchange Agreement and Certificate of Acceptance for the exchange of the easements; and approving delegation of authority to the County Executive, or designee, to execute all other documents and agreements necessary to consummate the exchange following approval as to form and legality by County Counsel and approval by the Office of the County Executive. Delegation of authority shall expire on December 31, 2021. Resolution # BOS-2021-108 (ID# 106320)

President Wasserman recessed the meeting at 12:03 p.m.

**11.b RESULT:ADOPTED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**Time Certain - To Be Heard No Earlier Than 11:00 a.m.****12. Direct Administration, the Office of the County Counsel, the Office of Correction and Law Enforcement Monitoring (OCLEM), and any other relevant County department to make public information specified below relating to the County jail and the operations of the Sheriff's Office, transmit that information to relevant parties at the State and local level, and report to the Board of Supervisors with further information. (Simitian/Lee) (ID# 107245)**

## Possible action:

- a. Direct County Counsel to make public prior to the September 14, 2021 Board of Supervisors meeting a copy of County Counsel's February 10, 2020 19-page report relating to the case of Andrew Hogan, redacted to the minimum extent required by law; and, if deemed desirable by County Counsel, a non-confidential summary of that report also accessible to the public.
- b. Direct County Counsel to make public prior to the September 14, 2021 Board of Supervisors meeting a copy of the roughly 38 video/audio recordings related to the August 25, 2018 incident involving the case of Andrew Hogan (amounting to approximately 4.5 hours of content), redacted to the minimum extent required by law.
- c. Direct the Office of Correction and Law Enforcement Monitoring (OCLEM) to review, assess, describe, comment, and make recommendations on the issue of disciplinary action and/or lack thereof (to the maximum extent allowed by law), undertaken by the Sheriff's Office in connection with the Hogan case and report to the Board of Supervisors at the September 14, 2021 meeting, and share that same report with the County's Community Correction and Law Enforcement Monitoring Committee (CCLEMC), to the maximum extent allowed by law.
- d. Direct County Counsel to provide a public report regarding the status of County compliance with consent decrees involving the jail.
- e. Direct Administration to refer the above information, along with any additional relevant information relating to salary, overtime, promotion, and disciplinary action regarding relevant employees (i.e., employees involved in the below incidents), along with information regarding political endorsements, contributions, and independent expenditures by parties associated with these incidents to the California Fair Political Practices Commission (FPPC).
- f. Direct County Counsel to refer this legislative file, attached and/or supporting documents, if any, and all of the above-referenced information (i.e., as noted in paragraphs "a" through "e") to the Santa Clara County Civil Grand Jury for evaluation and consideration pursuant to California Government Code Section 3060 (re: misconduct in office).

- g. Direct County Counsel to refer this legislative file, attached and/or supporting documents, if any, and all of the above-referenced information (i.e., as noted in paragraphs "a" through "e") to the Office of the Attorney General, State of California for investigation relating to a possible pattern or practice of unconstitutional corrections conduct and/or civil rights violations and/or other violations of state or federal law; and for other such actions as may be appropriate consistent with the provisions of Article V Section 13 of the California Constitution, which provides in pertinent part: "The Attorney General shall have direct supervision over every district attorney and sheriff...in all matters pertaining to the duties of their respective offices..."
- h. Direct County Counsel to report to the Board of Supervisors in closed session at the earliest opportunity on the status of litigation involving former County jail inmate Martin Nunez.

President Wasserman reconvened the meeting at 12:30 p.m. with all members present.

Thirty-three individuals addressed the Board.

At the request of Supervisor Lee, the Board directed County Counsel to refer the issue to the United States Department of Justice and Office of the Attorney General, United States, in addition to the Office of the Attorney General, State of California.

At the request of Supervisor Chavez, the Board directed Administration to report to the Board on date uncertain relating to status of the Jail Reform recommendations regarding suicide prevention.

At the request of Supervisor Chavez, the Board further directed County Counsel to ensure that the referral of the issue to the United States Department of Justice allows for sufficient flexibility to address equity issues.

Supervisor Chavez requested that County Counsel ensure that all investigations are inclusive of County policies and roles in operation of the jails, including the provision of medical, mental health, facilities, and other services and funding.

Supervisor Lee requested that Administration provide an off-agenda report to the Board on date uncertain relating to an inquiry from the Chairperson of the Community Correction and Law Enforcement Monitoring Committee to form a potential ad hoc subcommittee with authority to review confidential information.

**12 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** S. Joseph Simitian, Supervisor

**SECONDER:** Otto Lee, Supervisor

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**Time Certain - To Be Heard No Earlier Than 1:00 p.m.****13. Receive report from Public Health Officer and Administration relating to the current status of COVID-19. (ID# 107298) (COVID-19)**

Fifty-three individuals addressed the Board.

Supervisor Chavez requested that Administration resend the list of communications vendors to the Board.

Supervisor Chavez requested that Administration provide weekly updates to the Board relating to contact via phone and in-person with County residents who have received the initial vaccination but not a second dose.

Supervisor Chavez requested that Administration include information in its next report to the Board relating to treatment, including hospital care and actions taken before an individual requires hospitalization.

Supervisor Chavez requested that Administration include information in its next report to the Board relating to logistics regarding simultaneous administration of booster shots, vaccinating children, and continuing door to door vaccinations.

Supervisor Chavez requested that Administration report to the Board on date uncertain relating to communication with County labor unions regarding individuals who request religious or medical vaccination exemptions, including the process to request an exemption online; implications of the request; what happens if the request is not accepted by management; and, processes if the request is not based on religious or medical grounds. Supervisor Chavez further requested that Administration discuss decision-making processes comprehensively with bargaining units, and include information in its report to the Board relating to the hierarchy for approval or denial of the requests and how that information can be communicated to individuals wishing to apply for an exemption.

Supervisor Chavez requested that Administration include information in its next report to the Board relating to processes regarding reasonable accommodations for employees who have been exposed to COVID-19 or need to quarantine, and processes regarding the County telework policy.

Vice President Ellenberg requested that Administration report to the Board on August 31, 2021, or in Closed Session, relating to engagement of labor unions and whether Administration was able to incorporate feedback from labor partners in creating a vaccination policy.

Vice President Ellenberg requested that Administration provide an off-agenda report to the Board on date uncertain relating to how telework for individuals who test positive for COVID-19 or close contacts is built into the County COVID-19 prevention plan.



Supervisor Lee requested that Administration report to the Board on date uncertain relating to total COVID-19 cases in schools; deaths from in-school transmissions among students and staff; cumulative and total school sites open and sites with at least one case; the number of students and teachers who are fully vaccinated, if data is available; breakthrough infections; the number of tests being performed; and, positivity rates.

Supervisor Lee requested that Administration provide an off-agenda report to the Board on date uncertain relating to the feasibility of a vaccination referral incentive program.

Supervisor Simitian requested that Administration report to the Board on September 14, 2021 relating to COVID-19 booster vaccine access, implementation, strategies, and logistics; the role of the County as a public health agency and as a health care provider; including information regarding the capacity of health care providers, including the County, healthcare, and non-profit providers, to administer booster shots, and identify to what extent the County, private, and non-profit providers are required to provide booster shot services; what happens if someone is denied a booster shot by their health care provider; and, fiscal implications.

Supervisor Chavez requested that Administration contact medical partners such as Kaiser Permanente, Stanford Healthcare, and Palo Alto Medical Foundation to report to the Board in September 2021 relating to capacity to administer COVID-19 booster vaccines and, that Administration report to the Board in September 2021 relating to implications of a potential Federal mandate for a COVID-19 booster vaccine on drugstores and other local vaccination providers.

### **13 RESULT: RECEIVED**

#### **Board Referrals**

- 14. Approve referral to Administration to report to the Board on September 14, 2021 with a written plan to administer and/or coordinate booster shots of the COVID-19 vaccine for those who live or work in the County. (Simitian) (ID# 107225) (COVID-19)**

Added to the Consent Calendar at the request of President Wasserman.

### **14 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

#### **Board of Supervisors and Board Appointees**

- 15. Approve County sponsorship of the Healthier Kids Foundation in the amount of \$5,000 from the Supervisorial District Three and Supervisorial District One allocations in the Office of the Clerk of the Board Fiscal Year 2021-2022 budget, to support the 20th Annual Benefit Celebrating Kids. (Lee/Wasserman) (ID# 106975)**

Added to the Consent Calendar at the request of President Wasserman, Vice President Ellenberg, and Supervisor Lee.

**15 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**16. Approve County sponsorship of the Sunnyhills' Neighborhood Association in the amount of \$2,000 from the Supervisorial District Three allocation in the Office of the Clerk of the Board Fiscal Year 2021-2022 budget, to support the Sunnyhills' Neighborhood Association Halloween Party. (Lee) (ID# 106968)**

Added to the Consent Calendar at the request of President Wasserman, Vice President Ellenberg, and Supervisor Lee.

**16 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**17. Consider recommendations relating to sponsoring the Asian Americans for Community Involvement (AACI) Better Together Gala. (Simitian) (ID# 107205)**

Possible action:

- a. Approve waiver of Board of Supervisors' Policy 3.68.4.2 which requires approval of a sponsorship at least 30 days before the event/activity.
- b. Approve County sponsorship of AACI in the amount of \$2,500 from the Supervisorial District Five allocation in the Office of the Clerk of the Board Fiscal Year 2021-2022 budget, to support the Better Together Virtual Gala.

Added to the Consent Calendar at the request of President Wasserman, Vice President Ellenberg, and Supervisor Lee.

**17 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**18. Consider recommendations relating to sponsoring The Health Trust's 25th Anniversary Virtual Celebration. (Simitian) (ID# 106838)**

Possible action:

- a. Approve waiver of Board of Supervisor's Policy 3.68.4.2 which requires approval of sponsorship at least 30 days before the event/activity.

- b. Approve County sponsorship of The Health Trust in the amount of \$5,000 from the Supervisorial District Five allocation in the Office of the Clerk of the Board Fiscal Year 2021-2022 budget, to support The Health Trust's 25th Anniversary Virtual Celebration.

Added to the Consent Calendar at the request of President Wasserman, Vice President Ellenberg, and Supervisor Lee.

**18 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**19. Receive report from County Executive.**

Jeffrey V. Smith, County Executive, stated that he did not have a report.

Vice President Ellenberg requested that Administration report to the Board on August 31, 2021 relating to COVID-19 recovery funds, including information regarding the American Rescue Plan Act (ARPA), with a draft plan for allocation of ARPA funding and gap analysis of applicable funding sources for COVID-19 expenses.

**19 RESULT: RECEIVED**

**20. Receive report from County Counsel on legal issues and Closed Session meeting of August 16, 2021.**

James R. Williams, County Counsel, reported that at the August 16, 2021 Closed Session, by unanimous vote with all members present, the Board authorized the County to intervene in one litigation matter. The name of the action and the defendant, as well as the substance of the litigation, shall be disclosed, once intervention in the litigation is formally commenced, to any person upon inquiry.

Mr. Williams further reported that at the August 16, 2021 Closed Session, by unanimous vote with all members present, the Board approved the appointment of Tiffany Lennear to serve as the Acting Clerk of the Board.

**20 RESULT: RECEIVED**

**Regular Agenda - Items for Discussion**

**21. Under advisement from May 25, 2021 (Item No. 26): Consider recommendations relating to Assisted Outpatient Treatment (AOT). (Behavioral Health Services Department) (ID# 106312)**

Possible action:

- a. Approve the AOT Training and Education Plan and authorize the Behavioral Health Services Department to submit the AOT Training and Education Plan to the

Department of Health Care Services pursuant to Assembly Bill (AB) 1976 requirements.

- b. Approve the recommended advisory process relating to the AOT Implementation Plan.
- c. Receive report relating to a plan to expand behavioral health services and bring wait lists down to zero to support AOT implementation.

Held to August 31, 2021 at the request of President Wasserman.

At the request of Supervisor Lee, the Board directed Administration to contact the Santa Clara County Superior Court prior to August 31, 2021 relating to collaboration to ensure successful implementation of the Assisted Outpatient Treatment program.

**21 RESULT: HELD [UNANIMOUS] Next: 8/31/2021 9:30 AM**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 22. Approve Request for Appropriation Modification No. 25 - \$1,515,633 increasing revenue and expenditures in the Behavioral Health Services Department budget, relating to adding 11 positions for the Assisted Outpatient Treatment program. (4/5 Vote) (ID# 106835)**

Added to the Consent Calendar at the request of Supervisor Chavez.

**22 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 23. Adoption of Salary Ordinance No. NS-5.22.12, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees adding one Health Services Representative position, one Mental Health Peer Support Worker position, one Mental Health Program Specialist II or Mental Health Program Specialist I position, two Psychiatric Social Worker II or Marriage & Family Therapist II or Marriage & Family Therapist I or Psychiatric Social Worker I positions, one Psychologist position, one Rehabilitation Counselor position, three Senior Management Analyst or Management Analyst positions, and one Senior Mental Health Program Specialist position in Behavioral Health Services. (ID# 106836)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

Added to the Consent Calendar at the request of Supervisor Chavez.

**23 RESULT: ADOPTED (PRELIM.) [UNANIMOUS]      Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**24. Under advisement from May 25, 2021 (Item No. 15): Consider recommendations from the Office of the County Executive relating to addressing chronic school absenteeism in Santa Clara County. (ID# 107083)**

Possible action:

- a. Receive report relating to strategies for addressing chronic school absenteeism for the 2021-2022 school year.
- b. Approve delegation of authority to the County Executive, or designee, to negotiate, execute, amend, or terminate Memorandum of Understanding with the Santa Clara County Office of Education related to providing teacher training and supports to address chronic school absenteeism in Santa Clara County, in an amount not to exceed \$500,000 and a contract term that starts no earlier than August 30, 2021 and ends no later than June 30, 2022, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on July 1, 2022.
- c. Approve Request for Appropriation Modification No. 39 - \$500,000 transferring funds from the General Fund Contingency Reserve to the Office of the County Executive budget. (4/5 Vote)

Four individuals addressed the Board.

Vice President Ellenberg noted that the title for the item should reflect "report on chronic absenteeism and school-based mental health services."

At the request of Vice President Ellenberg, the Board directed Administration to carefully evaluate the titles of legislative files in future reports to the Board to ensure that they reflect the entirety of the items under consideration and accurately capture Board direction.

At the request of Supervisor Chavez, the Board directed Administration to the report to the Children, Seniors, and Families Committee in September 2021 relating to framework strategies for partnerships to ensure truancy and absenteeism case management, including partnerships with schools.

At the request of Supervisor Lee, the Board directed Administration to report to the Children, Seniors, and Families Committee on date uncertain relating to options for the inclusion of the Orchard School District in the plan to expand School-Linked Services and prevention and early intervention behavioral health services; and, options to provide behavioral health services to all schools.

At the request of Supervisor Lee, the Board directed Administration to report to the Board on date uncertain relating to the feasibility of providing public transportation for elementary, middle school, and high school students, including information regarding the total number of students at the elementary, middle school, and high school levels; the number of students residing outside of bus zones; and, the number of housing insecure students.

**24 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Susan Ellenberg, Vice President  
**SECONDER:** Cindy Chavez, Supervisor  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**25. Under advisement from June 13, 2021 (Item Nos. 6 and 14): Receive report from the Office of the County Executive relating to the Vietnamese American Service Center. (ID# 107106)**

Held to August 31, 2021 at the request of Supervisor Chavez.

At the request of Supervisor Chavez, the Board directed Administration to report to the Board on August 31, 2021 relating to the reporting and organizational structure of all positions from co-located departments at the Vietnamese American Service Center (VASC).

At the request of Supervisor Chavez, the Board directed Administration to report to the Board on August 31, 2021 relating to options for consideration relating to employing a VASC director position overseeing all functions and operations, and a multi-media communications officer position.

**25 RESULT: HELD [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**26. Consider recommendations from the Office of the County Executive relating to staffing and programming at the Vietnamese American Service Center. (ID# 107096)**

Possible action:

- a. Approve Request for Appropriation Modification No. 036 - \$1,348,137 transferring funds from the Reserve for State and Federal Impacts to the Office of the County Executive, Vietnamese American Service Center.
- b. Approve delegation of authority to the County Executive, or designee, to negotiate, execute, amend, or terminate contracts relating to the provision of specialized services in an aggregate amount not to exceed \$1,500,000 and a contract term that begins no earlier than October 1, 2021 and ends no later than June 30, 2022,

following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on June 30, 2022.

Added to the Consent Calendar at the request of Supervisor Chavez.

**26 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**27. Adoption of Salary Ordinance No. NS-5.22.18, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees adding one Community Outreach Specialist position and five Office Specialist III positions in the Office of the County Executive. (ID# 107097)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

Added to the Consent Calendar at the request of Supervisor Chavez.

**27 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**28. Under advisement from June 15, 2021 (Item No. 53): Consider recommendations relating to Community Engagement Mini Grants. (Office of the County Executive) (ID# 106988)**

Possible action:

- a. Receive report relating to funding Community Engagement Mini Grants for individuals, groups, and organizations to lead community projects that address the concerning rise of hate incidents and acts in Santa Clara County.
- b. Approve delegation of authority to the County Executive, or designee, to negotiate, execute, amend, or terminate agreements with eligible recipients of the Community Engagement Mini Grants in the grant award amounts ranging from \$200-\$2,000 per grant with a total amount for all grants not to exceed \$100,000; and a contract term that starts no earlier than September 1, 2021 and ends no later than June 30, 2022, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on June 30, 2022.
- c. Approve Request for Appropriation Modification No.14 - \$100,000 transferring funds from the General Fund Contingency Reserve to the Office of the County Executive budget. (4/5 Vote)

Two individuals addressed the Board.

Approved as amended to increase the grant range to \$200-\$2,500 per grant; and, to extend the application window until June 30, 2022.

Supervisor Simitian requested that Administration provide an off-agenda report to the Board on date uncertain relating to commencement date of the program.

President Wasserman recessed the meeting at 5:20 p.m.

**28 RESULT: APPROVED AS AMENDED [UNANIMOUS]**

**MOVER:** Otto Lee, Supervisor

**SECONDER:** Cindy Chavez, Supervisor

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**29. Held from August 17, 2021 (Item No. 29): Receive report from the Office of the County Executive on options for consideration relating to obtaining certification by Welcoming America. (ID# 107023)**

Held to September 14, 2021 at the request of Supervisor Lee.

**29 RESULT: HELD [UNANIMOUS] Next: 9/14/2021 9:30 AM**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**30. Under advisement from November 17, 2020 (Item No. 19): Receive quarterly report from the Office of the County Executive relating to the 2021 Data Privacy Day event. (ID# 106898)**

Added to the Consent Calendar at the request of President Wasserman, Vice President Ellenberg, and Supervisor Lee.

**30 RESULT: RECEIVED**

**31. Under advisement from June 22, 2021 (Item No. 34): Consider recommendations relating to an agreement between the County and San Jose State University Research Foundation (SJSURF). (ID# 106982)**

Possible action:

- a. Approve delegation of authority to the County Executive, or designee, to negotiate, execute, amend, or terminate Agreement with San Jose State University Research Foundation relating to providing services for building community education and awareness about the rich histories of local Asian American Activists in an amount not to exceed \$495,650 and a contract term that starts no earlier than August 17, 2021 and ends no later than June 30, 2023, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on June 30, 2023.



- c. Approve usage of Board Policy 5.6.5.1(D)(2)(a), Exceptions to Competitive Procurement (Single Source), relating to the Agreement with San Jose State University Research Foundation for community education and awareness about the rich histories of local Asian American Activists.
- b. Approve Request for Appropriation Modification No. 12 - \$495,650 transferring funds from the General Fund Contingency Reserve to the Office of the County Executive budget. (4/5 Vote)

Added to the Consent Calendar at the request of President Wasserman and Supervisor Lee.

**31 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**32. Under advisement from June 22, 2021 (Item No.17): Consider recommendations relating to the Hate Crime Task Force. (ID# 106985)**

Possible action:

- a. Receive report from the Office of the County Executive, Division of Equity and Social Justice, relating to options for consideration relating to a partnership with San Jose State University Research Foundation (SJSURF) and potentially other academic institutions to provide professional and expert assistance to the Hate Crimes Task Force.
- b. Approve delegation of authority to the County Executive, or designee, to negotiate, execute, amend, or terminate Agreement with San Jose State University Research Foundation relating to providing services for expert support to the Hate Crime Task Force in an amount not to exceed \$250,000 and a contract term that starts no earlier than August 17, 2021 and ends no later than June 30, 2023, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on June 30, 2023.
- c. Approve usage of Board Policy 5.6.5.1(D)(2)(a), Exceptions to Competitive Procurement (Single Source), relating to Agreement with San Jose State University Research Foundation for expert support to the Hate Crime Task Force.
- d. Approve Request for Appropriation Modification No. 13 - \$250,000 transferring funds from the General Fund Contingency Reserve to the Office of the County Executive budget. (4/5 Vote)

Added to the Consent Calendar at the request of Supervisor Chavez.

**32 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**33. Under advisement from June 22, 2021 (Item No. 22): Approve Memorandum of Agreement with Midpeninsula Regional Open Space District relating to the inspection and enforcement of the Ridgeline Protection Easement Deed, dated August 18, 1972. (County Counsel) (ID# 107277)**

Added to the Consent Calendar at the request of President Wasserman and Supervisor Lee.

At the request of Supervisor Chavez, the Board directed Administration to report to the Board in five years relating to the productivity and efficacy of the Memorandum of Agreement with Midpeninsula Regional Open Space District.

**33 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**34. Held from June 8, 2021 (Item No. 29): Receive report from the Office of Supportive Housing relating to community engagement and outreach policies for housing development.**

Held to August 31, 2021 at the request of Administration.

**34 RESULT: HELD [UNANIMOUS] Next: 8/31/2021 9:30 AM****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**35. Under advisement from June 8, 2021 (Item No. 15): Receive report from the Office of the County Executive relating to options for designing and implementing a firearm buy-back program on an annual basis.**

Held to September 14, 2021 at the request of Supervisor Lee.

**35 RESULT: HELD [UNANIMOUS] Next: 9/14/2021 9:30 AM****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**Time Certain - To Be Heard No Earlier Than 6:00 p.m.****36. Under advisement from December 4, 2018 (Item No. 19), November 17, 2020 (Item Nos. 12-15), and April 20, 2021 (Item No. 9): Consider recommendations relating to an Airborne Lead Study of Reid-Hillview Airport. (ID# 103282)**

Possible action:

- a. Receive report from the Office of the County Executive relating to the Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California Study.
- b. Approve funding in the amount of \$90,000 for publication of the Study in a peer-reviewed scientific journal.
- c. Direct County Counsel to submit or join a Petition for Rulemaking to the U.S. Environmental Protection Agency under the authority granted by the Administrative Procedure Act, 5 U.S.C. section 553 to make a finding that lead emissions from general aviation aircraft endanger public health and welfare and issue proposed emission standards for lead from general aviation aircraft under Section 231(a)(2)(A) of the Clean Air Act.
- d. Direct Administration to continue working on securing unleaded aviation gasoline for the County Airports System.
- e. Direct Administration to discuss with California Department of Public Health (CDPH) and Mountain Data Group their interest in and the feasibility of undertaking a broader study of airborne lead emissions at general aviation airports with jurisdictions expressing a desire to participate in a study.

President Wasserman reconvened the meeting at 6:02 p.m. with all members present.

Considered concurrently with Item Nos. 37, 38, and 126.

Two hundred nine individuals addressed the Board.

At the request of Supervisor Chavez, the Board directed Administration to offer technical assistance and expertise to other local jurisdictions considering a similar airborne lead emission study.

At the request of Supervisor Chavez, the Board directed Administration to prepare and implement a robust culturally and linguistically appropriate community education and awareness campaign to educate parents, families, schools, and all sensitive receptors relating to health risks, available medical services, and next steps given the results of the airborne lead study.

At the request of Supervisor Chavez, the Board directed Administration to amend and update all of the County Health Assessments to include the epidemiology of the airborne lead study.

At the request of Supervisor Chavez, the Board directed Administration to recommend actions around anti-displacement policies, public safety and disaster response, and community recreation, including Eastridge Little League baseball, throughout the Reid-Hillview Vision Plan process.

At the request of Supervisors Chavez and Simitian, the Board directed Administration to continue the already approved engagement process with the San Martin community and communities surrounding Moffett Field, Mineta San Jose International, and Palo Alto airports communities.

At the request of Supervisor Chavez, the Board directed Administration to begin testing the lead levels of children incarcerated in juvenile hall.

At the request of Supervisor Ellenberg, the Board directed Administration to report to the Board on date uncertain relating to child lead screening and prevention activities in the County, including any current or potential funding sources available for community remediation efforts.

At the request of Supervisor Lee, the Board directed Administration to report to the Board on date uncertain with a displacement plan for those impacted by the closure of Reid-Hillview Airport, including a comprehensive study relating to minimizing the impact on San Martin Airport and the surrounding area.

The Board received the report from the Office of the County Executive relating to the Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County, California Study.

The Board approved funding in the amount of \$90,000 for publication of the Study in a peer-reviewed scientific journal.

The Board directed County Counsel to submit or join a Petition for Rulemaking to the United States Environmental Protection Agency under the authority granted by the Administrative Procedure Act, 5 U.S.C. Section 553, to make a finding that lead emissions from general aviation aircraft endanger public health and welfare and issue proposed emission standards for lead from general aviation aircraft under Section 231(a)(2)(A) of the Clean Air Act.

The Board directed Administration to continue working on securing unleaded aviation gasoline for the County Airports System; and, at the request of President Wasserman, the Board further directed Administration and County Counsel to collaborate with the private sector and Reid-Hillview Airport Fixed Base Operators responsible for the recent delivery of lead free gas to Reid-Hillview Airport, and take all actions necessary to transition to carrying only lead free gas at both County airports as soon as possible with the understanding that the sales of leaded gas will not be permitted at either County airport after December 31, 2021 except for emergency operations.

The Board directed Administration to discuss with CDPH and Mountain Data Group their interest in and the feasibility of undertaking a broader study of airborne lead emissions at general aviation airports with jurisdictions expressing a desire to participate in a study.

A verbatim transcript of Item Nos. 36, 37, 38 and 126 is attached to these minutes as Appendix A, and is hereby incorporated into the minutes.

**36 RESULT: APPROVED AS AMENDED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**37. Direct Administration and County Counsel to take all necessary actions, including closure, to immediately prevent lead contamination from operations at Reid-Hillview Airport. (ID# 107018)**

Considered concurrently with Item Nos. 36, 38, and 126.

Approved as amended to direct Administration and County Counsel to take such actions as may be necessary to expeditiously eliminate lead exposure from operations at Reid-Hillview Airport, consistent with all established federal, state, and local laws and all court orders. Such actions may include, but are not limited to, both prohibiting the sale or use of leaded fuel, and pursuing any and all available paths to early closure prior to 2031.

**37 RESULT: APPROVED AS AMENDED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**38. Under advisement from November 17, 2020 (Item No. 12): Receive report from the Facilities and Fleet Department and the Roads and Airports Department relating to the development of a community participation framework for collaborative and transparent stakeholder engagement regarding potential land use changes at the Reid-Hillview Airport site. (ID# 104882)**

Considered concurrently with Item Nos. 36, 37 and 126.

**38 RESULT: RECEIVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**39. Consider items previously removed from the Consent Calendar.**

The Clerk noted for the record that Item No. 39 was incorrectly placed under Time Certain - To Be Heard No Earlier Than 6:00 p.m.

No items were removed from the Consent Calendar.

### Closing

#### 40. Adjourn. (See Item No. 4)

President Wasserman adjourned the meeting on August 18, 2021 at 12:03 a.m.

**Consent Calendar - Items will be considered under Item No. 7. Items removed from the Consent Calendar will be considered at the end of the regular agenda.**

#### 41. Minutes Approval:

##### a. Approve minutes of the June 14, 2021 Budget Hearing.

**41.a RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

##### b. Approve minutes of the June 15, 2021 Continued Budget Hearing.

**41.b RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

##### c. Approve minutes of the June 17, 2021 Continued Budget Hearing.

**41.c RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

##### d. Approve minutes of the June 21, 2021 Regular Meeting prior to Closed Session.

**41.d RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

##### e. Approve minutes of the June 22, 2021 Regular Meeting.

**41.e RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Social Services Agency

**42. Approve delegation of authority to the County Executive, or designee, to negotiate, execute, amend, or terminate Contracts with various Adult Education and Community Colleges relating to providing CalWORKs Adult Education Services in an aggregate amount not to exceed \$1,983,000 per fiscal year for period July 1, 2021, through June 30, 2026, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. An exemption to competitive procurement has been approved by the Office of Countywide Contracting Management pursuant to Board of Supervisors Policy 5.6.5.1(D)(1). (ID# 106896)**

**42 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**43. Adoption of Salary Ordinance No. NS-5.22.14, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees deleting one Deputy Public Guardian - Conservator position and adding one Supervising Deputy Public Guardian position in the Social Services Agency. (ID# 106907)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**43 RESULT: ADOPTED (PRELIM.) [UNANIMOUS]      Next: 8/31/2021 9:30 AM**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Santa Clara Valley Health and Hospital System

**44. Approve retroactive amendment to no-cost grant agreement with The Health Trust relating to supporting the redesign of the Valley Café at the Suzanne B. Wilson Women's and Children's Center at Santa Clara Valley Medical Center, extending the agreement for a four-year period through June 30, 2022, that has been reviewed and approved by County Counsel as to form and legality. An exception to Board of Supervisors Policy 5.4.5.4, Length of Term of Contracts, has been approved by the Office of Countywide Contracting Management. (ID# 107094)**

**44 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**45. Deleted.**

**46. Approve Eighth Amendment to Agreement with Triage, LLC relating to providing temporary technologist staffing services increasing the maximum contract amount by \$900,000 from \$3,005,268 to \$3,905,268, with no change to the term of the Agreement, that has been reviewed and approved by County Counsel as to form and legality. (ID# 107007)**

**46 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**47. Approve Request for Appropriation Modification No. 35 - \$727,532 increasing revenue and expenditures in the Santa Clara Valley Medical Center Hospitals and Clinics budget, relating to the Clinical Clerkship Program. (4/5 Vote) (ID# 107078)**

**47 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**48. Adoption of Salary Ordinance No. NS-5.22.09, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees adding one House Staff Coordinator position in the Santa Clara Valley Medical Center. (ID# 107069)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**48 RESULT: ADOPTED (PRELIM.) [UNANIMOUS]      Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**49. Approve Request for Appropriation Modification No. 30 - \$2,084,800 transferring funds from the General Fund Contingency Reserve and General Fund Reserve for Federal and State Impacts to the Santa Clara Valley Medical Center Hospitals and Clinics budget, relating to the Sexual Assault Response Team program. (4/5 Vote) (ID# 107130)**

**49 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian



**50. Ratify Grant Application submitted by Ambulatory and Community Health Services and Santa Clara Valley Medical Center Hospitals and Clinics to El Camino Healthcare District relating to grant funding for dental services in North County in the amount of \$530,000 for period July 1, 2021 through June 30, 2022. (ID# 106955)**

**50 RESULT: RATIFIED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Public Health Department

**51. Adoption of Salary Ordinance No. NS-5.22.10, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees adding one unclassified Supervising Materials Supply Specialist position in the Public Health Department. Position shall expire at 11:59 p.m. on March 5, 2023. (ID# 107072)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**51 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Behavioral Health Department

**52. Consider recommendations relating to the Mental Health Service Oversight and Accountability Commission (MHSOAC) funding for Early Psychosis Intervention Plus program. (ID# 106808)**

Possible action:

- a. Approve retroactive Agreement with the MHSOAC relating to providing funding to support Early Psychosis Intervention Plus services in an amount not to exceed \$1,736,270 for period August 1, 2021 through August 31, 2025, that has been reviewed and approved by County Counsel as to form and legality.
- b. Approve Request for Appropriation Modification No. 10 - \$1,736,270 increasing revenue and expenditures in the Behavioral Health Services Department budget, relating to grant funding to support Early Psychosis Intervention Plus services. (4/5 Vote)

**52 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Employee Services Agency

**53. Adoption of County of Santa Clara Master Salary Ordinance No. NS-5.22, an Ordinance relating to offices of the County of Santa Clara fixing the compensation and salary of deputies, assistants, and employees in such offices, and repealing all other ordinances in conflict herewith. (ID# 107038)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**53 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**54. Adoption of Salary Ordinance No. NS-5.22.01, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees deleting alternately-staffed Associate Management Analyst or Management Aide positions in various agencies and departments, and adding alternately-staffed Management Analyst or Associate Management Analyst positions, or alternately-staffed Management Analyst or Associate Management Analyst or Management Aide positions, in various agencies and departments. (ID# 106489)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**54 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**55. Adoption of Salary Ordinance No. NS-5.22.02, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees deleting one Administrative Services Manager I position and adding one Administrative Services Manager II position in the Employee Services Agency. (ID# 106883)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**55 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**56. Adoption of Salary Ordinance No. NS-5.22.04, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees adding Footnote No. 249, authorizing a differential for employees designated on a scheduled assignment status as a Sexual Assault Forensic Examiner or Nurse Assistant, and Footnote No. 250, authorizing a differential for employees designated on a scheduled assignment status and called to perform forensic exam and nurse assistant duties for the Sexual Assault Response Team in Santa Clara Valley Medical Center. (ID# 106904)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**56 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**57. Approve Tentative Agreement with the Santa Clara County Probation Peace Officers' Union, Local 1587, AFSCME relating to canine handler compensation consistent with the terms of the side letter. (ID# 106800)**

**57 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**58. Adoption of Salary Ordinance No. NS-5.22.03, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees adding Footnote No. 251 authorizing a differential and stipend for represented employees of the Probation Peace Officers' Union, Local 1587, AFSCME when assigned to canine handler. (ID# 106820)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**58 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**59. Approve Tentative Agreement with the Santa Clara County Correctional Peace Officers' Association, Inc., relating to canine handler compensation consistent with the terms of the side letter. (ID# 106913)**

**59 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**60. Adoption of Salary Ordinance No. NS-5.22.05, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees adding Footnote No. 252 authorizing a differential for represented employees of the Correctional Peace Officers' Association, Inc., when assigned to canine handlers. (ID# 106912)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**60 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**61. Adoption of Salary Ordinance No. NS-5.22.08, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees deleting one Principal IT Manager position in Valley Health Plan. (ID# 107080)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**61 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**62. Adoption of Executive Leadership Salary Ordinance No. NS-20.21.02, an Ordinance amending Santa Clara County Executive Leadership Salary Ordinance No. NS-20.21 relating to compensation of employees adding one Valley Health Plan - Assistant Director, Managed Care Programs in the Santa Clara Valley Health and Hospital System - Valley Health Plan. (ID# 107079)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**62 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**63. Approve job specifications and amend Classification Plan to add classifications of Senior Privacy Analyst, Privacy Analyst, and Associate Privacy Analyst. (ID# 107090)**

**63 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**64. Adoption of Salary Ordinance No. NS-5.22.07, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees deleting one Program Manager I position and two Program Manager II positions and adding one Privacy Analyst or Associate Privacy Analyst position and two Senior Privacy Analyst positions in the Office of the County Executive and amending the Salary Schedule to add the classifications of Associate Privacy Analyst, Privacy Analyst, and Senior Privacy Analyst. (ID# 107091)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**64 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**65. Adoption of Salary Ordinance No. NS-5.22.06, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees amending the Salary Schedule to increase the salaries of various represented and unrepresented classifications. (ID# 107029)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**65 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**66. Approve Tentative Agreement with the Santa Clara County Government Attorneys Association relating to mandatory holiday work compensation consistent with the terms of the side letter. (ID# 106773)**

**66 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**67. Approve Tentative Agreement with Service Employees' International Union Local 2015, Homecare Worker Chapter, for In-Home Supportive Services, effective January 31, 2021 through January 31, 2024. (ID# 107099)**

**67 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**68. Receive Fiscal Year 2020-2021 year-end report from the Employee Services Agency, Human Resources Department relating to fourth and fifth step appointments, administrative position add/delete actions, and administrative classification specification revisions. (ID# 107057)**

**68 RESULT: RECEIVED**

### Board of Supervisors

**69. Announce adjournment in honor and memory of Larry Lisenbee. (Chavez) (ID# 107052)**

**69 RESULT: RECEIVED**

**70. Announce travel for elected officials as follows:**

- a. Supervisor Lee traveled to Sacramento to attend the California State Association of Counties New Supervisors Institute on August 10-12, 2021. (ID# 106994)

**70.a RESULT: RECEIVED**

- b. Lawrence E. Stone, Assessor, traveled to Squaw Valley to attend the Northern California Assessors' Association Regional Conference on August 2-5, 2021. (ID# 106855)

**70.b RESULT: RECEIVED**

- c. Lawrence E. Stone, Assessor, will travel to Chicago, Illinois to attend the International Association of Assessing Officers 87th Annual Conference on Assessment Administration on August 29 - September 1, 2021. (ID# 106857)

**70.c RESULT: RECEIVED**

**71. Consider the following meeting attendance reports:**

- a. Receive report from Supervisorial District One relating to meetings attended through August 17, 2021. (ID# 107137)

**71.a RESULT: RECEIVED**

- b. Receive report from Supervisorial District Two relating to meetings attended through August 17, 2021. (ID# 107232)

**71.b RESULT: RECEIVED**

- c. Receive report from Supervisorial District Three relating to meetings attended through August 17, 2021. (ID# 106711)

**71.c RESULT: RECEIVED**

- d. Receive report from Supervisorial District Four relating to meetings attended through August 12, 2021. (ID# 107182)

**71.d RESULT: RECEIVED**

- e. Receive report from Supervisorial District Five relating to meetings attended through August 16, 2021. (ID# 107231)

**71.e RESULT: RECEIVED****Health and Hospital Committee**

- 72. Receive report from the Health and Hospital Committee relating to the special meeting of June 24, 2021. (Simitian) (ID# 106834)**

**72 RESULT: RECEIVED**

- 73. Receive report from the Health and Hospital Committee relating to the meeting of June 30, 2021. (Simitian) (ID# 106863)**

**73 RESULT: RECEIVED****Children, Seniors, and Families Committee**

- 74. Receive report from the Children, Seniors and Families Committee relating to the meeting of June 24, 2021. (Chavez) (ID# 107226)**

**74 RESULT: RECEIVED**

- 75. Receive report from the Children, Seniors and Families Committee relating to the meeting of April 22, 2021. (Chavez) (ID# 106873)**

**75 RESULT: RECEIVED**

## County Executive

**76. Approve First Amendment to Agreement with Social and Environmental Entrepreneurs, relating to a train-the-trainers program based on the Ollin Girls Curriculum, increasing the maximum contract amount by \$10,155 from \$50,000 to \$60,155 and extending the Agreement for a ten-month period through June 30, 2022, that has been reviewed and approved by County Counsel as to form and legality. (ID# 106991)**

**76 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**77. Approve retroactive Fourth Amendment to Agreement with Enterprise Foundation, Inc., relating to providing economic development assistance to small businesses county-wide through the operation of the Silicon Valley and Hispanic Satellite Small Business Development Center Programs, increasing the maximum contract amount by \$280,000 from \$842,000 to \$1,122,000, with no change to the term of the agreement, that has been reviewed and approved by County Counsel as to form and legality. (ID# 106425)**

**77 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**78. Approve First Amendment to Agreement with Reflection Press relating to providing gender-affirming training for providers and healing-focused workshops for community, with no change to the maximum contract amount, and extending the Agreement for a twelve-month period through August 31, 2022, that has been reviewed and approved by County Counsel as to form and legality. (ID# 106996)**

**78 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**79. Consider recommendations relating to adult reentry services. (ID# 107088)**

Possible action:

- a. Approve retroactive Second Amendment to Agreement with FIRST 5 Santa Clara County relating to providing evidence-based parenting education classes increasing the maximum contract amount by \$250,000 from \$250,000 to \$500,000 and extending the agreement for a 12-month period through June 30, 2022, that has been reviewed and approved by County Counsel as to form and legality.



- b. Approve retroactive Second Amendment to Agreement with Santa Clara County Office of Education relating to education programming for reentry clients, increasing the maximum contract amount by \$950,294 from \$238,129 to \$1,188,423 and extending the agreement for a 24-month period through June 30, 2023, that has been reviewed and approved by County Counsel as to form and legality.
- c. Approve Fourth Amendment to Agreement with San Jose State University Research Foundation relating to service navigation for reentry clients, increasing the maximum contract amount by \$744,445 from \$1,445,890 to \$2,233,335 and extending the agreement for an 11-month period through June 30, 2022, that has been reviewed and approved by County Counsel as to form and legality.
- d. Approve Third Amendment to Agreement with Mental Health Systems relating to service navigation for reentry clients, increasing the maximum contract amount by \$1,200,000 from \$2,400,000 to \$3,600,000 and extending the agreement for an 11-month period through June 30, 2022, that has been reviewed and approved by County Counsel as to form and legality.

**79 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**80. Consider recommendations relating to California Governor's Office of Emergency Services: State Homeland Security Grant Program, Emergency Management Performance Grant, Urban Areas Security Initiative, Building Resilient Infrastructure and Communities; and, related grant programs. Resolution # BOS-2021-109 (ID# 107013)**

Possible action:

- a. Adopt Resolution authorizing the County Executive, Chief Operation Officer, or a Deputy County Executive to execute grant applications, grant agreements, grant budget modifications, reimbursement requests, and subsequent amendments relating to the Emergency Management Performance Grant (EMPG) Program, State Homeland Security Grant Program (SHSGP), Urban Areas Security Initiative (UASI) Program, and Building Resilient Infrastructure and Communities (BRIC) Program
- b. Approve delegation of authority to the County Executive, or in the County Executive's absence or unavailability, the Chief Operating Officer or a Deputy County Executive, to negotiate, execute, amend, terminate, and take any and all necessary or advisable actions relating to obtaining grant funds, including executing grant applications, grant agreements, grant budget modifications, reimbursement requests, subsequent amendments, and any and all actions necessary with the U.S.

Department of Homeland Security, the California Governor's Office of Emergency Services, the Bay Area UASI, and jurisdictions in the Operational Area relating to the SHSGP, EMPG, UASI, and BRIC grant programs for period July 1, 2021 through May 31, 2024, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire December 31, 2024.

**80 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**81. Adoption of Salary Ordinance No. NS-5.22.16, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees deleting one Office Specialist III position and adding one Management Analyst or Associate Management Analyst position in the Office of the County Executive. (ID# 107030)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**81 RESULT: ADOPTED (PRELIM.) [UNANIMOUS] Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**82. Approve County sponsorship of the Gay Pride Celebration Committee of San José in the amount of \$10,000 from the Office of LGBTQ Affairs, Office of the County Executive Fiscal Year 2021-2022 budget, to support the Silicon Valley Pride Parade and Festival 2021. (ID# 106997)**

**82 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**83. Deleted.**

**84. Receive monthly status report on items referred to Administration. (ID# 106822)**

**84 RESULT: RECEIVED**

### Office of Supportive Housing

**85. Consider recommendations relating to budget modifications in the Office of Supportive Housing Fiscal Year 2021-2022 Budget. (ID# 107032) (COVID-19)**

## Possible action:

- a. Approve Request for Appropriation Modification No. 33 - \$61,783,842 increasing revenue and expenditures in the Office of Supportive Housing budget, relating to U.S. Treasury Emergency Rental Assistance funds, Community Development Block Grant - CV3 funds, Federal Emergency Management Agency reimbursement for costs related to emergency, non-congregate sheltering in response to the COVID-19 pandemic and Homeless Housing, Assistance and Prevention Program Round 2. (4/5 Vote)
- b. Approve Request for Appropriation Modification No. 41 - \$43,892,110 transferring funds within the Office of Supportive Housing budget relating to tracking revenue and expenses for the Emergency Rental Assistance (ERA) Program.

**85 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 86. Approve Grant of Easement to San Jose Water Company to install, operate, maintain and replace a water conveyance infrastructure located on County-owned property at 2358 Alum Rock Avenue, San Jose, to facilitate the construction of affordable and supportive housing. (ID# 106087)**

**86 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 87. Approve retroactive First Amendment to Agreement with Abode Services relating to providing housing needs assessment and linkages to services increasing the maximum contract amount by \$339,764 from \$901,000 to \$1,240,764, with no change to the term of the Agreement, that has been reviewed and approved by County Counsel as to form and legality. (ID# 106984)**

**87 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 88. Approve retroactive Second Amendment to Agreement with YWCA Silicon Valley relating to providing Supportive Housing Services increasing the maximum contract amount by \$448,007 from \$497,691 to \$945,698, and extending the agreement for a 24-month period through June 30, 2023, that has been reviewed and approved by County Counsel as to form and legality. (ID# 106794)**

**88 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**Procurement Department****89. Consider recommendations relating to diagnostics imaging systems with related services and support. (ID# 107040)**

Possible action:

- a. Approve Fourth Amendment to Agreement No. 5500003126 with Siemens Medical Solutions USA, Inc., relating to providing maintenance service and support for Siemens diagnostics imaging systems increasing the maximum contract amount by \$1,850,000 from \$9,800,000 to \$11,650,000, and extending the Agreement for a 41-month period through September 24, 2028, that has been reviewed and approved by County Counsel as to form and legality. An exception to Board of Supervisors Policy 5.4.5.4, Length of Term of Contracts, has been approved by the Office of Countywide Contracting Management.
- b. Approve Fourth Amendment to Agreement No. 5500003127 with Siemens Medical Solutions USA, Inc., relating to providing diagnostics imaging systems increasing the maximum contract amount by \$3,442,000 from \$11,693,000 to \$15,135,000 with no change to the term of the Agreement, that has been reviewed and approved by County Counsel as to form and legality.

**89 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**Technology Services and Solutions Department****90. Consider recommendations relating to County of Santa Clara Health System Enterprise Core Healthcare Information System. (ID# 107051)**

Possible action:

- a. Approve Thirty-First Amendment to Agreement with Epic Systems Corporation relating to providing licensing and support of the Enterprise Core Health Information System increasing the maximum contract amount by \$120,500,000 from \$83,919,353 to \$204,419,353, and extending the Agreement for a 120-month period through January 11, 2032, that has been reviewed and approved by County Counsel as to form and legality. An exception to Board of Supervisors Policy 5.4.5.4, Length of Term of Contracts, has been approved by the Office of Countywide Contracting Management.

- b. Approve amended delegation of authority to the County Executive, or designee, to negotiate, execute, amend, terminate and take any and all necessary or advisable actions relating to modifying the license and support agreement with Epic Systems Corporation, increasing the maximum delegated amount by \$120,500,000 from \$83,919,353 to \$204,419,353, and extending the delegated contract term limit through January 11, 2027, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on January 11, 2027.
- c. Approve amended delegation of authority to the County Executive, or designee, to negotiate, execute, amend, terminate, and take any and all necessary or advisable actions relating to licensing and/or service agreements with third-party software vendors that enable the integration of devices with the Epic system with no change to the delegated amount of \$15,000,000, and extending the delegated contract term limit through January 11, 2027, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on January 11, 2027.

**90 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Boards and Commissions

- 91. Receive report from Measure A (2016 Housing Bond) Independent Citizens' Oversight Committee relating to the Fiscal Year 2020-2021 Third Quarter Report from the Independent Auditor. (ID# 106833)**

**91 RESULT: RECEIVED**

- 92. Consider recommendations relating to Commission on the Status of Women (CSW) collaboration with state and national-level associations. (ID# 106832)**

Possible action:

- a. Authorize CSW to join the Association of California Commissions for Women (ACCW) and the National Association of Commissions for Women.
- b. Appoint CSW Commissioner Lisa Liddle to serve on the ACCW in the role of "Commissioner-at-Large" for Fiscal Year 2021-2022.

**92 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**93. Approve Commissioner attendance at the American Planning Association 2021 California Virtual Conference on September 15-18, 2021, for Planning Commissioner Marc Rauser. (ID# 107115)**

**93 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**94. Receive announcement of appointments and reappointments by individual Board members to various Boards and Commissions:**

a. Supervisor Wasserman: (ID# 107169)

ii. Appoints Sean O'Donoghue to the Planning Commission, seat number 7.

iii. Reappoints Marilyn Librers to the Hsinchu County, Taiwan, Republic of China Sister-County Commission, seat number 13.

**94.a RESULT: RECEIVED**

b. Supervisor Chavez: (ID# 107199)

i. Reappoints Elinor Stetson to the Health Advisory Commission, seat number 5.

ii. Reappoints Elinor Stetson to the Measure A Citizens' Oversight Committee (2008), seat number 7.

**94.b RESULT: RECEIVED**

c. Supervisor Simitian: (ID# 107131)

i. Appoints Pria Graves to the Historical Heritage Commission, seat number 4.

**94.c RESULT: RECEIVED**

**95. Approve Board-As-a-Whole appointments and reappointments to various Boards and Commissions:**

a. Supervisor Wasserman nominates: (ID# 107170)

i. Khoa-Nathan Ngo for appointment to the HIV Commission, seat number 9.

ii. Yoriko Kishimoto for appointment to the San Francisco Bay Conservation and Development Commission, as the second alternate to seat number 1.

**95.a RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- b. Supervisor Simitian nominates: (ID# 107129)
- i. Sherry Sager for reappointment to the Santa Clara County Health Authority Governing Board of Directors, seat number 10.

Item No. 95b. was corrected to reflect the appointee's name as Sherri Sager.

**95.b RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 96. Accept the resignation of Alicia Newton from the Child Abuse Prevention Council.**  
(ID# 106837)

**96 RESULT: ACCEPTED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**Law and Justice**

- 97. Approve Request for Appropriation Modification No. 15 - \$980,018 increasing revenue and expenditures in the Office of the District Attorney budget, relating to various grant awards. (4/5 Vote) (ID# 107114)**

**97 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 98. Consider recommendations relating to the Youth Programs and Facilities Grant Program.** Resolution # BOS-2021-110 (ID# 107025)

Possible action:

- a. Ratify Grant Application submitted by the Probation Department to the Board of State and Community Corrections relating to grant funding for the Youth Programs and Facilities Grant Program in the amount of \$356,000 for the period of June 10, 2021 through June 1, 2024.
- b. Adopt Resolution authorizing the delegation of authority to the County Executive, or designee, to negotiate, execute, amend, or terminate the Grant Agreement with the Board of State and Community Corrections for the Youth Programs and Facilities Grant Program, in an amount not to exceed \$356,000 for period June 10, 2021 through June 1, 2024, following review and approval by County Counsel as to form and legality. Delegation of authority shall expire on June 1, 2024.

- c. Approve Request for Appropriation Modification No. 27 - \$356,000 increasing revenue and expenditures in the Probation Department budget, relating to the Youth Programs and Facilities Grant Program. (4/5 Vote)

**98 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Finance Agency

- 99. Approve Request for Appropriation Modification No. 31 - \$1,088,912,327 increasing revenue and expenditures in the County Debt Service and the Office of Supportive Housing budgets, relating to the issuance of the County of Santa Clara Affordable Housing General Obligation Bonds (Election of 2016) 2021 Series B. (4/5 Vote) (ID# 106989)**

**99 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 100. Approve Request for Appropriation Modification No. 32 - \$785,208,069 increasing revenues and expenditures in the County Debt Service and Facilities and Fleet budgets, relating to the issuance of the Santa Clara County Financing Authority Lease Revenue Bond 2021 Series A. (4/5 Vote) (ID# 107049)**

**100 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- 101. Adopt Resolution approving the issuance by the California Enterprise Development Authority of its revenue obligations for the benefit of Pacific Autism Center for Education in an aggregate amount not to exceed \$4,700,000 for the purpose of refinancing the cost of the acquisition, construction, rehabilitation, equipping and furnishing of certain property, providing the terms and conditions for such approval and other matters relating thereto. Resolution # BOS-2021-111 (ID# 107021)**

**101 RESULT: ADOPTED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian



**102. Approve First Amendment to Agreement with Wells Fargo Bank relating to providing operational banking services increasing the maximum contract amount by \$1,320,000 from \$1,320,000 to \$2,640,000, and extending the agreement for a 12-month period through October 31, 2022, that has been reviewed and approved by County Counsel as to form and legality. (ID# 107059)**

**102 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**103. Adopt Resolution authorizing the Loma Prieta Joint Union Elementary School District to sell Election of 2018 General Obligation Bonds, Series B, on its own behalf in an amount not to exceed \$4,000,000. Resolution # BOS-2021-112 (ID# 105536)**

**103 RESULT: ADOPTED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Commendations and Proclamations

**104. Commendations and Proclamations. (See Item No. 5)**

- a. Adopt Commendation for Atticus Ginsborg for achieving the highest Boy Scout rank of Eagle Scout. (Chavez) (ID# 107171)

**104.a RESULT: ADOPTED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- b. Adopt Commendation for Reverend Jethroe Moore II for his years of tireless dedication, commitment, and advocacy for all residents of Santa Clara County. (Chavez) (ID# 106992)

**104.b RESULT: ADOPTED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- c. Adopt Commendation for Enedina Cardenas on her selection as a 2021 Woman of Influence by the Silicon Valley Business Journal. (Chavez) (ID# 106903)

**104.c RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- d. Adopt Commendation for Alum Rock Union Elementary School District on the occasion of its 90th anniversary. (Chavez) (ID# 107228)

**104.d RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- e. Adopt Commendation for the Sí Se Puede Collective in honor of the innovative model pilot for crisis response and intervention through its community health workers, staff, and affiliated community business collectives, or Guerrer@s, during the COVID-19 pandemic. (Chavez) (ID# 107229) (COVID-19)

**104.e RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- f. Adopt Commendation for Marcus Stephens for achieving the highest Boy Scout rank of Eagle Scout. (Chavez) (ID# 107230)

**104.f RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- g. Adopt Commendation for Amy Fang for 20 years of service improving the health and quality of life of residents in Santa Clara County. (Lee) (ID# 107213)

**104.g RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- h. Adopt Commendation for Hot San Jose Nights for its success over the years in continuing the enrichment of the aviation and car shows for the residents in Santa Clara County. (Lee) (ID# 107208)

**104.h RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- i. Adopt Commendation for Barbara Avery in recognition of her efforts to improve the health of Santa Clara County. (Simitian) (ID# 107207)

**104.i RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- j. Adopt Commendation for Sharon Kreider for over ten years of service as a member of Assessment Appeals Board III. (Clerk of the Board) (ID# 107085)

**104.j RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- k. Adopt Proclamation declaring August 2021 as "Child Support Awareness Month" in Santa Clara County. (Department of Child Support Services) (ID# 106788)

**104.k RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- l. Adopt Proclamation declaring September 10, 2021 as "Family Reunification Day" in Santa Clara County. (Social Services Agency) (ID# 106986)

**104.l RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

- m. Adopt Commendations for honorees of Family Reunification Day for their success in reuniting as families and providing support to help parents overcome challenges to reunite with their children. (Social Services Agency) (ID# 107076)

**104.m RESULT: ADOPTED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**105. Approve Certificates of Appreciation to Employee Excellence Award Honorees for August 2021. (Office of the County Executive) (ID# 107037)**

- a. Mariana Lopez, Division Manager Records, Clerk of the Board
- b. Chinh Nguyen, Biologist/Standards Specialist, Consumer and Environmental Protection Agency
- c. Sharon Kelly, Children's Supervising Librarian, County Library
- d. Emilia Mancilla, Criminalist III, Office of the District Attorney
- e. Vaandaana Puri, Interim Nutrition Services Manager/Managing Dietician, Social Services Agency
- f. Joselita Chua, Psychiatrist, Santa Clara Valley Health and Hospital System
- g. Selene Ho, Health Center Manager, Santa Clara Valley Health and Hospital System
- h. Diana Barnes, IT Manager, Technology Services and Solutions Department
- i. Joseph Luiz, Deputy - Custody Bureau, Office of the Sheriff
- j. April Bracamonte, Election Process Supervisor, Registrar of Voters

Item No. 105e was corrected to reflect the honoree's name as Vandana Puri.

**105 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**Department of Planning and Development**

**106. Adoption of Ordinance No. NS-1100.134 amending Division C1 of Title C of the County of Santa Clara Ordinance Code to rename Article 3 of Chapter 1 and adding a new Article 8 to Chapter 1 pertaining to implementation of State Minimum Fire Safe Regulations. California Environmental Quality Act (CEQA): Exempt pursuant to Section 15061(b)(3) of the CEQA Guidelines. (ID# 106947)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

This ordinance establishes procedures for implementing the State Minimum Fire Safe Regulations.

At the request of Supervisor Lee, the Board directed Administration to conduct community outreach relating to the Ordinance change, and provide an off-agenda report to the Board prior to August 31, 2021 relating to the feedback received and the type of outreach conducted; and, further directed Administration to add a link to the proposed Ordinance language to the County website.

**106 RESULT: ADOPTED (PRELIM.) [UNANIMOUS]      Next: 8/31/2021 9:30 AM**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### Parks and Recreation Department

**107. Receive annual summary report from the Department of Parks and Recreation, relating to the status of Historic Grant Program projects with open Historic Grant Program Funding Agreements. (ID# 105963)**

**107 RESULT: RECEIVED**

**108. Consider recommendations from the Parks and Recreation Department relating to amendments to professional service agreements. (ID# 106288)**

Possible action:

- a. Approve Third Amendment to Professional Services Agreement with RRM Design Group relating to provision of planning and design consultant services increasing the maximum contract amount by \$500,000 from \$1,000,000 to \$1,500,000, and extending the agreement for a six-month period through May 17, 2022, that has been reviewed and approved by County Counsel as to form and legality.
- b. Approve Fourth Amendment to Professional Services Agreement with BFS Landscape Architects relating to provision of planning and design consultant services with no change to the maximum contract amount, and extending the agreement for a six-month period through May 17, 2022, that has been reviewed and approved by County Counsel as to form and legality.

**108 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**109. Approve an increase in the Supplemental Work Allowance (SWA) for the Water Tank Improvements at Mt. Madonna and Stevens Creek County Parks Project, Contract No. 19-06, awarded to Top Line Engineers Inc., increasing the SWA by \$200,000 from \$141,500 to \$341,500, for a new total contract encumbrance of \$1,870,360. (ID# 106932)**

**109 RESULT: APPROVED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

## Consumer and Environmental Protection Agency

**110. Approve Third Amendment to Agreement with The Regents of the University of California relating to providing Agriculture, Forestry and Nutrition Program services increasing the maximum contract amount by \$150,000 from \$1,689,738 to \$1,914,738, with no change to the term of the Agreement, that has been reviewed and approved by County Counsel as to form and legality. (ID# 106949)**

**110 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

## Roads and Airports Department

**111. Consider recommendations relating to the transfer of approximately 15,175 square feet of County-owned land, portions of Assessor's Parcel Nos. (APN's) 484-33-110, 491-01-016, 491-05-020 and 491-15-003, located adjacent to Capitol Expressway in San Jose to the County of Santa Clara for public street and right-of-way purposes. (ID# 107016)**

Possible action:

- a. Approve Grant Deed transferring 841 square foot of County-owned land, portion of APN 484-33-110, located adjacent to the easterly side of Capitol Expressway north of Mervyns Way in San Jose to the County of Santa Clara for public street and right-of-way purposes.
- b. Approve Grant Deed transferring 761 square foot of County-owned land, portion of APN 491-01-016, located adjacent to the easterly side of Capitol Expressway south of Cunningham Avenue in San Jose to the County of Santa Clara for public street and right-of-way purposes.
- c. Approve Grant Deed transferring 2,535 square foot of County-owned land, portion of APN 491-05-020, located adjacent to the westerly side of Capitol Expressway between Swift Lane and Tully Road in San Jose to the County of Santa Clara for public street and right-of-way purposes.
- d. Approve Grant Deed transferring 11,038 square foot of County-owned land, portion of APN 491-15-003, located adjacent to the westerly side of Capitol Expressway south of Ocala Avenue in San Jose to the County of Santa Clara for public street and right-of-way purposes.

**111 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**112. Approve the Project, adopt plans and specifications, and authorize advertisement of Contract Documents for the Bridge Preventive Maintenance Project (Anderson Reservoir Bridge #37C0166 at East Dunne Ave, Llagas Creek Bridge #37C0820 at Edmundson Ave, Lions Creek Bridge #37C0354 at Kern Ave, and Pacheco Creek Bridge # 37C0531 at Dunne Ave) and direct the Clerk of the Board to open bids on Thursday, September 9, 2021, at 2:00 p.m., in the Office of the Clerk of the Board of Supervisors. For the duration of the County emergency due to COVID-19 and requisite social distancing requirements by order of the Public Health Officer, the opening of bids shall be made available to the public via virtual teleconference, a link to which will be posted via Addendum to the Invitation to Bid no later than 72 hours before the time scheduled for the opening of bids. The results will be posted on the Clerk of the Board website no later than the following day. (ID# 106920)**

**112 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**113. Approve the Project, adopt Plans and Specifications, and authorize advertisement of Contract Documents for the Lawrence Expressway Pavement Rehabilitation Project between US-101 and SR-237, and direct the Clerk of the Board to open bids on Thursday, September 9, 2021, at 2:00 p.m., in the Office of the Clerk of the Board of Supervisors. For the duration of the County emergency due to COVID-19 and requisite social distancing requirements by order of the Public Health Officer, the opening of bids shall be made available to the public via virtual teleconference, a link to which will be posted via Addendum to the Invitation to Bid no later than 72 hours before the time scheduled for the opening of bids. The results will be posted on the Clerk of the Board website no later than the following day. (ID# 106892)**

**113 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**114. Approve Second Amendment to Agreement with Crawford Consulting relating to providing reporting and monitoring for the National Pollutant Discharge Elimination System discharge permit for the Oregon Expressway Underpass Pump Station, increasing the maximum contract amount by \$148,074 from \$338,250 to \$486,324, and extending the agreement for a 24-month period through August 31, 2023, that has been reviewed and approved by County Counsel as to form and legality. An exception to Board of Supervisors Policy 5.4.5.4, Length of Term of Contracts, has been approved by the Office of Countywide Contracting Management. (ID# 106936)**

**114 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**115. Adoption of Salary Ordinance No. NS-5.22.13, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.22 relating to compensation of employees deleting one Road Dispatcher position and adding one Administrative Assistant position in the Roads Department. (ID# 107000)**

- Introduce, waive reading, and preliminarily adopt on August 17, 2021.
- Adopt (Final) on August 31, 2021.

**115 RESULT: ADOPTED (PRELIM.) [UNANIMOUS]      Next: 8/31/2021 9:30 AM****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**116. Consider recommendations relating to Bids for construction of Page Mill Road Intersection Improvements at Hanover Street. (ID# 106922)**

Possible action:

- a. Award contract to Redgwick Construction Company in the amount of \$1,007,004 which includes an allowance for Supplemental Work in accordance with the Contract Documents, and a construction duration of 120 working days.
- b. Authorize the County Executive, or designee, to issue Change Orders against the allowance for Supplemental Work and to approve modifications to the construction time.
- c. Authorize Director, Roads and Airports Department, to approve changes that the Director deems reasonable and necessary to the Board-approved construction documents with such approval to occur in advance of the construction authorized by such changes.
- d. Ratify Addendum No. 1 to the Bid Documents, which changed the bid opening to a video teleconference.
- e. Ratify Addendum No. 2 to the Bid Documents, which provided the correct links for the video teleconference.

**116 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian



## Facilities and Fleet Department

### 117. Receive report relating to Emergency Procurement to repair underground water leak at Elmwood W2. (ID# 106466)

**117 RESULT: RECEIVED**

### 118. Consider recommendations relating to Professional Services Agreements (PSA's) for building commissioning services. (ID# 105681)

Possible action:

- a. Approve Second Amendment to PSA with Enovity, Inc., relating to providing building commissioning services for various projects with no change to the maximum contract amount, and extending the agreement for a 24-month period through February 26, 2024, that has been reviewed and approved by County Counsel as to form and legality. An exception to Board of Supervisors Policy 5.4.5.4, Length of Term of Contracts, has been approved by the Office of Countywide Contracting Management.
- b. Approve Second Amendment to PSA with Integral Group, Inc., relating to providing building commissioning services for various projects, with no change to the maximum contract amount, and extending the agreement for a 24-month period through January 22, 2024, that has been reviewed and approved by County Counsel as to form and legality. An exception to Board of Supervisors Policy 5.4.5.4, Length of Term of Contracts, has been approved by the Office of Countywide Contracting Management.
- c. Authorize the County Executive, or designee, to be the Owner's Authorized Representative to negotiate, execute, amend, terminate, and take any and all necessary or advisable actions relating to the PSAs, including issuance of Project Agreements for services during the term of the PSAs, extension of the PSA term by up to six months, with no increase of the maximum compensation limit, following approval by County Counsel as to form and legality, and approval by the Office of the County Executive. Delegation of authority shall expire on the end date of each agreement.

**118 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

### 119. Consider recommendations relating to VMC - Saint Louise at 9400 No Name Uno, Gilroy. (ID# 106924)

## Possible action:

- a. Approve establishment of Capital Improvement Project 263-CP22010 "VMC-SLRH Air Handling Replacements."
- b. Approve establishment of Capital Improvement Project 263-CP22011 "VMC-SLRH Joint Commission."
- c. Approve establishment of Capital Improvement Project 263-CP22012 "VMC-SLRH Sterilizer."
- d. Approve Request for Appropriation Modification No. 22 - \$2,700,000 transferring funds from FY22 Backlog BIP Account (263-BP22BIP) to Capital Project No. 263-CP22010 "VMC-SLRH Air Handling Replacements," \$600,000 transferring funds from Capital Program Holding Account (263-CPHOLD) to Capital Project No. 263-CP22011 "VMC-SLRH Joint Commission," and \$600,000 transferring funds from Capital Program Holding Account (263-CPHOLD) to Capital Project No. 263-CP22012 "VMC-SLRH Sterilizer."

**119 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**120. Consider recommendations relating to the General Contractor construction contract for the Santa Clara Valley Medical Center Burn Unit Upgrade (Project No. 263-CP18009). (ID# 106287)**

## Possible action:

- a. Award contract to SBAY Construction Inc., in the amount of \$21,219,000 with a construction time of 624 calendar days.
- b. Approve encumbrance of \$3,850,000 as Supplemental Work Allowance for a total encumbered amount of \$25,069,000.
- c. Authorize the County Executive, or designee, as the Owner's Authorized Representative, with authority to issue Contract Modifications and Change Orders, as necessary, consistent with Public Contract Code Section 20142.
- d. Ratify Addendum Nos. 1-3 to the Bid Documents, which modified or clarified the Bid Documents in response to bidder questions.

**120 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**121. Consider recommendations relating to Bids for construction of the 1996 Lundy Avenue TB/Refugee Clinic (Project No. 263-CP18028). (ID# 106918)**

Possible action:

- a. Award contract to SBAY Construction Inc., in the amount of \$11,849,000 with a construction time of 426 calendar days.
- b. Approve encumbrance of \$3,000,000 as Supplemental Work Allowance for a total encumbered amount of \$14,849,000.
- c. Authorize the County Executive, or designee, as the Owner's Authorized Representative, with authority to issue Change Orders, as necessary, consistent with Public Contract Code section 20142.
- d. Ratify Addendum Nos. 1-4 to the Bid Documents which modified or clarified the Bid Documents in response to contractor questions.

**121 RESULT: APPROVED [UNANIMOUS]**

**MOVER:** Cindy Chavez, Supervisor

**SECONDER:** Susan Ellenberg, Vice President

**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**122. Consider recommendations relating to Best Value Job Order Contract (JOC). (ID# 106946)**

Possible action:

- a. Award contract RFP\_JOC-FAF-2021-02 to SBAY Construction, Inc., for the Price Criteria Figure of 1.0234 with a minimum contract amount of \$50,000, a maximum contract amount of \$3,000,000, and a maximum contract duration of one year, with an option to extend the contract by two subsequent annual terms with an increase to the maximum value of \$6,000,000 over the two subsequent terms, for a maximum total compensation of \$9,000,000.
- b. Ratify Addendum No. 1 to the Project Manual and Contract Documents which modified or clarified the Project Manual and Contract Document in response to Proposers questions.
- c. Authorize the County Executive, or designee, to issue individual job orders, and to approve change orders to job orders within the parameters specified in the Contract Documents, as well as the Public Contract Code.
- d. Authorize the County Executive, or designee, to execute amendments to the Contract Documents to extend the contract term by two annual terms and increase the maximum total compensation by \$6,000,000 over the two subsequent terms.
- e. Authorize the County Executive, or designee, to accept individual job orders as complete and execute Notices of Completion.

**122 RESULT: APPROVED [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**Final Adoption of Ordinances****123. Adoption of Salary Ordinance No. NS-5.21.109, an Ordinance amending Santa Clara County Salary Ordinance No. NS-5.21 relating to compensation of employees deleting one half-time Office Specialist III position and adding one half-time Pharmacy Technician position in the Public Health Department. (ID# 106372)**

- Introduce, waive reading, and preliminarily adopt on June 22, 2021.
- Adopt (Final) on August 17, 2021.

**123 RESULT: ADOPTED (FINAL) [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**124. Adoption of Executive Leadership Salary Ordinance No. NS-20.21.01, an Ordinance amending Santa Clara County Executive Leadership Salary Ordinance No. NS-20.21 relating to compensation of employees adding one Director, Finance Agency position in the Finance Agency. (ID# 106726)**

- Introduce, waive reading, and preliminarily adopt on June 22, 2021.
- Adopt (Final) on August 17, 2021.

The Clerk of the Board read an oral summary for the compensation changes for the County of Santa Clara local agency executives.

**124 RESULT: ADOPTED (FINAL) [UNANIMOUS]****MOVER:** Cindy Chavez, Supervisor**SECONDER:** Susan Ellenberg, Vice President**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian**Final Adoption of Ordinances - Central Fire Protection District****125. Adoption of Salary Ordinance No. CFPD-2022-1-O amending Santa Clara County Central Fire Protection District Salary Ordinance No. CFPD-2021-1-O relating to deleting the classification of Support Services Manager and adding the classification of Director of Support Services; and deleting one Support Services Manager position and adding one Director of Support Services position. (ID# 105008)**

- Introduce, waive reading, and preliminarily adopt on June 22, 2021.
- Adopt (Final) on August 17, 2021.

The Board of Supervisors, sitting as the Governing Board of the Central Fire Protection District, took the following action:

**125 RESULT: ADOPTED (FINAL) [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

**Added Items for Discussion - Time Certain - To Be Heard No Earlier Than 6:00 p.m.**

**126. Adopt Resolution of the Board of Supervisors of the County of Santa Clara declaring its intention to maintain the existing aircraft hangar capacity and existing runway length and width at San Martin Airport. Resolution # BOS-2021-113 (ID# 107260)**

Considered concurrently with Item Nos. 36, 37, and 38.

**126 RESULT: ADOPTED [UNANIMOUS]**  
**MOVER:** Cindy Chavez, Supervisor  
**SECONDER:** Susan Ellenberg, Vice President  
**AYES:** Wasserman, Chavez, Lee, Ellenberg, Simitian

\_\_\_\_\_  
Mike Wasserman, President  
Board of Supervisors

Signed and certified that a copy of this document has been delivered by electronic or other means to the President, Board of Supervisors.

Attest:

\_\_\_\_\_  
Tiffany Lennear, Acting Clerk  
Board of Supervisors  
(jm/pd/dl/ck)

## Appendix A – Verbatim Transcript of Item Nos. 36, 37, 38, and 126

### Board of Supervisors - Regular Meeting - 8/17/21 from 6:02 PM to 8/18/21 at 12:03 AM Transcription by Dynamic Captioning - 9/16/2021

Length of time from start of recording [hr:min:sec]	Name of Speaker	Verbal Comments
8:32:58	Nancy Guerrero	Good evening. This is the clerk with announcements for agenda item numbers 36, 37, 38, and 126 relating to the Reid-Hillview Airport. Simultaneous Spanish and Vietnamese translation are available. To access the audio feed for either language, click the interpretation tab under the globe icon at the bottom of your Zoom screen. From there, select Spanish or Vietnamese.
8:33:27		Clicking the same interpretation tab will return you to the English audio feed where you can select English or off. If you do not turn on interpretation, you will hear the entire meeting in English with consecutive translation of Spanish and Vietnamese comments or questions. American Sign Language translation will be visible throughout the meeting. If you would like to enable captioning, click the live transcript tab at the bottom of your Zoom screen.
8:34:00		From there, you can select subtitles that will appear on the bottom of your screen. You can select "view full transcript" for a live transcript that will appear on the right side of your screen. These announcements will now be translated into Spanish and Vietnamese. Rosario, if you would provide the Spanish translation, please.
8:34:24	Rosario	[ speaking Spanish ]
8:35:41	Nancy Guerrero	[indistinct], if you could provide the Vietnamese translation, please.
8:35:46	unverified speaker	[ speaking Vietnamese ]
8:37:17	Nancy Guerrero	This concludes announcements for the meeting.
8:37:20	Mike Wasserman	Thank you, Nancy. And you're with us, is that correct, going into extra innings here?
8:37:24	Nancy Guerrero	That's correct
8:37:25	Mike Wasserman	All right, thank you very much for that. Um, would you please just take a roll call just to establish--
8:37:30	automated voice	Recording in progress.
8:37:33	Nancy Guerrero	Yes, Supervisor Lee.
8:37:36	Otto Lee	Present.
8:37:37	Nancy Guerrero	Supervisor Chavez.
8:37:39	Cindy Chavez	Here.
8:37:40	Nancy Guerrero	Supervisor Simitian.
8:37:44	Joe Simitian	Here.

8:37:48	Nancy Guerrero	Vice-President Ellenberg.
8:37:51	Susan Ellenberg	I'm here.
8:37:52	Nancy Guerrero	And President Wasserman.
8:37:54	Mike Wasserman	Here as well. Thank you very much. Just to give you all an idea of how we're going to go through this agenda from here on out, we're going to open up right now and we're gonna hear presentations on item 36, 37, 126 and item 38. We're gonna hear these four remaining items together as one item. Uh, Dr. Smith will make opening remarks, and, uh, Sylvia Gallegos will start the presentation, um, thirty-- on 36.
8:38:25		And Dr. Zahran and Lanphear will make presentations on the airborne lead study. Then Sylvia, do we have Dr. Marion Hoyer expected to be here from the EPA?
8:38:35	Sylvia Gallegos	I'll have her available as needed in terms of questions by Board members.
8:38:39	Mike Wasserman	Okay, thank you very much. And speaking of questions by Board members, uh, the sixth-sixth step in our agenda will be Board members asking questions of Dr. Zahran and Dr. Lanphear about airborne lead study. Then we'll have, uh, the aforementioned Sylvia Gallegos make a presentation on the airborne lead study recommendations. She'll make a presentation on staff recommendations in item 37. And, um, no presentation needed on 38.
8:39:10		Then turns over the presentation to me on item 126. Then we're gonna have public comment. And after public comment will be Board deliberation and votes on 36, 37, 126, and 38. So here we go. Take it away.
8:39:33	Jeff Smith	Thank you, Mr. President, members of the Board, members of the public. Uh, before you have a quite a compendium of information, and I expect that we'll have a lot of public comment. So I thought I would take the, uh, beginning of the meeting to try to put it in context and simplify as much as possible. Basically what you have before you is the fact that the County faces a very important and urgent dilemma related to Reid-Hillview Airport operations.
8:40:11		The fact of the matter is is that the Board has commissioned a study, which you'll hear about, which demonstrates that operations at Reid-Hillview expose the surrounding community to high levels of lead that are, um, demonstrated in children around the community with lead level-- blood lead levels. Because of this, the operations of-of the airport must change.
8:40:43		However, the FAA takes the stance that they are completely responsible for the operations of the airport, the utilization of, uh, fuel, the activities around the airport that are related to aviation, and all of the operations related to takeoff and landing and, um, maintenance of aircraft.
8:41:08		Therefore, based on statutory requirements in Federal law-- excuse me. The administration is taking the stance that the local agency and the owners of the airport do not have any ability to control this, uh, exposure to high lead levels in the community.
8:41:35		Administratively we think that's nonsense, and we are recommending-- after you hear the recommendations of the-- after you hear the report that you ultimately take recommendations to take action under item 37. What we're suggesting is that no matter what we do, we will end up in conflict with the FAA probably administratively and legally in the Courts, certainly in public.

8:42:09		And we're recommending that you delegate to staff and County council the authority to move as expeditiously as possible to stop the exposure. And it will be a challenge that will take, uh, considerable fortitude. Um, we recommend that-that you authorize us to move ahead with all legal activities necessary to stop the exposure, including closing the airport.
8:42:43		So with that, I'll turn it over to Sylvia Gallegos who will introduce the rest of the agenda. Thank you.
8:42:54	Sylvia Gallegos	Good evening, ladies and gentlemen, my name is Sylvia Gallegos, Deputy County Executive, and before I introduce the research author, I wanted to take a moment to set the table for everyone. Back in December 4th, 2018, the Roads and Airport Department presented a proposed airports business plan update. In preparing that plan, and-and in response to concerns about lead emissions that were expressed at community meetings leading up to that Board meeting, staff did present information about lead, top zip codes with elevated blood lead levels, and about lead emissions at Reid-Hillview.
8:43:32		At that December 2018 Board Meeting, the Board asked staff to prepare a study, which is what's before you. So in February 11th, 2020, the Board unanimously approved an agreement with Dr. Zahran. He's really one of two academics available in the entire United States who's done this work previously. We'd reached out to Dr. Marie Miranda, but she was on a sabbatical, and so then we reached out to Dr. Zahran, and we're happy to report that he agreed to undertake this study.
8:44:03		Dr. Stoddard in County Public Health and the Head of CDPH's Chief of Program Evaluation Research in the lead, um, poisoning prevention branch reviewed the research methods in the agreement. Dr. Zahran, to give you a sense of the scope of his, um, authorship is a named author in more than 70 peer reviewed studies and scientific journals. And in the last 10 years, he's published 19 studies on the topic of environmental lead exposure.
8:44:35		Dr. Zahran is a Professor of Demography and an associate Chair in the Department of Economics at Colorado State University. And he holds a joint appointment in the Department of Epidemiology at the Colorado School of Public Health. And he serves as the Senior Academic for our County Airborne Lead Study. In 2017, as I alluded to before in this presentation, he had, uh, prepared a study that brought him to our attention. Dr. Zahran studied the effect of lead-based avgas on blood lead levels in over a million children, with 448 nearby airports in Michigan.
8:45:12		So I wanna be clear in this presentation for the public that Dr. Zahran's work is narrowly focused on examining whether Piston Engine General Aviation Aircraft Operations at Reid-Hillview contribute to blood lead levels in nearby children. Once we received an initial draft from him, one of our struggles was to understand what to make of the findings. People don't usually speak in micrograms per deciliter, so we reached out to the National Academy of Pediatrics.
8:45:42		And we actually reached out to quite a number of people, and all roads lead to Dr. Bruce Lanphear, who has graciously volunteered to assist us in this-- with this process. So Dr. Lanphear is a public health physician, and is a pediatric epidemiologist, specializing in environmental exposures including lead. He is currently a professor in the Faculty of Health Sciences at Simon Fraser



		University, which is in Vancouver, C-C-Canada. Excuse me, Canada.
8:46:13		And a clinician scientist at the Children's Hospital Research Institute of the University of British Columbia. Dr. Lanphear's work focuses on the impact of fetal and early childhood exposure to environmental toxic chemicals, and he's published numerous studies relating to the effects of exposure to lead in childhood. So with that, we're going to turn over the presentation to Dr. Zahran, who will now be sharing his slides.
8:46:50	Sammy Zahran	Thank you, Sylvia.  [indistinct].
8:47:16		Can you all see?
8:47:17	Mike Wasserman	Yes, we can see and hear you, doctor.
8:47:19	Sammy Zahran	Okay, excellent. So it is, uh, a genuine honor to be with you this evening, and to share with you the many things learned in this study. In a meeting with Supervisor Wasserman many months ago, I made two promises. The first promise was that we would approach the work objectively and dispassionately, supplying the County with an impartial rendering of the facts.
8:47:55		Toward this end, the report is technical, and I believe achieves a proper emotional distance on a very difficult topic. One is hard pressed to find a single editorial remark in the report. The second promise was that we would stay clear of the policy deliberations before the county. We have actively avoided any involvement on this front.
8:48:25		At no point do we make any recommendation from the results obtained. Policy questions and my professional judgment, are best left to elected officials, administrators, and the various constituencies they represent. As you might imagine we've gotten hundreds of questions and comments from the community upon release of the report, by email and in various public forums, in addition to our prepared remarks this evening pertaining to the report.
8:49:01		We have performed additional analyses to address these thoughtful questions from the community, including but not limited to analyses involving atmospheric lead at the airport, child residential proximity to historic land uses like the San Jose Speedway, subgroup analyses involving particularly susceptible children, analyses involving proximity to various other point locations at the airport, and the collection of water lead, uh, exposure risk data.
8:49:36		Time permitting, we are happy to share results from these additional efforts. There is a famous Armenian proverb that says "Measure seven times, cut once." It's an admonition for carpenters but applies equally to the carpentry of data science. Across the hundreds of tests rendered in this report, each analytic cut was measured many times to produce the broadest possible ensemble of evidence for your consideration.
8:50:14		What follows is an abbreviated summary of those analytic cuts. Despite our best efforts, the report has been described to me as difficult. With that in mind, in this presentation, where possible, we have limited the use of technical language and expunged the presentation of statistical equations. Some of the technical language is inescapable and my apologies in advance for that.
8:50:41		All that said, the presentation will mostly involve graphics that summarize the

		many challenging and complicated programming, statistical and econometric judgments made. I will speak a bit slower than normal to enable translation services provided at this event.
8:51:06		While knowledge of the toxic effects of lead stretch back for many hundreds of years, the evidence amassed by modern science indicates that children exposed to lead suffer substantial, long lasting, and possibly irreversible negative health, behavioral, and cognitive outcomes. Numerous studies have linked elevated blood lead levels in children to cognitive and intellectual impairments, poor academic achievement, and higher risk of Attention Deficit and Hyperactivity Disorders, among other things.
8:51:42		Impairments caused by lead exposure in early childhood ramify through the life course. In a recently published study appearing in the journal of the American Medical Association, Reuben, et al., find that adult new late New Zealanders exposed to lead in childhood had measurable reductions in IQ and occupational status in midlife with these negative effects of early childhood exposure appearing to amplify over the life course.
8:52:17		Importantly, the relationship between child cognitive ability and blood lead is nonlinear. That is, the measured loss in cognitive ability is steeper at lower blood lead levels. Consider the following graphics. Graphic A is from a published study by Lanphear, et al., illustrating the notion that the loss in intellectual ability is steeper at lower blood lead levels.
8:52:47		On the horizontal axis we have child blood lead level measured in micrograms per deciliter of blood and on the vertical axis we have child IQ, a widely used but imperfect indicator of certain kinds of cognitive ability. While it is always the case that more lead in a child's bloodstream is more detrimental to measured IQ, note how the addition of one microgram of lead in a child's bloodstream produces greater loss in measured ability at lower as opposed to higher blood lead levels.
8:53:29		If you could see my cursor here, right? Let's imagine that we reduce blood lead levels by a half microgram. Going here from 20.5 to 20. If we follow this blue line to the nonlinear slope indicated, we can get an estimate of the expected loss in IQ. Now, if we were to move down one unit we could see that there would be a modest increase in the IQ of the child.
8:54:04		Now, let's imagine the same increment at lower blood lead levels, decreasing by a half microgram from this blue line to this red line. If we follow upward to the nonlinear slope, we can see that this modest reduction at lower blood lead levels produces a greater quantity of benefit in terms of the intellectual capabilities of a child.
8:54:33		Now, the nonlinear relationship between IQ and blood lead is not uncommon in epidemiology. Consider the following graphic showing the relationship between smoking and the risk of an ischemic heart disease event. An increase in the number of cigarettes smoked per day increases the risk of a heart disease event.
8:55:02		The effect of more is strictly worse than less. However, the size of the jump in risk is higher at the extensive margin as opposed to the intensive margin. That is, going from zero cigarettes smoked to one produces a bigger increase in the risk than going from 20 to 21.
8:55:32		The added quantity of one cigarette is the same in both scenarios but

		produces a larger effect at lower versus high cigarette consumption. Returning to the problem of lead exposure, it is also important to note that the nonlinear relationship between IQ and lead implies that the last mile of effort to minimize exposure to lead in children potentially carries greater benefit.
8:56:06		Also note, the loss in ability from exposure to lead in early childhood appears to echo through a child's academic life. Consider Graphic B from a published study by Miranda, et al., linking child blood lead levels at age two to performance on standardized tests in 4th grade. Again, we see the signature nonlinear effects of lead exposure.
8:56:32		The loss in performance is steeper at lower blood lead levels as opposed to higher. Studies by scientists like Lanphear and Miranda have caused various health organizations to conclude that there is no safe level of lead in a child's body. I quote, "Even low levels of lead in blood has been shown to affect IQ, ability to pay attention, and academic achievement."
8:57:02		The Federal Aviation Administration fact sheet is more detailed stating, "All forms of lead are toxic if inhaled or ingested." Lead can affect human health in several ways including effects on the nervous system, red blood cells, cardiovascular and immune systems. Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral and learning problems and lower IQ.
8:57:31		Children have increased sensitivity due to their developing nervous systems. Now, it might be tempting to assume that lead exposure in the United States is a rear-view or legacy problem. After all, the blood lead levels of children in the United States have declined precipitously over the last four decades coincident with the series of regulatory actions that expelled lead from paint, plumbing, food cans, and automotive gasoline.
8:57:59		Most effective among these interventions was the phase out of Tetraethyllead from automotive gasoline. On this question, we estimate that a reduction of one gram of TEL per gallon in automotive gasoline produced a remarkable 35% reduction in child blood lead levels. While Tetraethyllead is no longer used as an additive in automotive gas, it remains a constituent in aviation gasoline used by an estimated 170,000 piston engine aircraft.
8:58:39		These aircraft consume tens of millions of gallons of lead formulated gasoline annually. With lead emissions from this consumption accounting for about half to two thirds of all lead emissions in the United States today. The deposition of lead from these aircraft may be an exposure risk to the estimated 16 million persons residing within one kilometer of an estimated 20,000 airports that service these aircraft.
8:59:15		While many studies have linked aviation gasoline use to elevated atmospheric lead in the vicinity of the airports. To date, only two studies have explicitly linked aviation gasoline use to the blood lead levels of children. In a study involving over 125,000 observations across six counties and 66 airports in North Carolina, Miranda, et al., reported a striking correlation between child blood lead levels in airport proximity...
8:59:45		with children at 500 and 1,000 meters, about a half mile of an airport, at greatest risk of elevated blood lead levels. In other words, children close to airports were at great risk. In a study involving over a million children in 448 airports in Michigan, my colleagues and I found the child blood lead levels

		increased with proximity to airports,
9:00:14		increased with aircraft traffic observed across the subset of airports, increased in the percentage of prevailing wind days drifting in the direction of a child's residence and declined measurably among children sampled in the months after the tragic events of 9/11 caused by measured reductions in traffic subsequent to this-- to the tragedy.
9:00:42		Mountain Data Group and affiliated scientists were asked to assess whether the blood lead levels of sampled children are statistically associated with exposure to lead from aviation related sources independently of other sources of lead. Specifically, we set out to test whether the blood lead levels sampled children near Reid-Hillview and San Martin airports are correlating with child residential proximity, child residential direction or near angle to the airport, and the quantity of aircraft traffic.
9:01:23		What follows is a presentation of results pertaining to Reid-Hillview Airport. Only 68 blood samples were taken from children proximate to San Martin Airport in the last 10 years, prohibiting credible statistical analysis. The small number of blood lead samples likely resulted from the relative sparsity of population around San Martin Airport.
9:01:54		Next, I'll describe the various data sources deployed in the study, as well as the various measurement decisions made to capture exposure risks to lead formulated avgas. Blood lead sample data are from the Childhood Lead Poisoning Prevention Branch of the California Department of Public Health. Blood lead samples are collected from children during visits to a healthcare provider. Laboratories send test outcome data to the Lead Poisoning Prevention Branch.
9:02:26		We queried various databases for records with an indication of residence in Santa Clara County, a date of blood draw occurring in the last 10 years, a date of birth for the Santa person, and a reported blood lead value. Restricting to children 18 years of age-- or sorry, under the age of 18 at the time of blood draw residing within 1.5 miles of the airport and observed in this 10 year window, we arrived at 17,241 blood lead sample observations amenable to statistical analysis.
9:03:05		The main outcome of interest is blood lead level measured in micrograms per deciliter. Among children satisfying our inclusion criteria, the average blood lead level was 1.83 micrograms per deciliter, about 1.7% and 3.2% of sampled children present with blood lead levels more than 4.5 and 3.5 micrograms per deciliter respectively.
9:03:37		Allow me to address some confusion about this number of 1.7% of sampled children exceeding this threshold. The number that we report encompasses all children under the age of 18, regardless of residential distance to the airport. Journalists have noted that 1.5% of the children countywide present with blood lead levels above this reference value.
9:04:08		This countywide-- countywide number of 1.5% pertains to children 0-5 years of age, not all children under the age of 18. Because blood lead levels are generally higher among preschool children, our inclusion of children 6-18 at the behest of the county substantially deflated the observed fraction.
9:04:36		If we do an apples-to-apples comparison with the countywide number, that is restricting to children 0-5 years of age, we find that 2.9% of children within a

		half mile of Reid-Hillview exceed this threshold. That number is just shy of double the risk that obtains countywide.
9:05:03		It's also important to keep in mind that even this bigger fraction of 2.9% can be misleading. It is unadjusted, not accounting for the other factors coincident with residential distance. For this reason, it is absolutely necessary to perform a broader analysis that accounts for all factors that might simultaneously govern place differences.
9:05:34		Given that the bulk of lead emissions are released during departure phases of the land and takeoff cycle, we capture child proximity by calculating the distance from a child's residence at the date of draw to the Northwest tip of Reid-Hillview Airport. Though not emphasized in the report, the Northwest corner is also home to Aircraft Maintenance activities that also emit lead in large quantities.
9:06:04		As with previous research, we analyzed the residential distance effect both continuously and by division into three orbits of risk: less than half mile, half mile to a mile, and 1 to 1.5 miles from the airport. Now insofar as avgas exposure is a source of risk, children residing closer to the airport should present with higher blood lead levels.
9:06:35		Moreover, as described in the report, children that reside in these different orbits of risk are statistically similar with respect to other observable factors that may govern blood lead outcomes. This figure illustrates the measurement logic. Over our 10-year window, we observe a total of 1,065 records at less than a half mile of the airport as indicated in this yellow circle.
9:07:10		About 6,500 children at a half mile to a mile, as indicated in orange. And just shy of 10,000 sampled children at 1 to 1.5 miles from the airport. Again, insofar as aviation gasoline exposure is an independent source of risk, other things held equal, sample children in the nearest orbit to the airport should present with higher blood lead levels.
9:07:38		Airport proximity by itself is an imperfect measure of aviation gasoline exposure. The fate and transport of lead emissions depend on the direction of prevailing winds. We assigned each sample child a near angle to the airport corresponding to the four cardinal directions, of north, south, east and west. In this radial plot, we summarized the behavior of wind at the airport over the last 10 years.
9:08:07		Each wedge displays the percentage of wind days that emanate from a defined direction. Here we see that the winds originate overwhelmingly from the west-northwest. In total, we observe about 6,000 records residing north of the airport, about 1,100 records east, 3,500 south, and 6,600 west of the airport. Insofar as avgas exposure is a source of risk, then children residing east of the airport should present with higher blood lead levels.
9:08:40		The volume of traffic varies meaningfully between airports and within an airport in time. Therefore, two children residing in the same home but sampled at different moments in a calendar year may present with different blood lead levels coincident with the volume of traffic. To capture this risk, we collected daily data on departures and arrivals from the Federal Aviation Administration in monthly quantities of aviation gasoline sold at the airport.
9:09:15		To give you an appreciation of the quantity of lead released, from January 2011 to December 2018, an eight year time window, 2.3 million gallons of

		lead-formulated gasoline was sold at the airport. At about 2 grams of lead per gallon, that's over 10,000 pounds of lead consumed.
9:09:45		Based on an EPA estimate, the 95% of lead consumed is emitted over this eight year period alone, about 5 metric tons of lead was emitted. Importantly, this number of 5 metric tons does not include aircraft landing at the airport that fueled elsewhere.
9:10:09		In addition to child proximity to lead emitting toxic release inventory facilities operating in the County and child residence in neighborhoods with higher risk of exposure to lead-based paint is measured by the fraction of housing stock built prior to 1960, we control for many other factors that are correlated with child blood lead levels.
9:10:38		By combining all of these factors in a single statistical equation, we can estimate independent relationships between our main indicators of avgas exposure risk and child blood lead levels. Importantly, the purpose here as delineated in the service agreement with the County is not a source apportionment exercise.
9:11:05		The objective here is very narrow, to calculate blood lead outcomes attributable to airport activities. In the presentation of our basic results, we begin with residential distance, then residential near angle, and then measures of piston engine aircraft traffic and aviation gasoline sales. A reminder that results presented pertain to all sampled children under the age of 18.
9:11:36		The focus is on statistical relationships between child blood lead levels and each indicator of risk separately. Later, Dr. Lanfield-- Lanphear will present results on subsets of children and the cumulative risk faced by children across these indicators combined.
9:12:02		Quickly, this table shows that sampled children are statistically similar with respect to gender, residential near angle, age, piston engine aircraft traffic exposure, and year and timing of blood draw. On variables where we do, in fact, observe differences, all function to inflate the blood lead levels of sampled children in outer orbits.
9:12:36		For example, the risk of exposure to lead-based paint as measured by the age of the housing stock is statistically higher among children residing in neighborhoods in the outer as opposed to the inner orbit. Therefore, whatever differences in estimated blood lead levels that they obtain between sampled children by residential distance and statistical analyses that follow, we may regard these differences as likely attenuated or conservative.
9:13:18		Holding all other factors constant, we find that the blood lead levels of children in the nearest orbit are about one-fifth of a microgram higher than children in outer orbits. In percentage terms, sampled children most proximate to the airport present with blood lead levels that are 10% higher than sampled children in outer orbits.
9:13:43		If we limit to children 0-5 years of age, the observed difference expands to just shy of 0.3 micrograms. To provide context, these calculated differences are approximately equal to 50% of the estimated increase in child blood lead levels at the height of the Flint Water Crisis over baseline levels in Flint.
9:14:14		We know this to be true, because we conducted and published an NIH-funded

		study analyzing over 21,000 blood lead samples in Genesee County before, during and after the Flint Water Crisis. From the published study, we graph the change in blood lead levels attributable to the switch in water regime that caused intrusion of lead in drinking water.
9:14:46		Note the surge in blood lead levels hovers between 0.35 and 0.45 micrograms 'til the first advisory to boil water. Now the comparison to Flint is imperfect with respect to the nature of the exposure. In one case, we have contaminated water. In the airport case, we have atmospheric deposition of lead.
9:15:16		However, it is worth noting, again, that the Flint Water Crisis from start to finish unfolded in less than a year and a half. By contrast, at the airport, the release of lead into the lived environment is non-stop, a continuous flow of an undeniable suppressant of human potential.
9:15:49		Next, we share results pertaining to residential near angle. Recall, each child is assigned a cardinal direction to the airport. Because the winds prevail from the west-northwest, children east of Reid-Hillview should present with higher blood lead levels. Again, controlling for all other factors that may implicate the outcome, compatible with a hypothesis of avgas exposure risk,
9:16:19		we find that children east of the airport present with blood lead levels that are significantly higher than all other sampled children. Residing east of the airport is associated with a 0.4 microgram per deciliter increase in blood lead levels, equal to a 25% increase over other sampled children. This margin of difference is equal to the observed difference in sampled children before and during the Flint Water Crisis.
9:16:54		These results were also supported by analyses involving the account of downwind days drifting in the direction of the child from the point of blood draw. Next we share results pertaining to measured levels of traffic. This figure summarizes how blood lead levels change with an increase in traffic.
9:17:20		Counting for all other factors, the upward sloping line here indicates the child blood lead levels increase as the quantity of traffic increases. The inverse is also true, of course, child blood lead levels decrease as measured quantity of traffic decreases. The same positive association obtains between child blood levels and the quantity of lead-formulated gasoline sold at the airport.
9:17:53		Child blood lead levels rise and fall with the sale of leaded aviation gasoline. In going from the minimum to the maximum of child traffic exposure, we find the child blood lead levels increase by about 0.3 micrograms per deciliter depending on the presence of controls. This result obtains if we substitute traffic for the quantity of avgas sold.
9:18:20		And this relationship is likely linear as supported by analyses involving the division of traffic into low, medium and high categories. In addition to these main results, we performed several ancillary tests to expand and support the body of evidence. The purpose here is to guard against the rush to judgment, developing tests that lean more aggressively against the intuition of risk.
9:18:56		Moreover, the report itself is replete with appendices showing results from additional sensitivity and robustness tests that we do not have time to cover today. I will cover three of these extension exercises to our main analysis, bolded and italicized here.
9:19:23		The first extension involves categorical measurement of blood lead levels to

		see if exposure risk to lead-formulated aviation gasoline increases the likelihood the sampled child presents with a blood lead level in excess of 4.5 micrograms per deciliter, which is a very high reference value that the CDPH uses to allocate scarce resources toward the protection of the most vulnerable children.
9:19:56		Here, we display two sets of results from this reference value exercise. One set in light blue pertains to the chance that a child presents with a blood lead level below 1.5 micrograms, and the other set in navy pertains to the chance that a child presents with a blood lead level in excess of 4.5 micrograms.
9:20:23		These probabilities are calculated by distance, near-angle and traffic. Again, these analyses pertain to all children under the age of 18. All results displayed here inflate considerably when we limit the analysis to children 0 to 5 years of age. Fixing your eyes for a moment on the navy blue graphics, in the top right hand corner,
9:20:52		we find that the chance that the child in outer orbits of risk presenting with very high blood lead levels is over 20% lower than the statistically similar child at a half mile from the airport. Children east of the airport are almost 2.5 times more likely to present with blood lead levels in excess of 4.5 micrograms per deciliter.
9:21:23		Finally, we find that the risk of exceedance increases substantially with measured traffic. This recapitulates what we just said. Nonetheless, it's worth emphasizing the proximity to the airport, residing east of the airport, and sampled under periods of high traffic, all function to increase the risk of exceeding this very high reference value.
9:21:52		Next we present results from a test that may be regarded as the most telling of the tests performed. In this test, we asked whether the blood lead levels of children respond differently to fluctuations in traffic depending on their proximity to the airport. Insofar as exposure to lead-formulated avgas is in fact an independent source of risk,
9:22:24		then the blood lead levels of children most proximate to the airport should be more sensitive to changes in the quantity of traffic. Allow me to present a bit slower here. On the horizontal axis, we have the quantity of traffic going from the observed minimum to the observed maximum over our study period.
9:23:00		On the vertical axis, we have predicted, or statistically adjusted, blood lead levels. Two lines intersect the space, one corresponding to children within a half mile of the airport, the other corresponding to children in the outer orbits of risk.
9:23:25		To use the language of medicine, we can think of children in the nearest orbit as our treatment group, and children in the outer orbit as our control group. Now imagine that we turn a dial of traffic from low to high, holding all other factors constant.
9:23:53		Note how the blood lead levels of children in our so-called treatment group rise steeply in response to the traffic. Also note how the blood lead levels of children in the outer orbit also increase, but substantially more modestly. This, we reproduce with the substitution of the horizontal axis or the input variable from traffic to the quantity of aviation gasoline sold.
9:24:29		Overall, among the sampled children at less than half-mile of the airport, an



		increase from minimum to maximum traffic is associated with an estimated 0.83 microgram increase in blood lead levels. This measured increase over and above all other sources of lead is greater than what we observed at the height of the Flint Water Crisis.
9:24:59		Children nearest the orbit we find are especially sensitive to changes in traffic. Again, these results pertain to all children under the age of 18. If one restricts analysis to children under the age of six, the estimated increase is more than 1 microgram per deciliter.
9:25:24		These measured effects are meaningfully higher, again, than what we observed in the Flint water case. Resulting from various non-pharmaceutical efforts to limit the spread of COVID-19, traffic declined measurably at the airport over the months of February to July 2020. Traffic declined by 34 to 44% depending on the baseline used.
9:25:59		Intriguingly, traffic at the airport returned to pre-pandemic levels in August to December of 2020. These dynamics in Piston Engine Aircraft operations at the airport present us with an intriguing natural experiment. Insofar as aviation gasoline exposure is a source of risk, then children sampled in this contraction period should present with lower blood lead levels.
9:26:31		Children sampled in this traffic to traction period did in fact present with significantly lower blood lead levels, about one-fourth of a microgram lower than children not sampled in this contraction window. Given the reduction in traffic of about 40%, the size of the estimated reduction in blood lead levels of one-fourth of a microgram is approximately equal in magnitude to what we observe in main results pertaining to measured traffic.
9:27:02		This basically recapitulates what I just said. Now for your consideration, allow me to compile the evidence on the question of whether the use of lead-formulated gasoline at the airport poses an independent risk to children nearby. Forgive me, but I will read carefully here.
9:27:30		Evidence from main analyses for a statistical link between aviation gasoline exposure risk, child blood lead levels include: blood lead levels of sampled children increase significantly with proximity to the airport. Blood lead levels are significantly higher among children residing east and predominantly downwind of the airport and increase in downwind days from the date of blood draw.
9:28:02		Blood lead levels of sampled children increase significantly with measured traffic at the airport in monthly quantities of avgas sold at the airport. The probability that blood lead levels exceed 4.5 micrograms per deciliter increases with proximity to the airport, residing east of the airport and with measured quantities of traffic.
9:28:30		Blood lead levels of children approximate to the airport are significantly more sensitive or dose responsive to aircraft traffic and quantities of gasoline sold at the airport. The blood lead levels of children sampled in the traffic contraction period of February to July 2020 presented with significantly lower blood lead levels.
9:28:59		Not discussed this evening, but shown in the report, children commuting toward the airport to attend school present with substantially higher blood lead levels than children commuting away from the airport to attend school. On the need to limit lead exposure from aviation gasoline,

9:29:25		the National Academies of Sciences, Engineering and Medicine in a recently published report maintains, quote, "Because lead does not appear to exhibit a minimum concentration in blood below which there are no health effects, there is compelling reason to reduce or eliminate aviation lead emissions.
09:29:55:13		The ensemble of evidence compiled in this study supports this compelling need to limit aviation lead emissions to safeguard the welfare and life chances of at-risk children and adults. In a classical liberal democratic society as ours. Persons are free and right to transact with each other for mutual benefit. On occasion, such a transaction can impose costs on third parties, what we call in economics and external diseconomy or negative externality.
09:30:43:11		In this study, we show repeatedly across hundreds of independent tests that the lawful buying and selling of lead formulated aviation gasoline appears to impose harm on innocent others. Thank you.
09:31:08:24		
09:31:14:28	Sylvia Gallegos	>> Now we're gonna invite Dr. Lanphear to make his presentation.
09:31:19:13		
09:31:28:18	Bruce Lanphear	>> Thank you, Sylvia.
09:31:30:11		
09:31:31:20		So before I begin, I just wanted to introduce myself and tell you a little bit more about why I was asked to provide a perspective on this report. Uh, I'm a physician and a scientist. Over the past 25 years, I have studied how children are poisoned by leaden paint, air, house dust and water. I've also studied how lead damages children and adults. I've been fortunate to be involved in dozens of studies with teens around the world.
09:32:01:08		So I was asked to provide some perspective on this new report on child and lead exposure from the Reid-Hillview Airport. Lead is a poison. We've known for over two centuries that lead is a poison. Most of my research over the past two decades was to find out how much lead is too much. So I want to begin first by giving you my impression-- my overall impression of this report by Dr. Sammy Zahran, Christopher Keyes and their team.
09:32:37:16		asked to figure out if emissions from flying aircraft could contribute to the amount of lead circulating in the blood of children who lived near the airport. You'd first need to know how close they lived to the airport, the household income, the amount of lead in their blood, and so much more. You'd also need to protect their privacy. On top of that, you need to find ways to prove or disprove that aircraft emissions were a source of children's exposure to a toxic metal when other sources like leaden house paint exists.
09:33:10:19		So what they did was really remarkable. They merged a series of databases from birth certificates and blood lead tests and household income and census data and fuel use. And as you saw from the presentation. They did a masterful job testing whether their hypothesis was right or wrong. In the end, the results all pointed to the same conclusion. The Reid-Hillview Airport endangers the lives of people who live around the airport. Especially children.
09:33:40:24		Their report is one of the most comprehensive and conclusive reports I've read in my career. Still, as I'll point out in a few minutes, they've actually underestimated the extent of exposure to children and the extent of harm. But before I get to that, I want to share a few additional points, and reinforce a few

		points that Sammy described just a few minutes ago.
09:34:08:19		We're talking primarily about children today and I just wanted to point out the three major ways that we measure brain function in children. First, with cognition, we measure IQ. We measure academic abilities as well. Reading scores, for example. We can measure behaviors and oftentimes those result in either a parent report or physician reported behavior problems like ADHD.
09:34:35:00		And finally, we've also used brain imaging and shown that higher levels of lead in children's blood have resulted in structural changes in the brain. Particularly in the prefrontal cortex of the brain, which makes us distinctly human.
09:34:51:16		This first study, published in 1979 by Dr. Herbert Needleman, recruited over 2,000 school children in Massachusetts and they paid to have substitute teachers come in and have the homeroom teachers rate these children on a whole variety of behaviors from whether than can follow simple directions, whether they were hyperactive or impulsive, whether they were persistent in their schoolwork and dependable.
09:35:18:15		Whether they were organized or easily frustrated. And what they found when they measured the amount of lead in the children's shed baby teeth, which they collected from the children and gave them little gifts, was that as the lead in children's teeth increased, they saw these strong relationships with the amount of problems they had in school as tooth lead levels increased, the children were reported by their homeroom teachers to be more impulsive, more hyperactive, less dependable, less organized. This collection of behaviors we now describe as ADHD.
09:36:00:15		Subsequently, about ten years ago, we did a national study in the United States and we found that children who had a blood lead level in excess of 1.7 microgram per deciliter were two to two and a half times more likely to meet criteria for ADHD to have ADHD. We went on to estimate that one out of five children in the United States with ADHD had ADHD because of lead exposure.
09:36:29:10		Now imagine for a moment, if you will, if I had designed a vaccine or a drug that could prevent one out of five cases of ADHD in U.S. children over 600,000 cases, I'd be quite wealthy. We got some scholarly attention but that was about it. We were less concerned, it seems, for prevention. But what I've been so impressed with in learning about what's going on in Santa Clara County is that you've decided to take this, uh, and conduct your own studies, uh, and ask your own questions.
09:37:06:03		As Sammy pointed out, we saw the striking reductions beginning at the lowest measurable levels. What Sammy called a non-linear relationship and we saw that with reading and the first study I did, and frankly, it went right over my head. But by the second study, I was ready for it. And the third study. And there had been over 12 studies by now that have looked at the shape of this dose response relationship.
09:37:59:04		
09:38:13:01	Mike Wasserman	>> Bruce, we can't hear. The volume?
09:38:16:07		
09:38:18:09	Bruce Lanphear	>> Sorry about that. I forgot that magic optimize your video.
09:38:25:28		

09:38:30:14		Oops.
09:38:32:23		
09:38:43:13		[popping]
09:38:47:21	narrator on Power Point	>> The largest drop in IQ from lead exposure occurs at the lowest levels. As the level of lead in children's blood increases from 0 to 100 parts per billion, IQ scores drop by about six points.
09:38:59:25		In contrast, an increase from 100 to 200 parts per billion results in an IQ drop of two more points, an increase from 200 to 300 parts per billion results in an IQ drop of another point. In fact, the World Health Organization and other agencies agree there is no safe level of lead exposure.
09:39:20:14		
09:39:22:16	Bruce Lanphear	>> This is really quite remarkable. This idea that there's no safe level because what we've always done up until 2012 is we've made an assumption that there are thresholds for safe levels for toxic chemicals like lead. So to come out and say consistently and convincingly whether it's the World Health Organization, the Centers for Disease Control, the National Health, uh, Public Health Agency of Germany,
09:39:48:17		Health Canada, CalEPA -- They've all consistently acknowledged this and have done their regulatory standards based on this steep slope at the lowest levels of exposure.
09:40:02:13		I also want to put this in perspective with, uh, how there's this shift in the curve and how these subtle changes can have big impacts on populations, on communities. And so in this case, what you're gonna see is, uh, the impact of a 5 IQ point decrement across a six year birth cohort of children in the United States.
09:40:25:04	narrator on Power Point	>> Typical distribution of IQ scores, most of us have IQ scores that fall between 85 and 115 in points. Only 2.5 percent of children have an IQ above 130, which is considered gifted. There are about 6 million children in this group. On the other end of the distribution, another 2.5 percent of children have an IQ below 70, which is considered challenged. The impact of exposure to a toxin like lead causes a five point drop in IQ.
09:40:54:18		This shift results in a 57 percent increase in the number of children that are challenged from 6 million to 9.4 million. There is a corresponding decrease in the number of children that are gifted from 6 million to 2.4 million. Little shifts matter. The impact of exposure to another toxin like flame retardants results in a further increase in the number of children who were challenged from 9.4 million to over 11 million. There is a further decrease in the number of gifted children.
09:41:25:22	Bruce Lanphear	>> One of the other challenges in trying to protect children from toxic chemicals that impact brain development is lead is only one of them. Children in California have some of the highest levels of PBDEs, a type of flame retardant in the world. They're also exposed to air pollution, which also diminishes children's cognitive ability and pesticides. So the impact of these various toxins add up. And not surprisingly, children who live in low income communities tend to be more heavily exposed to various toxic chemicals like lead and flame retardants and pesticides and air pollution.

09:42:05:28	narrator on Power Point	>> Typical--
09:42:07:25	Bruce Lanphear	>> I also want to put this in perspective, so that we don't too quickly diminish small increments in intellectual ability or academic abilities. So if you'll focus for a moment here, the current reference value that the Centers for Disease Control-- there seems to be lots of different action levels. CDC right now uses 5 microgram per deciliter. California uses 4.5 microgram per deciliter.
09:42:37:21		The CDC recently voted, uh, to lower it to 3.5 microgram per deciliter, more on that in a few minutes. Still if we just focused for a moment on 5 microgram per deciliter. In, uh, a six year birth cohort of children, that is the 24 million children who are born over a six year period.
09:43:01:12		Four million in each birth cohort, so a total of 24 million, there's about half a million who had a blood lead greater than 5 microgram per deciliter at the time this study was completed. Each of them after taking other factors into account is estimated to lose about six IQ points from lead exposure alone. If you multiply half a million times six, you end up with 3 million IQ points lost. Now let's look at the next strata, children between a blood lead of 2.1 and 5, almost six million children.
09:43:37:13		And they lose on average about 1.5 IQ points. Now that seems like a small amount, but if you multiply your 5.7 million children by the 1.6 IQ point decrement, you see that it adds up to three times more IQ points lost, and it's simply a numbers game, right? I'd rather have, um, a dollar from 100 million people than one million from ten people. A million dollars from ten people, right.
09:44:05:26		So th-this-this is how businesses can do really well when they sell a lot of volume of something. So, if we just focus on children with the highest blood lead level, whether it's 5 microgram per deciliter or 4.5, we will fail to protect or preserve the vast majority of IQ points lost. In this particular case, we would only protect or preserve 3 million out of the 23 million IQ points lost, and that's why it's so important to focus on even the lowest levels of exposure.
09:44:38:09		
09:44:45:27	narrator on Power Point	>> Lead toxicity doesn't only impair children, it affects people over their entire life. The ability to think and reason increases as we mature, peaks during young adulthood and then begins to decline in our 60s. Children who have higher lead exposure never reach the same peak ability as children with lower exposure. At the other end of life, adults with higher lead exposure have accelerated decline in their mental abilities and may develop dementia sooner.
09:45:14:12		
09:45:16:06	Bruce Lanphear	>> So this model has been seen time and again. When you follow children out, those with higher blood lead levels never meet their same peak cognitive ability as children with lower levels. We also see at the other end of the age spectrum that adults with higher bone lead or blood lead have accelerated cognitive decline. We also have evidence, not as definitive as some of the other evidence I've just shared with you, that lead is a risk factor for dementia as well.
09:45:49:27		Now, you saw this, um, graphic that Sammy and his team put together, showing that children who lived in closest proximity to the airport, within half a

		mile, had significantly higher blood lead levels than children who lived further away. They looked at 18-year-old children.
09:46:09:08		And this is probably the most important way that they underestimated the impact of the aviation fuel, leaded aviation fuel, on children's blood lead levels. If you focus on toddlers, 12 to 24 month old children, instead of, or in addition to, children who are younger than 18 years, you can see that the blood lead concentrations are actually quite a bit higher than children who are younger than 18, and the difference is actually underestimated because in the analysis that includes children younger than 18, are the toddlers.
09:46:50:08		And so, by being particularly careful, what Sammy and his team did is they underestimated the impact. So instead of being about 2.1 microgram per deciliter, the estimated blood lead level for children was about 2.5 when you look at toddlers. Now, why would we want to look at toddlers? Well, study after study has shown that toddlers are the best indicators of, uh, a lead contaminated environment. Why is that?
09:47:28:29		Well, toddlers, uh, represent a confluence of increasing mobility as they begin to crawl and stand, and mouthing behaviors that persist, so all of you that are parents or have younger children, or cousins, nephews, know that children put soil and dirt in their mouths.
09:47:49:13		They put non food items in their mouths, and that's one of the most important ways for children to be exposed, not only to lead paint that disintegrates and contaminates the house dust, but aviation fuel as well. Airborne lead is ingested and it settles out, and is picked up and ingested, especially by toddlers. And that's why, if you want to know about ongoing exposures, the key is to focus on toddlers.
09:48:25:29		So here's this key graph that Sammy showed you. Um, it's just looking at children under 18 years of age, and what you can see is that as air traffic increases, so does the blood lead level of children, but only if they live in close proximity. The second line, the blue line, barely nudges upward, but you see a steep increase in blood lead concentration as air traffic increases among those who live in close proximity.
09:48:55:29		And I want you to just pay attention to the maximum value here. It's about 2.5. Again, this is looking at children younger than 18 years of age. Now let's look at the same graph for toddlers. Again, you see that steep increase in blood lead levels of children who live in close proximity, but not in those who live further away. But here, instead of being a maximum of 2.5, it's about 3.4 microgram per deciliter.
09:49:25:13		Again, showing how they underestimated the impact on children. So now if we look at toddlers, we can see how their blood lead levels increased. So, uh, Dr. Zahran and his team showed the independent contribution of proximity, and separately, maximum traffic, and separately from that, living downwind or to the east of the airport, or being in the lowest 10% of income in the community.
09:50:01:14		But what happens if you start to add those up? The mean blood lead level, the average blood lead level, for toddlers, now-- we're focusing on toddlers because those are gonna-- The toddlers are gonna give us the best indication of ongoing exposure in the community, increased from 2.5 microgram per deciliter, to 3.3 when you add proximity plus the maximum traffic, to 3.5 when you add living to the east of the airport, and finally, when you add low income,

		it increases to 3.7.
09:50:38:09		Now, it's important to note that the number of children get smaller as you go out here. But it's also to know that even looking at the average underestimates the impact. Let's look at what happens now when you look at the percent of children who exceed 4.5 microgram per deciliter. That's the California Department of Public Health action level.
09:51:03:04		And you can see-- just focus here on the percentile at the top, not the rest of it. You can see that the percent of children who have lead poisoning based upon this value, 4.5, increases from 2.6, to 3.4%, to 6.3%, to 8.9%. Almost 9% of kids who have all of these characteristics. Now I mentioned, I was just on the, um, the CDC working group that was asked to evaluate whether we should lower the action level from 4--
09:51:38:06		excuse me, from 5 microgram per deciliter, down to 3.5 microgram per deciliter. Our working group unanimously voted to lower it down to 3.5 microgram per deciliter. That represents the 97.5th percentile of children in the United States. We passed that on to the CDC's Lead Advisory committee, and they also unanimously voted to reduce the action level down to 3.5 microgram per deciliter.
09:52:06:13		So if we look at this cumulative increase jumping from proximity. Where over 5% of toddlers exceeded 3.5 micrograms per deciliter, to 7% when we add maximum traffic, to 10.5% when we add living downwind, and finally, almost 14% when we look at children in the lowest income level. This is sizeable increase in blood lead concentrations. Now, to summarize that, we can see as we shift from all children exceeding-- this is now just focusing on percent.
09:52:47:13		All children exceeding a blood lead of 4.5, toddlers exceeding 4.5, and toddlers exceeding 3.5, we can see that there's this incremental increase in the percent of children who are estimated to exceed these values. Why is that? Why are toddlers better? Well, you could think about it as children of different ages are like different types of vacuum cleaners.
09:53:17:00		Toddlers are really good vacuum cleaners, maybe like the Dyson. They pick up dust and stuff really well, and that's why there's such good indicators of the kind of contamination in their environment. We could also think about it like a bank account and a salary, a monthly salary.
09:53:39:04		The blood lead levels that we're measuring are not the best indicator of lifetime exposure, or total body burden of lead. The blood lead levels are a good indicator of a mixture of past exposures and current exposures, but for toddlers, they're much better at representing ongoing or current exposures.
09:54:02:20		But think about blood lead as a monthly paycheck. The monthly paycheck can give you an indication of somebody's overall wealth, but it's just an estimate. It probably gives you a good ranking, and the blood lead tests are good. That's what I've relied on for most of my tests and they're the optimal tests for large epidemiologic studies like this one.
09:54:29:12		But what we know is that bone lead concentrations or tooth lead concentrations, which is a type of bony tissue, are much better indicators of cumulative lead exposure. So this study that was done in Yugoslavia looked at both bone lead and blood lead. In both cases they saw that steep drop off in IQ from the lowest quartile, the lowest 25%, to the next category.

09:55:03:05		And those were both highly significant. But when they put both of those in the model, in the same model, essentially they asked the question, if we compete bone lead and blood lead at the same time, what happens? And what they found was that bone lead was a much stronger predictor of IQ deficits. So the estimated decrements from blood lead concentrations will underestimate the brain injury that we see. There's a couple other cautions.
09:55:35:00		First, most of the studies that have looked at IQ deficits and ADHD or criminal behavior in children with higher lead exposure focused on lead in paint pigments. The particles of lead in paint pigments tend to be much larger, about 500 nanometer, than the lead particles in aircraft exhaust. The red dot here represents the lead, which is usually attached to other particles.
09:56:00:07		This is based on the recent National Academy of Science and Engineering Medicine Report. The lead particles are about four nanometers, and the overall particles about 20 nanometers, found in aircraft exhaust. What we know about the size of the air-- of the particles is that the smaller particles are much more likely to be absorbed into the gut, into the respiratory tract, and even directly into the brain through the olfactory nerve.
09:56:32:10		And there are metal transporters on that nerve. So we may be underestimating the impact from aviation fuel, because most of the more recent studies have relied on leaden paint, uh, particles. And then finally, I just want to focus on this diseases of adults. For obvious reasons, Dr. Zarhan and his team focused on children.
09:56:59:25		We didn't have good air monitors out there. We had some but they're not very widespread, so by default, what Sam and his team had to do was-- is to essentially use children as air monitors. Uh, fortunately, they're good. They're good monitors and we know they take it up, particularly the toddlers are very good at giving us an estimate of what's in their environment, but by focusing on children's blood lead, they've also tended to ignore the impact on adults.
09:57:33:09		Now, just as one example, um, lead-- the U.S. EPA in 2013 said lead is a risk factor for coronary heart disease, so along with sex -- being male or female, obesity, smoking, diabetes, salt intake, toxic metals, lead, arsenic, physical activity, airborne particles, and genetic susceptibility, we know that lead is a, uh, in the EPA's own words, a causal risk factor for coronary heart disease.
09:58:04:23		And so I wanted to show you this next animation, because what we found in 2018 is directly relevant to this, because we see the same steep increase in risk of dying from coronary heart disease at the lowest measurable levels.
09:58:21:00		
09:58:24:07	narrator on Power Point	>> Lead is also a risk factor for coronary heart disease. That's when your heart is slowly or suddenly suffocated by an obstruction of the arteries feeding the heart. In a national study, we found that deaths increase sharply at blood lead levels below 50 parts per billion, the level considered safe. There was no threshold or safe level.
09:58:45:17		If we let the narrowing of this coronary artery represent the risk of dying from heart disease, you can see that most of the narrowing occurs below 50 parts per billion. We found that lead accounts for about 185,000 deaths every year.
09:59:00:20		
09:59:02:18	Bruce Lanphear	>> That makes lead the leading cause of coronary heart disease deaths in the



		United States. Now, we use 50 parts per billion in here. That's an equivalent to five micrograms per deciliter. And again, because of that shape of that dose response relationship, beginning at the lowest measurable levels, you already see a steep rise in heart attacks. And so, by focusing on children, we're underestimating the other impacts, including hypertension. Lead is an established risk factor for hypertension. Renal disease, pre-eclampsia, and coronary heart disease.
09:59:39:05		
09:59:42:19		So several times, um, throughout reading the reports and expert reviews, I've come across the word crisis. Some used it to say that this was a crisis. Others said it's not a crisis. Well, when you have conflict like that, it's always nice to go back to basics, and so I went to the dictionary, and I looked up the word crisis.
10:00:06:18		The first definition: a time of intense difficulty, trouble or danger, and I think all of you know this is exactly that. It is a time of intense difficulty where you have to make different -- difficult decisions that will impact the health of children and entire communities, not just tomorrow, not just next year but for a lifetime, or actually, thousands of lifetimes. Thank you very much.
10:00:37:19		
10:00:40:28	Mike Wasserman	>> Thank you, Dr. Lanphear. Sylvia, we have, um, Dr. Hoyer, who you said is just on standby for any questions. So, board members, I'm going to turn now to each of you to see if you have any questions. This is not a time for motions or anything else. This is a time for questions of our two doctors, Dr. Zahran, Dr. Lanphear, and we also have Dr. Marion Hoyer from the EPA, um, if you've got any questions.
10:01:13:22		When we are done asking questions of those three doctors, we'll go back to Sylvia for about 30 minutes of presentations. Uh, then we have approximately 100 speakers that we're going to hear from, and then we will deliberate, make motions, and take votes. So with that, I'll look for any hands from any supervisors that wish to ask questions of the doctors at this time. And I'm not seeing any, so we will now move on, Sylvia, to you.
10:01:46:06		
10:01:48:04	Sylvia Gallegos	>> Thank you, Supervisor Wasserman. We're gonna bring up a presentation. So this may be, uh, challenging for the public to follow. Um, as Board President Wasserman indicated at the beginning, we have four items tonight, and the first of those four items is Item 36. And I'd like to now explain what the staff recommendations are with respect to Item 36.
10:02:19:27		So the first recommendation is to receive the staff report from our office of the County Executive and then also Dr. Zahran's study, which the formal name is The Leaded Aviation Gasoline Exposure Risk at Reid-Hillview Airport in Santa Clara County California Study.
10:02:38:24		The next, uh, recommended action is to have the board approve funding in the amount of \$90,000 for publication of the study in a peer-reviewed scientific journal. I-I said at the beginning that, um, Dr. Zahran is well published, and the goal with taking this study to publication in a scientific journal is to make it available for the EPA.
10:03:03:02		Periodically, they update every five years the national, um, ambient air quality

		standards for lead, and the five year review period is coming up. And we think it's important to make this study available for that review process. In addition-- and I'm going to speak in a moment to the next, uh, recommended action, we are interested in publishing this study because we want to add that to the body of evidence, um, that the EPA needs to consider.
10:03:32:25		So the next recommended action would be to direct County Council to submit or join a petition of rulemaking to the U.S. Environmental Protection Agency, and the intent is to have them make a finding that lead emissions from general aviation aircraft endanger public health and welfare, and then issue proposed emission standards for lead, uh, from general aviation aircraft under the Clean Air Act.
10:03:59:25		We know this is a national issue, and one of the great privileges of working for this board is its willingness to affect national policy, and so we think this is a very important, um, action to take on behalf of communities throughout this nation. The next action is to direct the Administration, um, to continue working on-- we've done some research, and it's been captured in this transmittal to pro-- to promote unleaded operations at both our county airports, and that relates to ensuring, uh, a reliable supply of unleaded fuel, and right now the only unleaded fuel available in the marketplace is a 94 Octane unleaded fuel by, uh, Swift Fuels.
10:04:42:28		And then engaging in education efforts with airport users to promote its use for those aircraft that can use it, and also considering possible incentives to encourage its use, including price per gallon, convenience, and availability. Then the last recommendation under Item 36 would be to direct the Administration to continue discussions with California Department of Public Health and Mountain Data Group-- that's Dr. Zahran's group-- um, to further, um, and understand, uh, their respective interests and the feasibility of taking, um, a broader study of airborne lead emissions.
10:05:22:21		This is just one airport, and we know that this could raise concerns in other communities. And I wanted to, um, you know, clarify that we would conduct this study if-if the board so approves and in-in respect, we would just be funders of a study that California Department of Public Health would lead, but we would do so with jurisdictions that express a desire to participate in the study. So those are our recommendations under Item Number 36.
10:05:52:08		So now I want to pivot to the next item, which is Item 37, and this is-- this is the principle recommendations we're making in light of the study that Dr. Zahran performed. So I want to start, actually, at the end, and usually I present the process at the very end of any kind of presentation I make, but I'm gonna start in the beginning, because for some people in the community this is long overdue, perhaps decades overdue. And for other people, this feels very rushed. Um, this is a very momentous Board vote, and so I wanted to, again, start with describing how we arrived at this process.
10:06:30:10		So you'll recall at the beginning, I said the Board unanis-- unanimously approved Dr. Zahran's agreement in February 2020. Then the county spent six months negotiating a data privacy and security agreement with California Department of Public Health and Dr. Zahran's company, and he didn't begin his work until September of 2020 last year.
10:06:51:26		The board will recall that our original date to bring this study forward was May

		25th, and about the April time frame, uh, we were coming up against the deadline, and one of our volunteer peer reviewers, and the one, frankly, we were waiting for, Dr. Anthopolos, wasn't submitting comments in timely fashion.
10:07:12:28		And at the time, we made this very painful decision to postpone this study and its presentation to the Board because our commitment to everybody was we would follow the science, and Dr. Anthopolos in particular was of, um, we were very eager to understand her input because she is one of the named authors in the other, um, doctor, Dr. Miranda, who has done work in this area, and so we delayed this, um, board meeting to August, so that would give Dr. Zahran time not only to receive this input, but also conduct additional analyses, um, in response to her-her input.
10:07:53:13		So then on August 3rd, the Airborne Lead Study was released, and we provided it to all the board offices and posted it to the County's web site. That same day, August 3rd, um, Mr. Freitas, our Roads and Airports Director, made a presentation of the study at the District 5 United meeting. That same night on August 3rd, Eric Peterson, our Airports Director, made a presentation on the airborne lead study to the Airports Commission. The next day on August 4th, staff in the, um, and our researchers conducted a press conference, a virtual press conference, because we understood that the study was, frankly, difficult for many people to understand.
10:08:36:14		Then on August 10th, staff met with the City of Morgan Hill. That same day, August 10th, staff met with the City of San Jose. And again, that same day, August 10th, we met with the City of Palo Alto, and-and I can tell you that, um, the City of Palo Alto staff have expressed interest in commissioning their own study, so I have in fact connected them to Dr. Zahran. Then on August 11th, we conducted a virtual committee-- community meeting in East San Jose with Supervisor Chavez.
10:09:08:21		There were 439 people in attendance. There were 341 questions and statements that were made at this community meeting. We did forward to the Board, as a supplemental report a-a matrix of these questions that were submitted, and then during this meeting, there were 72 live responses that were provided, and like today, we had Spanish and Vietnamese and American Sign Language translators.
10:09:35:16		The next night on August 12th, we had a virtual community meeting with Supervisor Wasserman, um, focused on South County. We had 138 attendees. There were 123 questions and statements made, and we had 65 live responses during that community meeting, and now we are before you at this Board meeting. So it was quite extensive, uh, the process leading up to it. It's frankly two and a half years in the making. And then I wanted to expand on that a little bit, providing, um, a brief historical review of Reid-Hillview for further context.
10:10:15:20		So, as I said, for many people, this is a long time coming-- this conversation. Um, Reid-Hillview has been a source of controversy since at least 1978 when the county first initiated a safety study of the airport in the aftermath of a plane crash that occurred at Katherine R. Smith Elementary School. In 1986, congresswoman Zoe Lofgren, then a County Supervisor, first called for the closure of Reid-Hillview.

10:10:42:19		On May 6, 1990, a Cessna Skyhawk crashed on take-off into the backyard of a house, and then San Jose Mayor Tom McEnery and city council member Blanca Alvarado and the entire City Council voted 10 to 1 asking the county to close Reid-Hillview Airport, and that didn't happen. In 1996, an environmental impact report to analyze environmental impacts of airport closure was prepared, and a proposal by then County Supervisor Alvarado to close the airport was narrowly defeated on a 2 to 3 vote.
10:11:18:02		12 years later in 2008, then Board Chairperson Pete McHugh asked for a report on the closure process for the airport and the potential benefits to the county of redeveloping Reid-Hill Airport for other uses. That ultimately didn't result in any additional actions. Ten years later in 2018, the Roads and Airport staff presented a proposal, or a proposed business plan update for the airport, and it was from this board meeting back in December of 2018 and from recommendations made by Supervisor Chavez and Cortese that this study was requested.
10:12:00:05		And again, here we are before you. So I wanted to, um, offer you a sense of the affected community. What you see in front of you is, uh, three rings. They're three orbits. So the outer orbit is one and half miles, and that reflects the entire study area. And what I wanted to bring to your attention is that there are 52,000 people within this area. And for context, let me tell you that that's more than the population of seven cities in Santa Clara County, so you can imagine--
10:12:32:09		Think of the entire population of Campbell or the entire population of Morgan Hill here. Of those 52,000 people, nearly 13,000 of them are children. That's more than-- than the enrollment of every school district except for San Jose Unified or East Side High School District. And we know-- we know this, because the population density here in this part of San Jose is five times higher than the rest of Santa Clara County.
10:13:03:10		So now I want to shift to, uh, San Marin Airport for comparison. So as you can see from this aerial, San Martin has 2,350 people, so that's 50,000 fewer people than in that same orbit at Reid-Hillview. They have 280 children, which represents about 2% of the nearly 13,000 children within that 1.5 mile orbit around Reid-Hillview Airport.
10:13:32:25		And I'm showing you this for two reasons. First, I want to bring to everyone's attention that we couldn't do an airborne lead study in San Martin as we had first proposed because there were only 68 blood records within that 1.5 mile orbit versus 17,000 for Reid-Hillview. And second, I raised this because in community meetings, um, some people were suggesting that, well, if we close Reid-Hillview Airport, it really means we need to close all general aviation airports.
10:14:03:26		And the point I want to make is that all general aviation airports are not the same, and in fact, if you look at the vast majority of the 250 public use airports, they do not have residential neighborhoods directly adjacent to them. But I do want to show you for context some of these other airports in Santa Clara County. So this is Palo Alto Airport. Then I want to move to Mineta San Jose International Airport, and this is a commercial airport, so these are jet craft that don't use leaded fuel.
10:14:35:14		And then next, let's look at Moffett Airfield. And finally, I want to show you

		Santa Monica Airport. Um, as I said, of the 250 public use airports across California, the vast preponderance aren't like Reid-Hillview airport. But one that is is Santa Monica airport, as you can see from this aerial. And, uh, this airport is scheduled for closure in 2028 through a settlement agreement with the FAA.
10:15:05:05		So, given the significant effort that Doctor Zahran made to respond to questions our overall sense is, and many people did email him directly, uh, in addition to responding to comments in public meetings in other forums, you know, our sense is that many people have accepted, um, the validity of the findings. And in the last couple of weeks, you know, the conversation in the community has shifted and it's turned on the idea that if we could get unleaded avgas to our airports it would solve the airborne lead problem.
10:15:38:03		And so, what I want to, um, show, um, is that in fact a lot of our analysis was focused on mitigating lead contamination around Reid-Hillview Airport. And unlike other sources of lead exposure remediating lead from Reid-Hillview requires government action. While we laud the effort by Aerodynamic Aviation to secure unleaded avgas over the weekend for its flight training school we cannot make an entirely lead-free airport relying on people's goodwill.
10:16:09:19		And the analogy I used is that Valley Water, as many people will recall, asked the community to cut back on water consumption by 15%. Everyone knows we're in a megadrought and water is in significantly short supply. But what did the community save? Zero percent. In fact, despite every effort the administration would make to secure a reliable supply of unleaded avgas for airplanes at Reid-Hillview and San Martin, the county cannot ensure entirely lead-free operations at the airports.
10:16:41:28		There is one unleaded avgas available in the marketplace and it's a 94 octane product, which means it's not usable for about a third to maybe up to a half of the general aviation fleet. On July 27th, there was an announcement and it caused us to revise our report.
10:17:01:11		GAMI, which is General Aviation Modifications Incorporated, announced that it received approval by the FAA to do wide scale testing on 100 octane unleaded avgas. And the significance of this is that 100 octane unleaded avgas may be what's considered the universal drop-in solution to replace 100 octane low lead avgas for the vast majority, if not all, general aviation airplane fleet without engine or other modifications.
10:17:37:01		I wanna be clear that GAMI's 100 octane unleaded avgas is not available in the marketplace. It's undergoing wide scale test-testing and the FAA did ask GAMI to conduct additional tests, which we believe relate to sort of high compression engines. So, while aviation proponents may assert that there is a wide-- a fleetwide unleaded avgas solution on the horizon, we do not believe that is the case for the foreseeable future.
10:18:07:29		And I want to point to a statement that the Aircraft Owners and Pilots Association made. Now, this is an advocacy org-organization. I was struck by the sober and careful tone of its, um, comments when this announcement was made. And so, what they said was, While the FAA p-- approval represents a significant step in the long path toward the elimination of leaded avgas it will be some time for GAMI's 100 octane unleaded avgas might be available fleetwide. And then, importantly, only if it proves itself in the large-scale tests.

10:18:47:17		So, under current circumstances there are significant limits to our ability to create a lead -- lead-free airport. We believe the FAA would likely still require the county to supply a 100 octane low lead avgas and would very likely object to a ban on lead formulated avgas. At least if or until a universal unleaded avgas is available for the entire general aviation aircraft fleet.
10:19:16:17		In addition, an aircraft owner could continue to self fuel with lead formulated avgas, under current circumstances. Pilots of county airport based aircraft could fuel with leaded avgas at other airports. Itinerant flights landing at Reid-Hillview or San Martin could be using leaded avgas. And if the GAMI 100 octane unleaded fuel does pass additional testing and ultimately becomes available sometime in the future the GAMI Chief Engineer and Co-Founder estimates fuel would cost between \$0.60 to \$0.85 per gallon more than the 100 octane low lead, and that's a premium that price sensitive pilots may not be willing to pay. In addition, um, to, um--
10:20:04:23		In addition to that cost, to use GAMI's 100 octane unleaded fuel a pilot would need to obtain and pay for a supplemental type certificate, the process and cost of which is unknown at this time and would present another barrier for adoption of the fuel by segment of the pilots.
10:20:25:15		So, to-to sort of summarize all of these points, our view is if or until there's a widely available 100 octane unleaded avgas that's available to the entire general aviation fleet, a federal mandate that requires all pilots to use unleaded avgas, a phase out of leaded avgas production, and the supplies of leaded avgas depleted it would be very difficult to operate the airports entirely lead-free while subject to restrictions imposed by the FAA grant obligations.
10:20:59:04		The phase out of lead in automobiles may be instructive perhaps in terms of the timing. Some people may recall that, um, the schedule was introduced in the 1970 Clean Air Act. By 1975--
10:21:14:00	Mike Wasserman	>> Miss Gallegos? Miss Gallegos?
10:21:16:08	Sylvia Gallegos	>> Yes, sir.
10:21:17:07	Mike Wasserman	>> Excuse me a second. Is this your staff presentation of item number 37?
10:21:23:29	Sylvia Gallegos	>> That's correct, sir.
10:21:25:12	Mike Wasserman	>> That you're doing right now?
10:21:26:26	Sylvia Gallegos	>> Yes, sir.
10:21:28:01	Mike Wasserman	>> And the disputed actions and this direct administration county council take all necessary actions, including closure to immediately prevent lead contamination?
10:21:35:23	Sylvia Gallegos	> That's correct.
10:21:37:05	Mike Wasserman	>> And I know there's a number of different ways and things that the board could consider. It just seems like you're going down one path right now, um, specifically regarding a possible trans- transition to lead-free gas. I-I need to know where you're headed or-or what-what it is exactly you're doing. I'm-I'm a bit confused now.
10:22:01:26	Sylvia Gallegos	>> So, what we've been, uh, endeavoring to say is it'd be extremely difficult to operate the airports entirely lead-free and we were trying to describe the limitations to that under the current circumstances.
10:22:14:22	Mike Wasserman	>> Okay, and I-I don't wanna get in this debate publicly with you. But that

		would be like-- would be extremely difficult to close the airport prematurely and it could be extremely difficult to do other things. It just seemed you were very much focused on this-this one item. And I'm looking at the recommended action and that's-that's why I was asking where- where this was going. If you could please wrap up then we could get to public comment.
10:22:42:24	Sylvia Gallegos	>> All right, so let me-- I-I will wrap up then. Um, and let me move to the very end of the presentation, if I may. Just one moment.
10:22:54:01		
10:22:58:12		So staff recommendation. As you can see here and as described, Supervisor Wasserman, the recommendation by staff is to direct the administration council to take all necessary actions, including closure, to prevent lead contamination from operations at Reid-Hillview Airport. I want to be clear that this does not mean the airport will be lead-free tomorrow. This is the beginning of a fight. But I would say that I wanna communicate our steadfast commitment to that and that it's a righteous fight and one we are prepared to fight right now.
10:23:33:04		And so, let me do one last housekeeping item before, um, we make it available for public comment. So, board offices have expressed concerns with respect to the study and what this means for families and I wanted to bring to your attention that we now have an updated public health, uh, website in the Childhood Lead Prevention Program and it provides some information with respect to prevention and education information, including common sources of lead exposure, how to protect your family from lead, healthy eating to prevent lead poisoning, and what, uh, the program can do for you.
10:24:11:06		We also, as you, uh, know, have, uh-- we have a-a, uh, lead paint mitigation program and we're pleased to announce that the website is now up and it's at leadfreesc.org and you can find more information about the lead paint settlement, um, online at the county website. So, with that, we will, uh, abbreviate the presentation and-and allow you to open it up for public comment.
10:24:37:05	Mike Wasserman	>> Thank you, and-and Dr. Smith wanted to summarize. So, Dr. Smith, we'll turn to you.
10:24:42:28	Jeff Smith	>> Yes, thank you, Mr. President. Thanks to, uh, our consultants. Thanks to Deputy County Executive, Sylvia Gallegos, and everyone else who did a huge amount of work with regard to this. I started off trying to frame us, um, at the, um, 50,000-foot view, not-- no pun intended.
10:25:04:19		Um, and I-- we've gone through a lot of weeds, um, important things to know, lots of details that are critical. I think our studies and our experts made some great points, but I'd like to bring it back down to look at the overall general, uh, suggestion and recommendation from the board -- or from the administration to the board.
10:25:31:16		We think it's very convincing to realize that right now children and adults are being poisoned in the region around Reid-Hillview-- Reid-Hillview Airport and because of the fact that there's an intense population there and a large number of, uh, so-called sensitive receptors -- schools, and other areas that are, uh, children are at-at a lot.
10:26:00:27		We think it's clear that this has been a problem for many years that's

		contributed to many social and health ills and will continue to be a problem unless we do something now. What we're recommending to the board is that we embark upon what will be a challenging fight with the FAA in order to eliminate the lead exposure and poisoning.
10:26:31:15		The FAA will not, at least historically, has not been receptive to the idea of, uh, impacts of their service-- or of their activities on the community. They're enabling legislation and regulatory scheme really is focused on one issue and that's to maintain airports functioning as they currently are. I think it's been pretty well documented that, at least for Reid-Hillview, that operation causes IQ drop, illness, sickness, poor performance in school, um, adult diseases.
10:27:16:28		And we recommend that you authorize, the administration and county council, to take whatever, uh, steps are necessary in a legal way in order to prevent the exposure of lead -- of our community to lead. And thank you very much.
10:27:40:25		
10:27:42:18	Mike Wasserman	>> Thank you. Appreciate that. Uh, we will now move on to public comment. What I'd like to do-- I'm hoping we get public comment can end around 10 o'clock, a couple of hours from now. Given the number of people we have, Nancy, we're gonna go to 30 seconds each, so that we can give as many people as possible the opportunity to speak tonight about this and, uh, and voice their feelings. When public comment is over, which I'm guessing will be a couple of hours from now, uh, we will then have board deliberation on each item and, uh, take votes and, uh, try and wrap that up. So, Nancy, if you can start us off, please.
10:28:27:24	Nancy Guerrero	>> Sure, our first speaker is Paul Soto. I am unmuting you. Please accept the unmute. You will have 30 seconds to speak. The timer will start when you begin speaking.
10:28:37:10		
10:28:41:11		Paul Soto, if you can unmute yourself, please. Okay.
10:28:47:05	Mike Wasserman	>> Paul, you are on mute.
10:28:50:09	Nancy Guerrero	>> We will come back-- Oh.
10:28:51:16	[ Paul Soto ]	>> Uh, yes. Uh, yes, this is Paul Soto of Horseshoe.
10:28:54:26	Mike Wasserman	>> Yes.
10:28:56:00	[ Paul Soto ]	>> I think that the report, uh, says it all. Um, I'm more interested in its closing and for there be, uh, context centered for that closing. That DDT pesticides in the 1940s and '50s were loaded onto those planes and sprayed over Chicano populations that lived in Sal Si Puedes. The Chicanos have lived with this enough already and that there be some context centered on this discussion with respect to Sal Si Puedes and the DDT pesticides.
10:29:27:08	Nancy Guerrero	>> Our next speaker is Gabriel Monriqa. I am unmuting you. Please accept the unmute and you may speak.
10:29:36:08	[ Gabriel Monriqa ]	>> Good evening, board of supervisors. Uh, my name is Gabriel Monriqa. I am calling to support the closure of Reid-Hillview Airport. And the head of Silicon Valley doesn't want children, most of them from low income families and communities of color are exposed to toxic lead fumes from private planes flying out of Reid-Hillview almost everyday. The new report concludes that children next to Reid-Hillview Airport experience high blood lead levels. I urge



		the board of supervisors to close the airport and protect our children, the future of Silicon Valley. Thank you.
10:30:07:10	Nancy Guerrero	Our next speaker is Michelle. Please accept the unmute to speak.
10:30:15:25	Michelle Coleman	My name is Michelle Coleman. I'm a member of Showing Up for Racial Justice at Sacred Heart. The report documents the ongoing damage to East San Jose children. The c-- and other people. The community has been dealing with these conditions for decade and their health has been negatively impacted. It's time to stop the harm. We cannot continue to allow people to have their health and liv-living conditions negatively impacted. I call for the closure of the airport and a-
10:30:48:03	Nancy Guerrero	Our next speaker is Von Viaverde. Please accept the unmute to speak.
10:30:53:19	Von Viaverde	Good evening, President Wasserman, members of the board. My name is Von Viaverde, director of advocacy at Asian Americans for Community Involvement. And I'm here to urge the board to support the administration's recommendations to close the Reid-Hillview Airport. As a federally qualified health center, we stand with the medical and scientific communities in underlining that there is no such thing as a safe amount of lead exposure and that this exposure is leading to severe harm in our communities. We need to preserve the health and well being of our communities. Thank you very much.
10:31:23:01	Nancy Guerrero	Our next speaker is Brian Schmidt. Please accept the unmute to speak.
10:31:31:00	Brain Schmidt	Good evening. Brain Schmidt here, from Green Foothills. We support both the immediate closure of Reid-Hillview Airport and the protection of the San Martin community from potential impacts of sending air traffic to their airport. You've heard about the dangerous impacts of lead emissions, and we full ag-- fully agree with those reasons for closing Reid-Hillview and protecting San Martin from expansion. East San Jose deserves something better, including parks. And please also protect San Martin. Thank you.
10:32:01:26	Nancy Guerrero	Our next speaker is Trudy. Please accept the unmute to speak. Trudy, can you unmute yourself please?
10:32:13:25	Trudy	I have not submitted a question.
10:32:18:18	Nancy Guerrero	Now is your opportunity to provide public comment, if you wish.
10:32:21:26	Trudy	No thank you.
10:32:23:03	Nancy Guerrero	Okay, thank you. Our next speaker is Jeremy Barousse. I am unmuting you. Please accept the unmute to speak.
10:32:36:11	Jeremy Barousse	Good evening, President Wasserman, the Board of Supervisors. My name is Jeremy Barousse, and I'm the program coordinator with Community Health Partnership. I'm here tonight to ask you to vote in support of closing Reid-Hillview Airport as early as 2022 and banning use of lead in aviation, too, immediately. There is no safe lead level in children. With 21 schools and children's centers-- childcare centers within 1.5 mile radius of the airport, the continued exposure of children to lead must end. The dangers of Reid-Hillview Airport have been made evident--
10:33:09:29	Nancy Guerrero	Our next speaker is Ernesto Ansaes. Please accept the unmute to speak.
10:33:17:13	Ernesto Ansaes	Thank you very much. My name is Ernesto Ansaes, [indistinct] (10:33:18:00). And today, I'm-- [audio drops] --guys to talk about the compromise with this meeting and-- [audio drops] --at your Airport. You know, it needs to be closed

		by 22-- uh, 2022 at the latest. Uh, there's two reasons why, you know, I-I definitely, you know, agree we have to do this, because most people-- [audio drops] --you know, owners. You know, they're not leaving there. I mean, they're leave-leave-- but, you know--
10:33:50:10	Nancy Guerrero	Our next speaker is Carlos Rosario. Please accept the unmute to speak.
10:33:56:28	Carlos Rosario	Hi, my name is Carlos Rosario. I'm the president of County of Black Lawyers. I serve as a commissioner on the county's health advisory commission, and I'm the chair of the Bay Area Community--
10:34:06:18	Nancy Guerrero	I am so sorry, I unmuted you. Can you please unmute? And restart the timer. My apologies.
10:34:14:02	Carlos Rosario	No problem at all. As I said, I'm, uh, president of the County of Black Lawyers, serve as commissioner on the county's advisory-- health advisory commission. Uh, most recently, I had, uh, the pleasure of serving on Supervisor Lee's community review panel for his URJENT Grant Program. Uh, I submit that you view the issues tonight through the URJENT Grant Program's lenses, which focuses on unhoused, racial justice, greenness, equity, neighborhoods, and transparency. I believe the community safety delayed is community safety denied, and I hope you take care of our kids. Thank you.
10:34:47:25	Nancy Guerrero	Our next speaker Bella Estrada. I am unmuting you. Please accept the unmute to speak.
10:34:57:27	Bella Estrada	My name is Bella. I'm seven years old. I go to school by the airport. I don't know what lead is, but my dad let me know it hurts kids. I don't want my friends or me to get hurt by lead. I wanna grow up to be big, strong, and smart. Please close the airport.
10:35:21:29	Nancy Guerrero	Our next speaker is Juan Estrada. Please accept the unmute to speak.
10:35:32:17	Juan Estrada	Can you hear me?
10:35:34:05	Nancy Guerrero	Yes.
10:35:38:18	Juan Estrada	My name is Juan Estrada, advocacy associate as Green Foothills. Reid-Hillview Airport is surrounded by neighborhoods that have endured noise, plane crashes, and [indistinct] (10:35:45:00) pollution for decades. It's now also confirmed it's also poisoning children with leaded fuel all that time. We urge the continuation of a community lead vision for the site that includes a significant percentage of land to be dedicated for open space nature and parkland. Please close the airport for the sake of kids, the community, and the environment. Thank you.
10:36:08:14	Nancy Guerrero	Our next speaker is Susan Hayase. I am unmuting you. Please accept the unmute to speak.
10:36:14:16	Susan Hayase	My name is Susan Hayase. I've lived in San Jose for 40 years. I'm a member of San Jose Nikkei Resisters. We are a grassroots community organization in the Japanese-American community. We know that closing the Reid-Hillview Airport is an issue of environmental justice. I strongly urge you to close Reid-Hillview Airport. It is unacceptable that east side families and children are exposed to toxic lead fumes every day from private planes, mainly owned and flown by people who live miles away. There is no safe blood le-- lead level in children. Please close the airport.
10:36:46:09	Nancy Guerrero	Our next speaker is Cecilia Chavez. Please accept the unmute to speak.

10:36:52:12	Cecilia Chavez	Hello, my name is Cecilia Chavez, and I'm a community member from east San Jose right on Story and King, right on the wind trajectory, uh, of where I've been contaminated all these-- for the past two, three decades of my life. Um, I've suffered, um, not knowing that I'm suffering the consequences of being exposed to lead, with two premature births and consequences, um, of that, but also as a Silicon Valley De-Bug organizer. I want this explored on the youth that have been incarcerated and, um, their blood level should be tested as well.
10:37:25:07	Nancy Guerrero	Our next speaker is Brett Bymaster. Please accept the unmute to speak. Brett, you may speak.
10:37:35:08	Brett Bymaster	Hello, my name is Brett Bymaster, executive director at Healing Grove Health Center. Uh, we have a significant concern. We are in favor of closing the Reid-Hillview Airport, but we have a significant concern that that traffic will shift over to San Jose Mineta Airport. The FAA actually can't restrict which-- where, uh, uh, planes fly in. Uh, so we wanna make sure that in this conversation, that we are, uh, taking in-- [audio drops] --Guadalupe community, where there's already a high fraction of low income people living. So, we could just shift the problem from east San Jose to Washington-Guada-Guadalupe--
10:38:09:11	Nancy Guerrero	Our next speaker is Ángel Madero. I am unmuting you. Please accept the unmute to speak.
10:38:15:25	Ángel Madero	Cool, thank you. Good evening, honorable Board of Supervisors. My name is Ángel Madero and I'm speaking on behalf of council member Magdalena Carrasco who represents District 5. In the area that the report references, you have gathering spaces to the tune of 21 schools, parks, recreation centers, places of worship, and shopping centers. You're talking about 52,000 residents and 12,000 children who are on a daily basis exposed to lead pollution for years, and who will now have to deal with these consequences. Council member Carrasco r-requests the board vote to close the Reid-Hillview Airport. Thank you.
10:38:48:00	Nancy Guerrero	Our next speaker is Lisa Gonzalez. Please accept the unmute to speak.
10:38:54:23	Lisa Gonzalez	Good evening. My name is Lisa Gonzalez. I am in favor of shutting down the airport and let community lead a vision of what to do with the land. Um, it is enough. It is too late to change. We need this airport to be closed and be able to give our community what they need, the programs after all the damage that these people have done to us. It is time, I am asking the supervisor to vote yes on closing the airport and let community decide what to do with that-- with the land. Thank you.
10:39:24:14	Nancy Guerrero	Our next speaker is Steve Bennet. I am unmuting you. Please accept the unmute to speak. Steve, can you unmute yourself please?
10:39:39:23	Steve Bennet	My wife, a Korean born U.S. citizen, was lead assembler for 25 years. Where was your lead testers when she and thousands of other immigrants were breathing solder smoke while they worked? She took a heavy metal test in Reno, 10 times the max, half-life 20 years. Our tests here showed nothing. Are your tests tainted in your favor? Uh, our metal pipes, uh, you wanna test one for lead? Whether there were water pipes in the tested area. Uh, I think you're, uh, uh, the lead tester behind the airplane, that's not right.
10:40:13:29	Nancy Guerrero	Our next speaker is Mackie Avela. Please accept the unmute to speak. Mackie, can you please unmute? Mackie, one more time, can you please

		unmute?
10:40:37:13	Mackie Avela	[speaking Spanish]
10:40:38:14	Nancy Guerrero	Si.
10:40:44:05	Mackie Avela	[speaking Spanish]
10:41:19:28	Nancy Guerrero	Rosario, are you available to translate that?
10:41:22:23	Rosario	Yes, I'm here. Sorry, yes, I'm here. Uh, "My name is Macaria and I live in east San Jose. And I live in-- right next to the airport. I'm a mother of three children and one more on its way, and I've been living for five years with this. Um, I'm also a community promoter and I would like to have justice and-- for children in Asian and Latin American communities. Thank you."
10:41:50:00	Nancy Guerrero	Our next speaker is Abre' Conner. I am unmuting you. Please accept the unmute to speak.
10:41:56:27	Abre' Conner	Hi, my name is Abre' Conner. I'm the directing attorney of the health program at the Law Foundation of Silicon Valley. We urge you to close the airport and allow for community input, uh, for a plan at this future site that includes the families of east San Jose. We've heard tonight that there is no level of, uh, lead that can exist in a child's blood that would be considered safe. Also, the students that are closest to the airport are students of color. Here in California, CalEnviroScreen has demonstrated that race and environmental harms are directly correlated, and that's what would happen here as well.
10:42:30:25	Nancy Guerrero	Our next speaker is Mary Helen Doherty. Please unmute to speak.
10:42:36:17	Mary Helen Doherty	Mary Helen Doherty, a member of SURJ at Sacred Heart in the Housing Team of PACT. Please vote to immediately close the Reid-Hillview Airport and endorse a community centered approach to reimagine how the land will be used in support of our eastside neighbors. Your vote to do so is an action that implements the stated county values to achieve racial and economic equity, and is a statement of respect for former supervisor, Blanca Alvarado, who continues to set an example for you by her justice making for her community. Thank you.
10:43:07:17	Nancy Guerrero	Our next speaker is Aurora Soliz. I am unmuting you. Please accept the unmute to speak. Aurora, can you unmute yourself please? Aurora, one last time. Okay, we will come back to her. Next speaker is Laverre Foster. I am unmuting you. Please accept the unmute to speak.
10:43:39:26	Laverre Foster	My name is Laverre Foster, and I represent the African American Community Service Agency. I support the immediate closure of Reid-Hillview Airport. We must always put the health and safety of our community first. The longer the airport remains, the longer parents have to wake up every morning wondering if their child will get sick. At the time, we ask for your leadership and make the decision that protects our community. Thank you.
10:44:04:20	Nancy Guerrero	Our next speaker is John Akin. I am unmuting you. Please accept the unmute to speak.
10:44:11:21	John Akin	Hi, my name is John Akin. I'm the director of aviation from Mineta San Jose International Airport. I have grave concerns about item 126, which proposes to prevent infrastructure improvements and expansions at San Martin Airport. Without investments in San Martin Airport, the board's actions this evening have the potential to shift general aviation aircraft to San Jose International

		Airport. This shift will negatively impact the operations of the county's only commercial service airport. San Jose International does not have the capacity to absorb these aircraft or activities. I can't--
10:44:45:09	Nancy Guerrero	And we are back to Aurora Soliz. Please accept the unmute to speak. Aurora, I see that you have unmuted. Please go ahead.
10:45:00:02	Aurora Soliz	Is that better?
10:45:01:11	Nancy Guerrero	Yes.
10:45:03:05	Aurora Soliz	Can you hear me?
10:45:03:26	Nancy Guerrero	Yes we can.
10:45:04:17	Mike Wasserman	Yes.
10:45:05:12	Aurora Soliz	Okay. Hello, my name is Aurora Soliz, and I live in East San Jose, near Reid-Hillview Airport. I have two elementary age grandchildren, who attend school in my vicinity, and my mother, who is 101 years old. I have lived here for 50 years. We are all so fearful that a plane might crash into our home or schools. We are tired of the noise all day and night. I urge you--
10:45:43:18	Nancy Guerrero	Our next speaker is Rebecca. Please accept the unmute to speak.
10:45:50:21	Rebecca	My name-- can you hear me?
10:45:51:26	Nancy Guerrero	Yes.
10:45:52:19	Rebecca	My name is Rebecca, and I live in East San Jose. I beg you to show your commitment in protecting and preventing our community from suffering painful disease. It is unacceptable and inhumane that our families and innocent children, who are in their full development of their immune system have to breathe this toxic air caused by useless, useless-- and again, useless airplane airport. Thank you.
10:46:20:03	Nancy Guerrero	Our next speaker is Sherry Burns. Please accept the unmute to speak.
10:46:28:06	Sherry Burns	Good evening, members of the board. My name is Sherry Burns, and I'm the executive director of Silicon Valley Independent Living Center. I'm a San Jose native, and I've lived here for several decades. I support the closure of Reid-Hillview Airport. The damage caused to residents living near the airport for more than 50 years of exposure to leaded aviation fuel emissions cannot be undone. We should never think it's okay to have policies in place that result in harm to any of our residents, let alone no-- ignore those policies that continue to increase the number of children who develop behavioral and intellectual disabilities. I urge you to vote to close the airport.
10:47:02:04	Nancy Guerrero	Our next speaker is Jennifer Maluda. I am unmuting you. Please accept the unmute to speak.
10:47:21:14	Mike Wasserman	Just go ahead, Nancy.
10:47:26:09	Nancy Guerrero	We seem to be having some technical difficulties here. If someone from my team can please take over?
10:47:38:26	woman	One moment. Our next speaker is Michelle Mashburn. Michelle, I've-- I've asked you to unmute. Please accept the unmute.
10:48:00:10	Michelle Mashburn	Hi, my name is Michelle Mashburn. I'm a disability advocate and activist in San Jose. Lead is toxic at any level, and environmental devastation disproportionately impacts lower-income communities, people of color, and disabled people. The airport must be closed, and the voices amplified on this

		issue are those that live in the area, and not the airplane owners and people who are unwilling to live in the toxic lead fumes. Close the airport and continue a community engagement to plan the future of this public site.
10:48:34:22	Nancy Guerrero	Next speaker is Gustavo. Please accept the unmute to begin speaking.
10:48:45:06	Gustavo	[speaking Spanish]?
10:48:46:19	Nancy Guerrero	Si.
10:48:48:08	Gustavo	[speaking Spanish].
10:49:25:24	Nancy Guerrero	Our next speaker is Jennifer Maluda--
10:49:27:28	woman	We need that. Just real quick, we need that--
10:49:29:25	Mike Wasserman	You want a translation?
10:49:30:21	woman	Yes.
10:49:31:10	Nancy Guerrero	Oh, I'm sorry.
10:49:33:06	translator	Yes, my name is Gustavo Flores, and I live in District 5 in San Jose. And I live in-- I've been living in East San Jose for 33 years now. And I'm here with the community to demand the closing of the airport, because we think it's dangerous to the community because of the lead's presence in the air. And it may be used-- that's it.
10:49:57:27	Nancy Guerrero	Our next speaker is Jennifer Maluda. Please accept the unmute to speak. And for some reason I am unable to unmute her. I will come back. Our next speaker is Omar Vasquez. I am unmuting you. Please accept the unmute to speak.
10:50:19:04	Omar Vasquez	Hi, my name is Omar Vasquez. I live, uh-- I'm a volunteer for LUNA, but I also live here close to the airport. Uh, after I heard, uh, the story, actually, I read, like, 25 pages, and-- now I know that this is gonna be about public health, or poor people health, versus, uh-- my privilege, or rich people's privilege. So and I wish that our supervisor to vote for public health.
10:50:52:00	Nancy Guerrero	Our next speaker is Louie Drocha. I am unmuting you. Please accept the unmute to speak.
10:50:58:22	Louis Drocha	Hi. Hello, good evening. On behalf of Latinos in Action, dear members of Santa Clara County Board of Supervisors, please be advised of consensus among state and national Latino civil rights leaders in supporting and urging the Santa Clara County Board of Supervisors to end decades of lead exposure to Latino children and families in East San Jose by closing Reid-Hillview General Aviation. You are strongly urged to vote "yes" A-- on each agenda item 36AE, 37, and 38.
10:51:32:04	Mike Wasserman	Excuse me, Nancy. A question for you. Is it possible we have simultaneous translation occurring for those listening on the-- for instance, the, um-- the Spanish translation version?
10:51:46:20	woman	Supervisor, that is happening. Um, we have, um, simultaneous translation both on the Vietnamese channel and on the Spanish channel. However, when somebody comes into the room and speaks Spanish, we do offer a translation for those English speakers so that they know what is said as well.
10:52:06:18	Mike Wasserman	Okay, so somebody comes in and they speak Spanish. This board is not able to get the English translation at the same time.
10:52:14:10	woman	Not at the same time, no.

10:52:16:13	Mike Wasserman	Okay, thank you.
10:52:17:15	woman	You're welcome.
10:52:20:15	Nancy Guerrero	Our next speaker is Beverly Widebacha. I am unmuting you, please accept the unmute to speak.
10:52:27:22	Beverly Widebacha	Hi, my name is Beverly Widebacha, and I represent the African-American Community Service Agency, and I support the immediate closure of the Reid-Hillview Airport. This issue has been plaguing our community for years, and it's essential that we prioritize the health of our children and the vulnerable black and brown communities that are not informed about the disproportionate health effects that are imposed on their community. Instead of the airport, we can start looking towards building facilities, recreational centers, and resources in that location to have a more positive impact on the community surrounding it. Thank you.
10:52:55:24	Nancy Guerrero	Our next speaker is Arie Luna. Please accept the unmute to speak.
10:53:02:24	Arie Luna	Hello? Can you hear me?
10:53:04:07	Nancy Guerrero	Yes.
10:53:05:11	Arie Luna	Okay. Hello, my name is Arie Luna, and I represent the African-American Community Service Agency. I reside in District 5, which is East Side San Jose. I support the immediate closure of Reid-Hillview Airport. My community has had enough of the long-term effects of lead poisoning. The most affected individuals being exposed to lead are children in families of minority groups. I asked myself, "How can you treat a creature so poorly?" So almost 200 acres of land East Side San Jose need to be allocated towards facilities that can direct positive impact on our community. Thank you.
10:53:37:08	Nancy Guerrero	Our next speaker is Amadi Bateman. Please accept the unmute to speak.
10:53:45:01	Amadi Bateman	Hello, my name is Amadi Bateman, with Surge at Sacred Heart. I support the immediate closure of Reid-Hillview Airport. As we've heard tonight, there's no safe level of lead in a child's body. The health of this community is continuing to be threatened, and we should not allow this damage to continue. As a teacher, I have seen firsthand the tragic results of elevated blood lead levels in children. The East Side community deserves a chance to heal, and to use the space to serve their own community. We need the immediate closure of the airport, and a community-centered approach to reimagine how the land can be used. Thank you.
10:54:18:00	Nancy Guerrero	Our next speaker is Milan Valentin. Please accept the unmute to speak.
10:54:25:06	Milan Valentin	Hello, my name is Milan Valentin, and I'm the executive director at the African-American Community Service Agency. We serve several clients that have reached out to us over the years, letting us know about the impact of this issue. One thing we wanna make clear here at AACSA is just because you change the gas does not mean you get a pass. It is time to close this airport.
10:54:50:24	Nancy Guerrero	Our next speaker is Nina Gomez. Please accept the unmute to speak. Nina, can you please unmute yourself? Okay, we will come back to her. Our next speaker is Carla Landes. I am unmuting you. Please accept the unmute to speak. Go ahead, please. Can you unmute yourself again, please?
10:55:26:18	Carla Landes	[speaking Spanish]?
10:55:27:24	Nancy Guerrero	Si.

10:55:28:19	Carla Landes	Okay. [ speaking Spanish ].
10:56:05:12	Josephine	Hi, my name is Carla--
10:56:06:14	Nancy Guerrero	Josephine?
10:56:07:00	Josephine	Yes.
10:56:07:17	Nancy Guerrero	Thank you.
10:56:08:07	Josephine	My name is Carla Landes, and I'm a mom, and I live in East San Jose, and I'm here to support the closing of the airport, which is not having any benefit. The only benefit, or thing that it may have is that it is for the benefit of very few people that are not part of the community, and it's polluting air. Air that is spread by our children, so let's have a better use for this land.
10:56:35:28	Nancy Guerrero	Our next speaker is Peter Ortiz. Please accept the unmute to speak.
10:56:45:07	Peter Ortiz	Hello. Can you hear me?
10:56:46:24	Nancy Guerrero	Yes.
10:56:47:14	Mike Wasserman	Yes.
10:56:48:00	Peter Ortiz	Hello, honorable President Wasserman, and the board of supervisors. My name is Peter Ortiz, and I represent the East Side community on the Santa Clara County Board of Education. I'm calling on behalf of the many students, families, and working class residents of my trustee area to urge you to vote to close the airport immediately. This is a clear issue of racial injustice, for the mainly children of color and immigrant families impacted by the placement of this airport. It's time for the board to prioritize our families over the use of private planes by closing the airport now.
10:57:21:07	Nancy Guerrero	Our next speaker is Nina Gomez. Please accept the unmute to speak. Nina, can you please unmute yourself?
10:57:38:15	Nina Gomez	Yes, uh, good evening. My, uh, concern is mostly about children and the children that are consuming the lead. Uh, I do have a vote, and it would be to close the-- the airport.
10:57:55:10	Nancy Guerrero	Thank you.
10:57:56:04	Nina Gomez	Hello? Thank you.
10:58:00:04	Mike Wasserman	Thank you. Nancy?
10:58:02:28	Nancy Guerrero	Our next speaker is Jen Mulata. I am unmuting you. Please accept the unmute to speak.
10:58:11:23	Jen Mulata	Thank you. Good evening, board. This is Jennifer Maluta, with San Jose State University. In direct response to the lead study, San Jose State will keep its students on the ground until flight school planes can use unleaded fuel only. Additionally, we commit to developing research and innovation strategies that will help transition general aviation away from all aviation fuels, and toward electric propulsion. We applaud supervisor Chavez for her leadership, and for all the work that has been done to get to this point. We will support the board's decision, and we are committed to working with the county.
10:58:45:11	Mike Wasserman	Nancy, if you'll hold up just a minute.
10:58:47:05	Nancy Guerrero	Sure.
10:58:48:00	Mike Wasserman	We've now been hearing public comment for 30 minutes, 10:20. We've got about 35 speakers that have spoken. We have 228 more to go. So, in, um,



		about three minutes, I think we'll cap it. So anybody else wishing to speak on this item, please register now. Uh, three speakers from now, Nancy, let's, uh, cap it on the speakers.
10:59:13:17	Nancy Guerrero	Okay, thank you. Our next speaker is Norma Pammeth. I am unmuting you, please accept the unmute to speak.
10:59:28:14	Norma	[speaking Spanish]
11:00:00:10	translator	Good evening, my name is Norma, and I live in the commu-- I'm from the community SoMa, and I would like to demand the immediate closing of this airport, and me, myself, I'm-- I was-- I had a very traumatic experience, so I please demand the immediate closing, now.
11:00:21:17	Nancy Guerrero	Our next speaker is Alicia Chavez. I am unmuting you, please accept the unmute to speak.
11:00:31:15	Alicia Chavez	Hi, my name is Alicia Chavez. I'm an organizer with Silicon Valley DeBug. I'm also within the range of the youth that were in the study, so it would probably be me and my peers. Growing up, I lived less than a mile away from the reed airview-- uh, Reid-Hillview Airport, and went to the schools and community centers around the airport, and we call for the immediate closure of the airport. Thank you.
11:01:03:00	Mike Wasserman	Thank you.
11:01:04:12	Nancy Guerrero	Our next speaker is Salvadore Mustamante. Please accept the unmute to speak.
11:01:10:15	Salvadore Mustamante	Uh, can you hear me?
11:01:11:09	Nancy Guerrero	Yes.
11:01:11:28	Mike Wasserman	Yes.
11:01:12:25	Salvadore Mustamante	Uh, President Wasserman and members of the b- of the board, good evening. I'm Salvadore Mustamante. I'm a member of Latinos United for a New America, also known as LUNA. I'm calling to urge you to close Reid-Hillview Airport immediately. The damage from more than 60 years of exposure to leaded aviation fuel emissions cannot be undone. However, you can do something tonight to show your commitment to a more equitable county by doing everything in your power to close the airport. Thank you.
11:01:44:13	Nancy Guerrero	Our next speaker is David Bivanko. I am unmuting you. Please accept the unmute to speak
11:01:56:26	David Bivanko	Hello? Can you hear me?
11:01:58:12	Nancy Guerrero	Yes, yes, please go ahead.
11:01:59:13	David Bivanko	Okay. Hi, my name is David Bivanko, and I am a father of four in the east side, and I grew up here as well. So I would like you guys to please shut down the airport. Uh, it'll benefit us, uh, to decide on what to, uh, use the line for. And, uh, yeah, I would desperately decide for you guys to, uh, say to close the airport. Thank you.
11:02:25:19	Mike Wasserman	Thank you, and Nancy, if you'll cap it now, we've got 252 people remaining to speak.
11:02:33:26	Nancy Guerrero	Thank you. We have made a note of that. Our next speaker is Barbera Estrada. Please accept the unmute to speak.

11:02:43:26	Barbera Estrada	Okay, my name is Barbera Estrada. I am president of District One. I am also the single mother of a special need child. I, uh, stand in soli-solidarity with the parents of [indistinct][11:02:53] east side San Jose community. I am ordering you to go out in support of closing Reid-Hillview Airport. Uh, as early as 2022 on beginning use of-- banning of leaded aviation fuel immediately. This is devastating, but today, dozen of children--
11:03:17:14	Nancy Guerrero	Our next speaker is Anhalita. Please accept the unmute to speak.
11:03:26:15	Anhalita Chavezel	Hi, can you hear me?
11:03:27:22	Mike Wasserman	Yes.
11:03:28:12	Nancy Guerrero	Sure can.
11:03:29:17	Anhalita Chavezel	Hi, my name's Anhalita Chavezel. I live in east town Jose, affected by the Reid-Hill airport, and work as a director of programs for SOMOS Mayfair. Within the county, we are working on creating systems of support and creating them with-- and leading demonstrations by-- to support families. Yet we continue to allow systematic and environmental issues to hurt our families and children. Closing the airport is a prevention and intervention method for children's future. If saving-- if we look at education as savings. I urge you to close it, and to not allow those in power to come persuade the vote.
11:04:02:21	Nancy Guerrero	Our next speaker is Jorge Casas. I am unmuting you. Please accept the unmute to begin speaking
11:04:21:22	Jorge Casas	Hi, hi, uh, President Wazeroo-- Wasserman. Uh, honorable board of supervisors, my name is Jorge. I'm a member of Latinos United for A New America, and a resident of east town Jose. I'm here to urge you, uh, to close the Reid-Hillview Airport immediately. Each day we continue to keep Reid-Hillview open, we are consciously making the choice to poison thousands of children and family members in east town Jose, a perpetual cycle of, uh, environmental discrimination and racism.
11:04:58:18	Nancy Guerrero	Our next speaker is Marianne Dewan. Please unmute yourself. And you may begin speaking.
11:05:08:29	Marianne Dewan	Good evening. Um, lead significantly impacts children's physical, emotional, and academic development. There are no treatments for reducing the developmental adverse effects of lead exposure in children. Prevention is the only effective strategy. Thousands of children are exposed daily due to Reid-Hillview Airport. Immediate action is needed to protect our children. I support the staff recommendations and urge you to take action.
11:05:39:16	Mike Wasserman	Thank you.
11:05:41:18	Nancy Guerrero	Our next speaker is Noah Lieman. Please accept the unmute to speak. Noah, can you please unmute yourself? 'Kay, I will come back to him. Our next speaker is Urbish. Please accept the unmute to speak.
11:06:15:06	Urbish	Thank you very much. Uh, I wanted to mention about, uh, two bills. One is a bill introduced by the U.S. congress to sustainable aviation fuel act, and second is the sustainable skies act. As well as I wanted to mention about the federal aviation's updated guideline about utilizing the 100LL fuel, and as well as the state federal legislative aircraft fuel regulation manufacturing and the distribution-- [ audio cuts ] --system property upgraded as by the safety insurance at the international congregation. This would help the country to evaluate that, that how the change in the leading us of-

11:06:48:22	Nancy Guerrero	Our next speaker is Waskov Castro. Please accept the unmute to speak.
11:06:57:14	Waskov Castro	Good after-- Good evening, uh, President Wasserman, members of the board. My name is Waskov Castro, working partnerships, saying it's all dirty in community partners and grassroot organization, urging the board to close Reid-Hillview Airport now. The recently-conducted lead study clearly shows that children living near Reid-Hillview Airport are at risk of increased lead exposure, which can lead to permanent, irreversible health defects. No amount of lead is safe amount of lead-- a safe amount of lead. No parent wants their children to be exposed to any measurement of lead. So why are we allowing East San Jose children to be exposed to such high amounts of lead every single day?
11:07:30:08	Nancy Guerrero	Our next speaker is Emily Schwing. Please accept the unmute to speak.
11:07:37:24	Emily Schwing	Good evening-- [ audio cuts ] --visors, my name is Emily Schwing. I'm public affairs director with Veggielution and [indistinct][11:07:41] Collective. Our collective urges you to shut down Reid-Hillview now to protect our community's health and well-being, and to take in account a history of social, racial, and economic injustices, perpetuated by the airport. We believe our families deserve quality and dignified access to education, economic mobility, public transportation, high-quality greenspace, services, programs, and affordable housing that leads to ownership reparations are due. Thank you for your time and consideration.
11:08:07:03	Nancy Guerrero	Our next speaker is Patrick McGarrity. Please accept the unmute to speak.
11:08:13:29	Patrick McGarrity	Good evening, my name is Patrick McGarrity, and I'm a San Jose city council member, Sylvia Arenas' Chief of Staff. Reid-Hillview is poisoning the children of East San Jose and Evergreen. It's imperative that you act now to stop it. In addition to the 21 schools discussed, there are dozens more daycares, preschools, and after-school sites that were never mentioned. As the parent of a toddler, I can't imagine what I would do if my son was one of those exposed. The county owned this airport, and you now know, definitively, that it is a- actively and continuously poi-poisoning our community. Councilmember Arenas lends her voice to the poorest of community members in rep--
11:08:47:26	Nancy Guerrero	Our next speaker is Oscar Cidos. Please accept the unmute to speak. Oscar, can you please unmute yourself?
11:08:58:15	Oscar Quiroz	Yeah, can you hear me?
11:08:59:10	Nancy Guerrero	Yes.
11:08:59:27	Mike Wasserman	Yes.
11:09:00:21	Oscar Quiroz	Hello, my name is Oscar Quiroz-Medrano. I am a leader of [indistinct][11:09:03]. We will-- Um, we demand that the, uh, county immediately close the airport, instate a curfew until the airport is shut down to address the noise, publicly announce a commitment to a community centered vision, because ending the use of lead is not, uh, a come-- uh, eh, not enough for our community. Thank you for your time.
11:09:26:11	Nancy Guerrero	Our next speaker is Antonio Martinez. Please accept the unmute to speak.
11:09:33:07	Antonio Martinez	Can you hear me?
11:09:33:26	Nancy Guerrero	Yes.
11:09:34:16	Mike Wasserman	Yes.

11:09:35:17	Antonio Martinez	All right, my name's Antonio Martinez. I'm a leader with [indistinct][11:09:36] from SOMOS Mayfair. Uh, we need-we-we need Red Hill shut down, knowing that's the planes that are flying around our area are spreading lead into the air is absolutely terrifying, especially when there are younger children in our community who are having health problems due to the lead in the air. It is important to shut it down before families, friends, and communities start dying from the poison that Red Hood Hill is spreading. Thank you for your time.
11:10:03:21	Nancy Guerrero	Our next speaker is Michael McDonald. Please accept the unmute to speak.
11:10:10:03	Michael McDonald	I'm Michael McDonald, one of many Angel Flight pilots at Reid-Hillview, the same national academy of sciences report to congress, the people have referred to, recommends communities adopt the unleaded fuel now at Reid-Hillview, as part of a comprehensive plan to keep communities safe from lead. If you really want to help communities and children around the U.S. eliminate lead you should support what we are doing at Reid-Hillview, Watsonville, San Carlos, and other California airports. Keep this airport open and let it be a model for the U.S. Thank you.
11:10:41:05	Nancy Guerrero	Our next speaker is Didesa Alvarado. Please accept the unmute to speak.
11:10:49:24	Didesa Alvarado	Hi. You have heard indisputable evidence of the harm that has been inflicted upon the residents, particularly vulnerable children for decades. I attended first through eighth grade within a half mile of the Reid-Hillview runway. I guess I should be grateful that the school is just west of the airport, not south and east. It is unconscionable to consider any delays to closure. The county must act tonight, and the city must consider all these decisions through the lens of environmental justice. We cannot allow the significant harm of these kinds of laggish decisions to be borne by anymore generations--
11:11:23:23	Nancy Guerrero	Our next speaker is Javier Villosantos. Please accept the unmute to speak.
11:11:32:08	Javier Villosantos	[ speaking Spanish ].
11:12:00:03	translator	My name is Javier Villosantos, a neighbor-- and I am a representative of a Mayfair community. Um, I would like to demand process-- um, racial injustice, and we demand a closing of this airport, and also to use it then for better needs according to the communities. Uh, if I were a director, I would vote immediately for the closing.
11:12:25:12	Nancy Guerrero	Our next speaker is Gabriella Godpresson Gupta. Please accept the unmute to speak.
11:12:32:07	Gabriella Godpresson Gupta	Good evening, my name is Gabriella, and I'm with Asian Mom Alliance. Please support the closure of the Reid-Hillview Airport. The airport has been open for far too long. There are people, real families and children, who have to deal with the negative effects of the airport. [indistinct][11:12:42] amounts is safe, and no one should be subjected to the poison. Although the airport made an announcement about switching to unleaded fuel, there's no timeline or 100% guarantee attached to this nounment-- announcement. They don't have time to wait around while our families get paid to suffer from lead pollution, noise pollution, unlimited housing. Let's reimagine this publicly-owned land for the public. Thank you.
11:13:02:12	Nancy Guerrero	Our next speaker is Delma Hernandez. Please accept the unmute to speak. Delma, can you unmute yourself, please?
11:13:13:05	Delma Hernandez	Hi, can you hear me?

11:13:13:27	Nancy Guerrero	Yes.
11:13:15:05	Delma Hernandez	Hi, my name is Delma Hernandez, and I live in East San Jose. I'm a volunteer with LUNA, Latinos united for a New America, and I urge you to vote to close that airport immediately, and include a robust community input process to prioritize the neighborhood families who are directly impacted by the airport, because reparations are due and the community must benefit directly. We must address racial justice by making sure that the land is used in a way that could best serve the community. Thank you.
11:13:45:17	Nancy Guerrero	Our next speaker is Kenny. Please accept the unmute to speak.
11:13:51:21	Kenny	Hello? Can you hear me?
11:13:52:24	Nancy Guerrero	Yes.
11:13:53:25	Mike Wasserman	Yes.
11:13:54:18	Kenny	Okay, so I wanna say, Cindy Chavez stated with joy that a Google campus could fit on Reid-Hillview property during the November 17th, 2020 board of supervisors meeting. This public comment is too short. It's a limit on my first amendment rights. The county is using children to create fear to push an agenda by large private donors to sell off our public assets. The airport is affordable, the pilots are charitable, and the facilities are vital to emergency preparations. It saved my 93 year old grandmother's life. Cindy Chavez is corrupt, and the rest of the county are disingenuous and immoral.
11:14:25:24	Nancy Guerrero	Our next speaker is Maria Martinez. Please accept the unmute to speak.
11:14:35:05	Maria Martinez	You can hear me?
11:14:35:25	Nancy Guerrero	Yes.
11:14:37:20	Maria Martinez	Hi, my name is Maria Martinez, and I'm Family Resource Center Supervisor at SOMOS Mayfair. And also, I live near Reid-Hillview Airport for more than fourteen years. I urge you to go to close the airport immediately. I'm tired to sacrific-- that always sacrifice our community, and with a healthy, um, of-- to those, um, leaders, uh, [indistinct] (11:14:55). You as a supervisor, uh, uh, you have the empathy and make decision that benefit the entire community, and no use of your people who are not able--
11:15:10:09	Nancy Guerrero	Our next speaker is Jenado. Please accept the unmute to speak. Jenado, can you please unmute yourself? We will come back to him. Our next speaker is Isaac Solorio. Please accept the unmute to speak. Isaac, can you please unmute yourself?
11:15:42:20	Isaac Solorio	Hi, my name is Isaac Solorio. I'm a leader with [indistinct] (11:15:44:00) from SOMOS Mayfair. Reid-Hillview will continue to affect my family because my sister suffers from seizures. I am afraid that if you do not close the airport, her condition will worsen by the lead being dumped in our community. Uh, we demand that the county immediately closes the airport and state a curfew until the airport is shut down to address the noise of looking at now, uh, commitment to a community, censor division, because ending the use of lead is, uh, not-- is not enough for our community.
11:16:16:00	Nancy Guerrero	Our next speaker is Jacqueline Franco. Please accept the unmute to speak.
11:16:21:13	Jacqueline Franco	Hello. My name is Jacqueline Franco. I'm a mother to three daughters and co-owner of META small business in east San Jose. East San Jose is the most impacted zone by COVID and lead exposure and toxins by the airport. It's

		continued-- continuously poisoning our families and children. This is a public health crisis. Close the airport, stop poisoning us, stop leaving us at the end, and let the community decide what to do with that land.
11:16:46:12	Nancy Guerrero	Our next speaker is Angelica. Please accept the unmute to speak. Angelica, can you please unmute? You may begin.
11:17:07:01	Angelica	[speaking Spanish]
11:17:45:09	translator	"Hi, my name is Angelica, and I live in San Jose. I mother-- I'm a mother of three children, and I live, um, in San Jose for 14 years. I am very concerned and I demand a closing of the airport."
11:18:01:28	Nancy Guerrero	Our next speaker is Jenado. Please accept the unmute to speak. Jenado, can you please unmute yourself? Our next speaker is Matt Gustafson. Please accept the unmute to speak.
11:18:26:21	Matt Gustafson	Good evening, my name is Matt Gustafson. I live in San Jose, not far from Reid-Hillview Airport. Uh, we have an infant who actually attends daycare on the east side, close to the airport, he's 15 months old. I urge you to please close Reid-Hillview Airport immediately. It's unacceptable that families and children, especially communities of color, are exposed to toxic lead fumes every day. This is an environmental justice issue, it's a racial justice issue. So, I urge you to close the airport and to commit to a robust community planning process that centers the most impacted communities in east San Jose. Thank you.
11:19:00:07	Nancy Guerrero	Our next speaker is B. Beekman. Please accept the unmute to speak.
11:19:10:02	Blair Beekman	Hi. Uh, Blair Beekman here. Uh, there will be, uh, there will still be toxic issues with unleaded fuel. I feel there can be ways to close the airport by 2022 to give us some low monthly maintenance and just let the airfield sit in the next decade. It can then be relied on only in times of Bay Area natural disasters in the next two to five to 10 years. Let's begin now better health, open good reasoning, and to better free the past entry of toxins, lead, and gasoline around this land. Thank you.
11:19:42:27	Nancy Guerrero	Our next speaker is Quyen Vuong. Please unmute yourself to begin speaking.
11:19:49:24	Quyen Vuong	Hi, my name is Quyen Vuong, executive director of ICAN. We work with Vietnamese children and families. I'm also a part of the REAL Commit-Committee, and I want to support, uh, item number s-- item number 37, urging the Board of Supervisors to close the airport-- Hillview Airport immediately. And also continue the dialogue with the communities to find ways to repurpose that land to benefit more people. This is an-- a, uh, racial equity issue, social injustice issue, so I hope the board will--
11:20:23:03	Nancy Guerrero	Our next speaker is Jenado. Please accept the unmute to speak. Jenado, can you unmute please? We'll move on to the next speaker. Next speaker is Edwin Mendosa. Edwin Mendosa is using an older version of Zoom and will be unable to provide public comment. Our next speaker is Cinthya Colmenares. Please accept the unmute to speak.
11:21:01:22	Cinthya Colmenares	[speaking Spanish]
11:21:35:14	translator	"My name is, uh, Cinthya Colmenares and I live close to the airport. I'm the mother of two children with, uh, asthma and ADHD, and I would like you to stop this lead, um, lead fumes. And you are responsible of the health of our community and our children, and this airport is not giving any benefit to them--

		to my community. Let's have a solid plan for the use of the land with a better quality. Thank you."
11:22:05:05	Nancy Guerrero	Our next speaker is Kelsey Banes. Please accept the unmute to speak.
11:22:11:17	Kelsey Banes	Hi, good evening, supervisors. My name is Kelsey Banes. I am a resident of District 5 in Palo Alto and, uh, regional director of YIMBY Action. We advocate for welcoming communities where everyone can thrive, and I want to urge you to, uh, close Reid-Hillview, uh, Airport immediately, given that overwhelming evidence that it's poisoning the residents of east San Jose. I hope you'll listen to the voices of those most impacted by the hazard tonight. Thank you.
11:22:45:13	Nancy Guerrero	Our next speaker is Vastu Murphy. Please accept the unmute to speak.
11:22:51:23	Vastu Murphy	Hi, uh, my name is Vastu Murphy. I'm a resident of San Jose and live close to the Reid-Hillview Airport, but I'm also a pilot. I have two-two children, um, and I deeply care about lead poisoning. And I-I-I recently, after the study, I realized, uh, I'm not-- I'm never gonna be flying with unleaded fuel again. Thankfully, the-the two big FBOs in the airport have already switched to unleaded fuel, the larger-- largest fuels provides us with the unleaded fuel. I look forward to only flying unleaded fuel, and that is the right solution, moving the traffic somewhere else is--
11:23:25:16	Nancy Guerrero	Our next speaker is Laurie Mann. Please accept the unmute to speak.
11:23:33:00	Laurie Mann	Hi, I'm a pilot and a resident of, uh, San Jose. I'd like to point out something which has been glossed over, which is that many of the general aviation aircraft, like mine, are turbine powered, not piston powered, and therefore use completely unleaded fuel today. They cannot use leaded fuel, they never have and they never will. So, those-- restricting those would serve no purpose.
11:23:56:08	Nancy Guerrero	Our next speaker is Julia Barba. Please accept the unmute to speak.
11:24:02:05	Julia Barba	Good evening. My name is Julia Barba, resident of San Jose. I urge you to vote in support of immediately closing Reid-Hillview Airport and support a community led process to re-envision the use of public land. Families shouldn't have to worry that an airplane is going to crash into their home and cause death. The noise impacts daily life, disrupts sleep quality, impacting overall health that's already been compacted by decades of ongoing lead exposure. These are toxins causing irreversible harm. This is a racial and environmental justice issue happening in our county and needs to stop today. I urge you to vote to close Reid-Hillview immediately and support--
11:24:35:05	Nancy Guerrero	Our next speaker is Randy. Please accept the unmute to speak.
11:24:40:02	Randy	My name is Randy. I live five miles from the airport in the departure path. Lead toxicity issues addressed by the adoption of unleaded fuels that contain no lead. The supervisors should take this opportunity to lead by example, endorse the use of unleaded fuels. Have the supervisors consider the potential for increase in piston traffic at San Jose International and San Martin if Reid-Hillview closes. The San Martin Airport is located in an agricultural area and is surrounded by an ecologically sensitive environment. The supervisors fails to recogn-- recognize the social injustice that's happening in the Reid-Hillview problem on the rural residents of San Martin.
11:25:12:16	Nancy Guerrero	Our next speaker is Marcy Gurston. Please accept the unmute to speak. Marcy, you can begin. I see that you have unmuted yourself.
11:25:33:00	Marcy Gurston	Can you hear me now?

11:25:33:24	Nancy Guerrero	Yes.
11:25:34:16	Marcy Gurston	Great. Good evening, this is Marcy Gurston calling tonight on behalf of the Jewish Community Relations Council of Silicon Valley, which represents synagogues and agencies in Santa Clara County. We feel it would be a betray-betrayal by county leaders to not close the Reid-Hillview Airport right away. Based on our traditions, we stand in solidarity with east San Jose families and their children's right to grow up healthy and fully supported by our county government's resources. We urge you to take action to close the airport. Thank you
11:26:05:26	Nancy Guerrero	Our next speaker is Maria Noel Fernandez. Please accept the unmute to speak.
11:26:13:18	Maria Noel Fernandez	Hi, I'm Maria Noel Fernandez with Working Partnerships USA and Silicon Valley Rising, and it-it is our collective responsibility to ensure with no question, no doubt in our minds that we are doing everything to ensure that predominantly working class families of color are not being poisoned every single day by this airport. It is time to close the airport, protect our families, and ensure that families who live in that area are leading discussion about what this precious piece of land can be in service of our community. Santa Clara County that many of us is proud is isn't a place that could stand by and allow this to continue. We can't be that place. Thank you.
11:26:44:29	Nancy Guerrero	Our next speaker is Patrick Ahrens. Please accept the unmute to speak.
11:26:51:18	Patrick Ahrens	Good evening, Board of Supervisors. My name is Patrick Ahrens and I'm the vice president of the Foothill-De Anza Community College Board. We are proud to serve tens of thousands of students each year for-- uh, who live in east San Jose, students that live in these communities that are directly impacted by this airport. I respectfully ask that the Board of Supervisors to close Reid-Hillview. For more than 60 years, the airport has caused irreversible damage due to the lead exposure and, uh, by residents, uh, or-or to residents, uh, in the east San Jose area. And by closing this airport, we will-
11:27:25:27	Nancy Guerrero	Our next speaker is Anna Dapelo Garcia. Please accept the unmute to speak.
11:27:32:10	Anna Dapelo Garcia	My name is Anna Dapelo Garcia. I was born in San Jose, raised in east San Jose, and now a resident of Mountain View. I'm an inclusion, diverse, and health equity leader at Stanford Healthcare and founder and president of Lean In Latinas. I compel the board to close the Reid-Hillview Airport due to health risks of families and children in the very zipcodes that I grew up in and supported by Dr. Zahran and Lanphear. I can only surmise if this was a situation in more affluent areas of Santa Clara County, they would've been closed years ago. As leaders and stewards for future generations, I deplore you to close the airport. Thank you.
11:28:06:06	Nancy Guerrero	Our next speaker is Ed Turner. Please accept the unmute to speak. Ed, can you unmute yourself please? We will come back to him. Our next speaker is Steven McHenry. Please accept the unmute to speak.
11:28:32:07	Steven McHenry	Yesterday, a major change was announced regarding the availability of unleaded fuel at Reid-Hillview Airport. Transition to unleaded fuel will solve the problem in the shortest possible time. When we transitioned cars to unleaded fuel we didn't expect the problem to be fixed immediately. There were timelines for adoption and criteria that had to be met. But we didn't ban all cars



		and close all the roads. The county needs to study the effect of introduction of unleaded fuel for two years to determine if this solves the problem.
11:29:03:27	Nancy Guerrero	Our next speaker is R. Konda. Please accept the unmute to speak.
11:29:14:15	R. Konda	Good evening, President Wasserman and members of the Board of Supervisors. I'm Richard Konda, executive director of Asian Law Alliance. There is no safe blood lead level in children. Please vote to close the Reid-Hillview Airport. This is an environmental, racial justice, and inequity issue. Thank you very much.
11:29:38:20	Nancy Guerrero	Our next speaker is Jonathan Nguyen. Please accept the unmute to speak.
11:29:47:15	Jonathan Nguyen	Hello, my name is Jonathan Nguyen. I live behind Reid-Hillview, and I oppose the closure of the airport. Like automotive fuel, it's a process to reach the goal of lead elimination. Why close it as options are now becoming available? Closing Reid-Hillview now will only shift the load to other areas and make it someone else's problem, and it just sweeps it under the rug. We owe it to everyone to see the stretch goal of not just the instant gratification. We're in a unique position to bolster tech and aviation industries with the advent of electric planes. Let's capitalize on that rising tech.
11:29:59:26		Closing Reid-Hillview now will only shift the load to other areas and make it someone else's problem, and it just sweeps it under the rug. We owe it to everyone to see the stretch goal of not just the instant gratification. We're in a unique position to bolster tech and aviation industries with the advent of electric planes. Let's capitalize on that rising tech.
11:30:19:20	Nancy Guerrero	>> Our next speaker is Ed Turner. Please accept the unmute to speak.
11:30:26:16	Ed Turner	>> You get me this time?
11:30:27:18	Nancy Guerrero	>> Yes.
11:30:28:15	Mike Wasserman	>> Yes.
11:30:29:11	Ed Turner	>> Okay, thank you. Uh, you're not getting accurate, up-to-date information on the use of unleaded av-gas. Unleaded gas is available now and many of the fleets have already been converted. This transition can happen much faster than has been presented. You need to look into this. I also wanna say, Reid-Hillview is critical into our emergency services operation. It would be a crime to flush this invaluable resource down the toilet. Our communities will need these resources in the event of an earthquake or others major disaster. Much more than they're gonna need another Google campus.
11:31:02:02	Nancy Guerrero	>> Next speaker is Thin Nguyen. Please accept the unmute to speak. Thin Nguyen, if you can unmute yourself please.
11:31:18:08		We will come back to Thin. Our next speaker is Kimberly Delgado. Please accept the unmute to speak.
11:31:27:29	Kimberly Delgado	>> Good evening. I'm-- Folks, there-- I have to agree, there's no safe lead levels, period. But this is a state-wide problem. This isn't indicative to Santa Clara County or around Reid-Hillview. The CPB and the CDPH have both stated so, and on top of that, in the August 2021 study performed by the Santa Clara County Office of Education, children exposed to lead in Santa Clara county, table six, page 16, "greater levels and percentages of children tested higher in Sunnyvale and Cupertino." This is on their report. Small table. So this isn't only a-- [ beeping ]

11:32:01:04	Nancy Guerrero	>> Our next speaker is Edgar Zuong. I am unmuting you. Please accept the unmute to speak.
11:32:07:21	Edgar Zuong	>> Hi there, can you hear me?
11:32:09:04	Nancy Guerrero	>> Yes.
11:32:10:04	Edgar Zuong	>> Perfect. CalFire, SGSU Flight, Angel Flight. In emergency airlift location in event of a major disaster. The opportunity is lost for young, aspiring aviators. The shuttered airport businesses run by people bought of color and minorities of your community. Please ensure that you hold these politicians who will willfully close the airport liable for providing housing that you truly need and not build Google workspaces. To make sure that the next wildfire in these foothills, do not burn down your constituents' homes. Please keep Reid-Hillview open.
11:32:39:13	Nancy Guerrero	>> Our next speaker is Thin Nguyen. Please accept the unmute to speak. Thin, can you unmute yourself, please? We'll move on to the next speaker. Dave R., please accept the unmute to speak.
11:33:00:13	Dave R	>> Can you hear me?
11:33:01:08	Nancy Guerrero	>> Yes.
11:33:02:08	Dave R	>> Yes. I'm for the use of the unleaded fuels in aircraft whenever they are available, and I am for keeping the airport open. Once we close the airport, we will never be able to get that resource back. The airport serves the community in many ways, including fire suppression, disaster mitigation, transportation relief, thousands of jobs, and the training of future pilots. With the introduction of unleaded fuels, blood lead levels should be a moot point. Also, many of the sources of lead found in the airport area, including lead paint, lead pipes, and the old racetrack have not been ruled out as a cause of the slightly higher levels of lead in blood. Closing the airport while it is adopting unleaded fuels would be a mistake.
11:33:33:29	Nancy Guerrero	>> Our next speaker is Anthony Ulo. Please accept the unmute to speak.
11:33:40:18	Anthony Ulo	>> Hello, Anthony Ulo from the city of Morgan Hill. Staff certainly made a valid case that lead from airports harms children. The San Martin airport is currently only half-occupied, therefore closing Reid-Hillview is gonna unquestionably double the air traffic and lead pollution in San Martin. California law requires a CEQA analysis to be done prior to the board taking discretionary actions, like the one that is placed before you now. We request that a CEQA analysis be conducted that considers all mitigation measures prior to the board directing staff to close Reid-Hillview. Let's protect all chil-- [ beeping ]
11:34:14:25	Nancy Guerrero	>> Our next speaker is Isabela Wong. Please accept the unmute to speak.
11:34:23:17	Isabela Wong	>> Hi, my name is Isabela Wong. [ distorted audio ] Can you hear me? Is there echo?
11:34:29:06	Mike Wasserman	>> We're okay.
11:34:30:11	Nancy Guerrero	>> We can hear you.
11:34:31:16	Isabela Wong	>> Okay. Sorry, um-- I'm Isabela, and I'm with ICAN, International Children's Assistance Network, and as you've heard tonight, there's no safe blood level in children, and the loss of human potential due to learning, cognitive, and behavioral issues from lead exposure can and should be prevented. Please

		vote for the immediate closure of the airport, and please commit to a community-centered approach to repurposing the land. Thank you.
11:34:58:27	Nancy Guerrero	>> Our next speaker is Thin Nguyen. Please accept the unmute to speak.
11:35:05:09	Thin Nguyen	>> Hi, my name is Thin Nguyen, and I heard about this from ICAN. Um, I would urge you to, uh, to close the airport, and then, um, communicate with the community for a better use for the land. Thank you very much.
11:35:20:10	Nancy Guerrero	>> Our next speaker is Allison Singlewanni. Please accept the unmute to speak.
11:35:27:06	Allison Singlewanni	>> Hi, this is Allison Singlani, chair of Alum Rock Union school district bond oversight committee and mother of two East San Jose children. It is morally and ethically indefensible to continue to operate Reid-Hillview while our East San Jose children and families suffer the lifelong impacts of high blood lead levels. Publicly owned land must serve the public good. The county must challenge the FAA. It's imperative that each of you demonstrate the courage to do the hard thing and the right thing. Close the airport and protect our East San Jose children and families.
11:36:00:09	Nancy Guerrero	>> Our next speaker is Katherine Hedges. Please accept the unmute to speak.
11:36:05:05	Katherine Hedges	>> Um, good evening. My name is Katherine Hedges. a member of PACT, People Acting in Community Together, and we need to close down the airport as soon as possible, and, um, if there needs to be a delay in closure, we need to encourage lead-free gas as much as possible. Um, it's just environmental injustice to have this many people in a red line neighborhood by an airport with planes flying out of the sky and lead in their houses-- [ beeping ]
11:36:39:08	Nancy Guerrero	>> Our next speaker is Alexis McNabb. Please accept the unmute to speak.
11:36:45:19	Alexi McNabb	>> Hi, this is Alexi McNabb, and I'm a member of SURJ at Sacred Heart, and I'm speaking in support of the immediate closure of the realit-- Reid-Hillview Airport. No matter the fuel type, the airport is a danger. There have been plane crashes in the neighborhoods, and as we've just heard, the damage from lead poisoning has already been done. The community deserves a chance to heal and to use the space to serve those who live near it. Because of the history of redlining and economic segregation, this is a racial justice issue as well as an environmental one. Close the airport and start a community-centered approach to reimagine how the land can be used. Thank you.
11:37:18:04	Nancy Guerrero	>> Our next speaker is Tao Phix. Please accept the unmute to speak.
11:37:23:11	Tao Phix	>> My name is Tao Phix, and I'm with Showing Up For Racial Justice at Sacred Heart. I support the immediate closure of the Reid-Hillview Airport. The lead report is extremely concerning for East San Jose community members. We cannot allow people to continue having their health and living conditions negatively impacted, which is why we need the immediate closure of the airport and a community-centered approach to reimagine how the land can be used. Thank you.
11:37:47:22	Nancy Guerrero	>> Our next speaker is Norma Chavez. Please accept the unmute to speak. Norma--
11:37:57:22	Norma Chavez	>> [ speaking Spanish ]
11:37:59:05	Nancy Guerrero	>> Si.

11:37:59:24	Mike Wasserman	>> Yes.
11:38:01:04	Norma Chavez	>> [ speaking Spanish ]
11:38:31:23	Translator	>> Hi, my name is Norma Chavez, and I'm mother of five kids, and I live in East San Jose. Please, I would like to demand the immediate closing of the airport, and what would you do if you have the power, um, sorry, you-you that- you having the power, what would you do if you were living under the same route of polluted air? Please close the airport immediately. Thank you.
11:38:59:04	Nancy Guerrero	>> Our next speaker is Immigration Zoom. Please accept the unmute to speak.
11:39:06:12	Jessica Jenkins	>> Hi, good evening, my name is Jessica Jenkins. Um, I am speaking only and on behalf of SURJ Sacred Heart tonight. I live in district two, and I have worked for years with immigrant families, many of whom live in the community impacted by the airports. As we've heard tonight, the airport threatens the health and safety of our community, especially our children. I support the immediate closure of the airport, and a community-centered approach to imagine how the land could better be used. Thank you.
11:39:36:07	Nancy Guerrero	>> Our next speaker is Leslie Zeiger. Please accept the unmute to speak.
11:39:41:27	Leslie Zeiger	>> Hi, I'm Leslie Zeiger, with SURJ Sacred Heart. I urge the immediate closure of the Reid-Hillview Airport. I want to lift up what a resident of East San Jose said earlier. You have a choice between public health and white people's privilege. Choose public health. We cannot allow people to continue having their health and living conditions negatively impacted any longer. We need the immediate closure of the airport and a community-centered approach to reimagine how that land-- [ beeping ]
11:40:16:00	Nancy Guerrero	>> Our next speaker is Jen Meyer. Please accept the unmute to speak.
11:40:21:13	Jen Meyer	>> Hi, my name is Jen Meyer. I'm a member of SURJ at Sacred Heart, and I'm asking for immediate closure of the Reid-Hillview Airport. Literally no amount of lead exposure is safe for East San Jose folks, especially kids. Even with a potential change to alternative fuel, airport is a danger to the neighborhood, given repeated plane crashes. Given the history of red-lining, neighbors of color have been differentially impacted. We need immediate closure and a community-centered approach to reimagine how the land can be used. Thank you so much.
11:40:50:18	Nancy Guerrero	>> Our next speaker is Casey Hill. Please accept the unmute to speak.
11:40:56:26	Casey Hill	>> Good evening, board of supervisors. Um, my name is Casey Hill. I'm the executive director of Edulution, and a part of the ¡Sí Se Puede! Collective. Every community is entitled to a healthy environment, but black and brown communities experience disproportionate amounts of pollution. Our collective demands of environmental justice and strong environmental protections for all residents in our community. We urge you to shut down Reid-Hillview now to protect our community's health and well-being, and to take into account the history of racial, social, and economic injustices perpetrated by the airport. Thank you.
11:41:27:10	Nancy Guerrero	>> Our next speaker is Camille Llanes-Fontanilla. Please accept the unmute to speak.
11:41:34:26	Camille Llanes-	>> Good evening, board of supervisors. I am both the executive director of

	Fontanilla	SOMOS Mayfair and a mother of two children who go to school less than one mile from the airport. I stand in full support of the community's demand to close Reid-Hillview Airport immediately. I spoke with neighbors, I knocked on doors last week and heard countless stories of the impacts, and yet we will never know the full impact this airport has had on the lives of people in our community, largely home to people of color, immigrants, and low income population. A decision that needs-- needs rectification of past planning decisions, one that is centered on the-- [ beeping ]
11:42:08:26	Nancy Guerrero	>> Next is Karen Martinez. Please accept the unmute to speak.
11:42:16:00	Karen Martinez	>> Good evening. My name is Karen Martinez, and I sit on the Evergreen San Jose City school board, and I am honored and privileged to serve in area two that is in the East Town Jose. I am a mother of seven. We have his, hers, and ours, and one of our children was born a 2-pound preemie. Died in my hands. And I watched her fight for her life. Vote to close Reid-Hillview tonight, immediately, to show us by your vote that you will protect us as a community of East San Jose. [ beeping ]
11:42:49:05	Nancy Guerrero	>> Next is Susan B. Please accept the unmute to speak.
11:42:54:05	Susan Butler Graham	>> Hi, I'm Susan Butler Graham, San Jose resident and volunteer leader with Mothers Out Front, Silicon Valley. As a mom and grandma, I'm appalled that this injustice has gone on for so long. Our children are being poisoned, and we cannot let this happen for ten more years. CalFire fixed wing aircraft use their Hollister Airport because Reid-Hillview's runways aren't long enough for them. There's no reason to keep it open. I urge you to close the airport now and let the east side community decide the best use of this land, because all kids deserve-- [ beeping ]
11:43:27:01	Nancy Guerrero	>> Our next speaker is Alia Castrance. Please accept the unmute to speak.
11:43:33:16	Alia Castrance	>> Hi, good evening, my name is Alia Castrance. I'm a youth leader with Californians For Justice, Vecinos Activos. Um, we demand that the county immediately close the airport and instate a curfew until the airport is shut down, um, and public-- lastly, publicly announce a commitment to a community- entered vision. As community members, we should be shifting our vision towards a more sustainable and green vision for our neighborhoods. Um, thank you for your time.
11:43:56:22	Nancy Guerrero	>> Our next speaker is David George. Please accept the unmute to speak.
11:44:01:26	David George	>> Good evening, my name is David George, and I am an environmentalist and engineer. I strongly advise against the closure of Reid-Hillview airport because of the constant increase in fire danger and the asset Reid-Hillview provides as a staging area for helicopter and firefighting efforts and emergency relief. Uh, do not close the airport, or fires will be worse than last year's. Also, an airport is simply not a racial issue. Stop abusing other people's racial pain to move an agenda. Reid provides very attainable flight training to all races.
11:44:31:21	Nancy Guerrero	>> Our next speaker is Tracy Weatherby. Please accept the unmute to speak.
11:44:37:18	Tracy Weatherby	>> Hi, I'm Tracy Weatherby, I'm the Vice President of Strategy and Sdvocacy for Second Harvest of Silicon Valley. As the food bank for both Santa Clara and San Mateo counties, we are laser-focused on the health of our community, and obviously, the, uh, continuance of Reid-Hillview as a

		functioning airport is in-- stands in opposition to that. So, we are in favor of the closing. We think it's a great move towards health and equity.
11:45:05:23	Nancy Guerrero	>> Our next speaker is Vanessa Tolanea. Please accept the unmute to speak. Vanessa, can you unmute yourself?
11:45:16:23	Vanessa Tolanea	>> Yeah. Hello, Board of Supervisors. My name is Vanessa Tolanea. I'm with Breathe California of the Bay Area, the local clean air and health and wellness leader. As a community resident, I urge to vote yes on item 37. Thousands of children, most of them from lower income households and communities of color, are exposed to toxic lead fumes from planes flying out of Reid-Hillview almost every day. They are the same population to suffer disproportionately from exposure to other air pollution sources and environmental hazards. Something must be done to protect them, and it must be done now. Thank you.
11:45:51:13	Nancy Guerrero	>> Our next speaker is Liz Gonzales. Please accept the unmute to speak.
11:45:57:18	Liz Gonzales	>> Hi, I'm with De-Bug and the South Bay Community Land Trust. I've lived within a mile of the airport for 40 years with my family. Stop poisoning us. Shut it down immediately and prioritize a cleaning of the land. We know that our youth in East San Jose are over-policed, and with this new information, we must study the connections between lead poisoning, cognitive issues, behavior, and contact with police and higher rates of incarceration. Make it right for future generations. 30 seconds is hella disrespectful.
11:46:29:12	Nancy Guerrero	>> Our next speaker is Nicole Buccolo. Please accept the unmute to speak. Nicole, can you please unmute yourself?
11:46:40:11	Nicole Buccolo	>> Yes. My name is Nicole Buccolo. I'm with Showing Up for Racial Justice at Sacred Heart, and this is a racial justice issue. I support the immediate closure of the Reid-Hillview airport. The lead report is extremely concerning for East San Jose community members. We cannot allow people to continue having their health and living conditions negatively impacted, which is why we need the immediate closure of the airport and a community centered approach to reimagine how the land can be used. Thank you.
11:47:08:20	Nancy Guerrero	>> Our next speaker is Gloria. Please accept the unmute to speak.
11:47:15:20	Gloria Chavez	>> [ speaking Spanish ]
11:47:42:25	Translator	>> "Hi, my name is Gloria Chavez and I live in Silicon Valley, and I want to close up this airport and also to be clean from le-- from lead. And, um, I-- let's stop all these cases have been arising and let's stop all the-- all these coming in the futures. If you don't close it, um, I-- in my case, I have two premature, uh, daughters both diagnosed with autism. So, let's stop these cases please. Thank you."
11:48:12:22	Nancy Guerrero	>> Our next speaker is Nereyda Hurtado. Please accept the unmute to speak.
11:48:19:14	Nereyda Hurtado	>> Hi, my name is Nereyda Hurtado, Associate Director of Grail Family Services and a member of the ¡Sí Se Puede! Collective. I'm speaking today to urge you to close down Reid-Hillview Airport immediately. As we heard, the recent lead study showed an alarming amount of lead in the blood of children living near the airport. We are concerned and outraged. There is no safe blood lead level in children. This is an equity and an environmental justice issue. I urge you to vote to close down the airport immediately and continue a community centered approach to plan for the future of this land. Thank you.

11:48:52:15	Nancy Guerrero	>> Our next speaker is Pamela Campos. Please accept the unmute to speak. Pamela, can you please unmute yourself?
11:49:09:29		We'll move on to the next speaker, Tony Romero. Please accept the unmute to speak.
11:49:17:07	Tony Romero	>> Um, good evening. Uh, my name's Tony Romero. I work with LUNA. And I want to quote, uh, from an article, um, uh, the presidents of the Santa Clara County firefighters, uh, Palo Alto, uh, and Mountain View firefighters. Um, "Reid-Hillview has never been used by any fire department or other disaster response agency as a base for fixed-wing aircraft. The airport's not big enough. Any future wildfires in Santa Clara County will be fought using aircrafts based out of Hollister. [ beeping ]
11:49:50:27	Nancy Guerrero	>> Our next speaker is Kayla Wilson. Please accept the unmute to speak.
11:49:56:18	Kayla Wilson	>> Good evening, members of the board. My name is Kayla Williams, a D-4 resident and staff at Community Health Partnership. Ignoring and neglecting the health impacts of lead exposure, sound pollution, and physical threat have on families who live and work near the airport goes against Santa Clara County's mission to promote a healthy, safe, and prosperous community for all. The children deserve a chance. These families deserve more. We deserve a vote that recognizes and begins to amend the harm that has been caused. Now is the time to close the airport. Thank you.
11:50:27:04	Nancy Guerrero	>> Our next speaker is Victoria Lamb. Please accept the unmute to speak.
11:50:32:22	Victoria Lamb	>> Good evening. My name's Victoria Lamb, and I'm speaking on behalf of Council Member Sylvia Arenas, who represents the children and families who have been poisoned by the dangerous lead levels from the Reid-Hillview Airport in East San Jose and Evergreen. For generations, the leaded fuel has poisoned the families, people of color, and immigrants that live in the neighborhoods surrounding Reid-Hillview. This is both an environmental justice issue and an equity issue, which is why Council Member Arenas urges the Board of Supervisors to immediately close the Reid-Hillview Airport and reduce the amount of air traffic between now and the closure. Thank you.
11:51:04:17	Nancy Guerrero	>> Our next speaker is Corina Herrera-Loera. Please accept the unmute to speak.
11:51:12:02	Corina Herrera-Loera	>> Hi, my name's Corina Herrera-Loera, a resident of the East San Jose, less than a mile, uh, from the airport, a mother of a 12-year old daughter, and current Board President of the Alum Rock Community School District, responsible for over 8,000 students. You heard the doctor today. We are in a crisis, our children and the human beings here are in danger. Therefore, as a servant leader in our community and advocate for our children, on behalf of their life I demand you to vote to close the Reid-Hillview Airport now and reimagine the space-- [ beeping ]
11:51:44:25	Nancy Guerrero	>> Our next speaker is 5152. Please accept the unmute to speak.
11:51:51:19	Aliah Yen	>> Hi, my name is Aliah Yen, and I'm an east side resident and I urge you to close the Reid-Hillview Airport. The community has been advocating this for decades, and of the number of callers tonight, the majority have spoken to close the airport. The health of the immediate community and our future generation, your immediate electorate should take precedent over the people whose health are not impacted. I would also like to say that cutting public

		comment in the middle of public comment is cons-- could be considered a Brown Act violation. I know that you can limit time, but cutting off people who can sign up to speak, I believe is in violation. [ beeping ]
11:52:25:00	Nancy Guerrero	>> Our next speaker is Teresa Rojas. Please accept the unmute to speak.
11:52:32:05	Teresa Rojas	>> Hi, can you hear me?
11:52:33:13	Nancy Guerrero	>> Yes.
11:52:34:06	Mike Wasserman	>> Yes.
11:52:35:02	Teresa Rojas	>> Oh, sorry. Um, I am urging the Board of Supervisors to approve to take all necessary actions, including closure, to immediately prevent lead contamination from operations at Reid-Hillview Airport. Not only because our families and children in East San Jose deserve a better future, but because this is now and has always been an envi-- an issue that desperately calls for environmental justice. I'm tired of hearing that switching over to unleaded fuel will solve the problem, because it will not reverse the effect it has had on our children. We are not statistics, we are people. Thank you.
11:53:09:18	Nancy Guerrero	>> Our next speaker is Victoria Partida. Please accept the unmute to speak.
11:53:16:27	Victoria Partida	>> Hi-hi, good evening. My name is Victoria Partida and I'm the Tropicana-Lanai Neighborhood Association President, which is located 1.9 miles away from the airport. I am calling in support of the closure of the Reid-Hillview Airport. The residents who live here strongly believe that the airport's property must serve all families, especially those impacted by environmental justice. Our families deserve quality and dignified access to education, economic ability, public transportation, and high quality green space. We have to walk over two miles to get to a park. [ beeping ]
11:53:50:13	Nancy Guerrero	>> Our next speaker is Krista. Please accept the unmute to speak.
11:53:56:12	Krista De La Torre	>> I'm Krista De La Torre speaking for the South Bay Labor Council. East San Jose is rich in culture and community, but lacks good, safe-- good jobs and safe and affordable housing. Reimaging Reid- Hillview is an opportunity to bring economic development and environmental justice to an undeserved community-- or underserved community. Hundreds of union members live near Reid-Hillview. They fear that adverse health impacts of lead from airplanes while struggling to secure safe and affordable homes to raise their families. We encourage efforts to revitalize Reid-Hillview Airport in a manner that will support and uplift the community with good, union-paying jobs and create affordable housing for working families and-- [ beeping ]
11:54:29:10	Nancy Guerrero	>> Our next speaker is Todd Williams. Please accept the unmute to speak.
11:54:36:05	Todd Williams	>> Prior to any decision, a detailed plan must be developed, including where the planes will be diverted and extensive neighborhood outreach. If lead poisoning is truly an issue, it should not be an option to move to-- the planes to San Martin or, as planned, downtown San Jose, as this would just be moving the issue to another neighborhood. And please don't tell us this is just preliminary. Present the plan in its entirety. Thank you.
11:55:05:29	Nancy Guerrero	>> Our next speaker is Lief Erickson. Please accept the unmute to speak.
11:55:12:19	Lief Erickson	>> Good evening, I'm Lief Erickson, a retired Executive Director of Youth Community Service, a non- profit in Supervisor Simitian's district. I'm calling to



		express my concern about the ways that environmental racism is permanently affecting the lives of children who live close to the airport. This must stop immediately. The closure of Reid-Hillveer-- Hillview Airport is long overdue. Please respond to all these voices and make the moral choice to shut it down immediately.
11:55:43:20	Nancy Guerrero	>> Our next speaker is Layton Chomonic. Please accept the unmute to speak.
11:55:49:13	Layton Chomonic	>> Can you hear me?
11:55:50:10	Nancy Guerrero	>> Yes.
11:55:52:05	Layton Chomonic	>> Good evening. My name is Layton Chomonic and I'm a first generation immigrant living less than two blocks away from Reid-Hillview Airport. Supervisors, my question for you is what more evidence do you need in order to shut this abomination down? If you have any regard for racial and social equity or public health, the decision is a no-brainer. Listen to your community and shut the airport down. Thank you.
11:56:21:12	Nancy Guerrero	>> Our next speaker is Saul Ramos. Please accept the unmute to speak. Saul, you can begin.
11:56:33:19		>> Yes, hello, good evening. My name is Saul Ramos, Deputy Director of SOMOS Mayfair. The report is very clear. 52,000 people are at risk now. This is a crisis. I urge you to vote this evening to shut out the airport and lead us through what we do best in this Valley, work towards a creative and courageous vision that prioritizes our collective well-being and one that elevates the needs for the most impacted community and doesn't poison the air of our children. Thank you.
11:57:01:14	Nancy Guerrero	>> Our next speaker is Walter Wilson. Please accept the unmute to speak.
11:57:09:28		>> Good evening. My name is Walter Wilson. The ongoing poison in the children of color is the height of environmental racism. The Reid-Hillview Airport must be closed immediately. The city and county must use emergency powers to do so. This is a health crisis. We need to shut this airport immediately. If the FAA stands in our way, we the people must use people power to shut the runways ourself and save the lives of our children. Thank you.
11:57:36:13	Nancy Guerrero	>> Our next speaker is Brenda Cendehaz. Please accept the unmute to speak.
11:57:44:21	Child	>> Mom! Mom! Mom!
11:57:50:01	Nancy Guerrero	>> Brenda, you may begin.
11:57:51:23	Child	>> Hello?
11:57:53:11	Mike Wasserman	>> Hello, go ahead.
11:57:55:05	Child	>> She's in the bathroom! She's in the bathroom.
11:58:04:00	Mike Wasserman	>> All right, call back.
11:58:05:29	Child	>> She's in the restroom.
11:58:08:01	Nancy Guerrero	>> Our next speaker is Maritza Maldonado. Please accept the unmute to speak.
11:58:17:04	Martiza Maldonado	>> Good evening. My name's Martiza Maldonado, founding Executive Director of Amigos de Guadalupe Center for Justice and Empowerment, also part of

		the Si Se Puede Collective and a lifelong resident of east San Jose, grew up right down, uh, the street from the airport. The-- it's very clear that we have to lift up the racial injustice that our community has suffered over generations. We saw it with the pandemic, and we can't afford to lose one more life in our community. We are way too valuable. [ beeping ]
11:58:50:07	Nancy Guerrero	>> Our next speaker is Jose Luis Pavon. Please accept the unmute to speak. Jose Luis, please unmute.
11:59:05:14	Jose Luis Pavon	>> Uh, good evening. Good evening, board members. Uh, my name's Jose Luis Pavon. Um, I-I support closing, uh, close Reid-Hillview. Uh, I support closing Reid-Hillview, uh, Airport-- I'm sorry. Um, the science is absolutely clear, there is no safe level of lead. It is extremely disturbing that this problem has gone on for this long. Please protect the children of eastside San Jose. Please protect public health now. Thank you.
11:59:32:12	Nancy Guerrero	>> Our next speaker is Kelsey Ichikawa. Please accept the unmute to speak.
11:59:40:18	Kelsey Ichikawa	>> Hi, can you hear me?
11:59:41:21	Nancy Guerrero	>> Yes.
11:59:42:29	Kelsey Ichikawa	>> All right, great. Um, thank you, board members. My name is Kelsey Ichikawa, and I'm a member of the Grassroots Organization San Jose Nikkei Resisters. I'm asking you to close the Reid-Hillview Airport. The decision before you is one about risk. How much risk are you willing to tolerate for our children? Are you willing to live in the neighborhoods downwind of this airport, knowing the serious possibility of continued lead exposure from planes who do not switch to unleaded fuel, and therefore the potential for neurological damage? [ beeping ]
12:00:13:24	Nancy Guerrero	>> Our next speaker is Rita Bureta. Please accept the unmute to speak.
12:00:23:00	Rita Bureta	>> [ speaking Spanish ]
		[ beeping ]
12:01:00:03	Translator	>> Hi, my name is Rita Bureta, and I'm a resident of-- I'm a resident living very near to the airport. And I belong to PEACE, and I live in east San Jose. Um, I demand a close of the airport. This is a case of racism against children. We demand justice for families that have been affected during years from lead and different-- and-and different, um-- different pollutants in the air. So we demand this, closing up the airport now.
12:01:30:13	Nancy Guerrero	>> Our next speaker is Amy Loueck. I am unmuting you, please accept the unmute to speak.
12:01:39:14	Amy Loueck	>> Hi. My name is Amy Loueck, and I'm with SURJ at Sacred Heart, uh, Showing Up for Racial Justice. I am in support of the immediate closure of the Reid-Hillview Airport. The lead report is extremely clear about the concerns raised for East San Jose community members, and we cannot allow people to continue having their health and living conditions negatively impacted for one more minute, which is why we need to immediately close the airport and, uh, pursue a community-centered approach to reimagine how the land can be used. Thank you.
12:02:12:05	Nancy Guerrero	>> Our next speaker is Gordon. Please accept the unmute to speak.
12:02:17:06	Gordon Frieschlat	>> My name is Gordon Frieschlat. I live in District 5, and stand with my

		community members in affected areas in supporting the closure of Reid-Hillview Airport. It is clear from the testimonies, studies, and presentations that closure is the right thing to do for the community. I'd also like to know how I can access the Deputy County Executive Gallegos' presentation that was clearly stating that switching to unleaded will not stop planes from using leaded fuel, and that closure is the only option to keep the community safe before President Wasserman rudely interrupted it. Thank you.
12:02:48:25	Nancy Guerrero	>> Our next speaker is Buckley Bloom. Please accept the unmute to speak.
12:02:58:01	Buckley Bloom	>> Hello. My name is Buckley Bloom. Um, I work in early learning and care supporting our youngest children and their communities. Um, I'm from San Jose, and I live here, and, um, we know that no amount of lead is safe, um, and I really urge you to close the airport and continue a robust community input process to plan the future of this public site for families of East San Jose who have already suffered enough. This has gone on for generations. Um, this is county land, we need to do community work around it. [ beeping ]
12:03:31:18	Nancy Guerrero	>> Our next speaker is Jose Villareal. Please accept the unmute to speak.
12:03:40:11	Jose Villareal	>> My name is Jose Villareal. I'm with CHANGE Santa Clara County. Um, I had something written down, but you guys are not giving enough time. It's very disappointing. But, uh, I'm all-- I'm for the, uh, closure of Reid-Hillview. Uh, I also wanna, uh, really emphasize that even though we can get this airport closed, we really need to focus on what we're gonna do with this land. I do not want to see developers come into the East Side. I do not want to see, uh, our people sold out, our land sold out. We need to keep it in the East Side community. Thank you. [ beeping ]
12:04:13:16	Nancy Guerrero	>> Our next speaker is Andrea Portillo. Please accept the unmute to speak.
12:04:22:02	Andrea Portillo	>> Hi, can you hear me?
12:04:23:05	Nancy Guerrero	>> Yes.
12:04:24:11	Andrea Portillo	>> Hi, my name is Andrea Portillo, with SOMOS Mayfair. I live in East San Jose near Reid-Hillview Airport. I spent my summers as a child at Hillview Park, the Boys and Girls Club, and the Little League. I urge you to shut down Reid-Hillview now to protect our community's health and well-being, and to take into account the history of social, racial, and economic injustices perpetuated by the airport. We have been in a crisis for decades. We have been neglected from resources and poisoned in the process. We deserve community engagement process that centers and prioritizes the community directly harmed. It's time for the board to act now to shut down the airport. [ beeping ]
12:04:57:18	Nancy Guerrero	>> Our next speaker is Christina Guimera. Please accept the unmute to speak.
12:05:06:24	Christina Guimera	>> I'm Christina Guimera, Deputy Chief of Staff for Mayor Sam Liccardo. Draft resolution 126 precludes holistic study of the impacts of a Reid-Hillview closure. While the mayor has consistently supported closure, at issue is the how, not the what. Environmental justice means we shouldn't move the problem from one densely populated community of color to another. The 208,000 flights at Reid- Hillview would create considerable operational risk for Mineta. Let's explore the smartest, safest closure options. Thank you.

12:05:36:00	Nancy Guerrero	>> Our next speaker is Paul Marshall. Please accept the unmute to speak. Paul, can you unmute yourself, please?
12:05:47:11	Paul Marshall	>> Sure, just took me a second. Hi, I'm Paul Marshall. I'm the, uh, President of the South County Airport, uh, Pilot's Association. Um, I agree that we should get rid of leaded emissions in our airports. The fastest way to do this is to not get tied up in years of litigation with the FAA. The fastest way to do this is to realize that 90% of flights out of Reid-Hillview can use the 94 unleaded gas right now. Let's put all our efforts into getting all the planes switched over just as fast as they can. A few years from now, the whole problem will be gone away. [ beeping ]
12:06:21:08	Nancy Guerrero	>> Our next speaker is Ritu Belani. Please accept the unmute to speak.
12:06:28:04	Ritu Belani	>> Good evening, board of supervisors. Um, I'm a member of the high school Sunnyvale Youth Public Policy Institute. All of our members stand together in urging you to close the Reid-Hillview Airport. The results of the lead study are alarming. Many people today have talked about the opportunities of unleaded fuel. However, we want to state again that that is not a feasible solution for this issue because not all planes at the airport will be compatible for that switch. If you just see the amount of community members who have turned out today, you know that the issue of this airport goes way beyond the lead. [ beeping ]
12:07:01:19	Nancy Guerrero	>> Our next speaker is Huy. Please accept the unmute to speak. Huy, can you unmute yourself, please? Okay, we will come back to them. We'll move on to the next speaker. Emma Hartung? Please accept the unmute to speak.
12:07:26:10	Emma Hartung	>> Hi, um, my name is Emma Hartung. I'm a member of SURJ at Sacred Heart. Um, I'm just calling in to say that it's unjust for this East San Jose community to have to continue dealing with the dangers this airport poses to their health and well-being, including lead, noises, and crashes. So asking you to move forward with the immediate closure of the airport in a community-centered approach that allows community members to heal and to reimagine how the land can be used. Thank you.
12:07:50:23	Nancy Guerrero	>> Our next speaker is Adrian Velisu. Please accept the unmute to speak.
12:08:01:19	Adrian Velisu	>> Yeah, I can-- hi, can you hear me?
12:08:03:24	Nancy Guerrero	>> Yes.
12:08:05:04	Adrian Velisu	>> Uh, closing the airport will take years in legal battle, mostly with the FAA, and it's likely not achievable until 2031. However, solving the lead problem is possible immediately by accelerating the adoption of unleaded fuel. And Dr. Zahran's research shows that the increase in blood lead level correlates very closely with the amount of traffic. So a 90% decrease in leaded fuel usage would likely result in most of the problem going away. So if we really want to solve the children blood lead level problem, this is much more quickly achievable.
12:08:38:10	Nancy Guerrero	>> And we will come back to Huy. Please unmute yourself to begin speaking. Okay, we will move on to our next speaker. Diane, please accept the unmute to speak.
12:08:58:24	Diane	>> Hi, my name is Diane. I'm a project manager at Rebuilding Together. Our Hazmat teams have shown when we go into the homes around Reid-Hillview Airport, there are over 700,000 square feet of lead-painted siding on those homes, which is outgassing over 7 tons of lead per month in and outside those

		homes. All the airplanes in Reid-Hillview couldn't do that together. If you wanna fix the problem, you gotta fix the homes. Closing the airport is not gonna help you at all.
12:09:31:00	Nancy Guerrero	>> Our next speaker is Wendy Greenfield. Please accept the unmute to speak. Wendy?
12:09:41:09	Wendy Greenfield	>> Can you hear me?
12:09:42:05	Nancy Guerrero	>> Yes.
12:09:43:09	Wendy Greenfield	>> Okay. Uh, my name is Wendy Greenfield. I'm a San Jose resident sharing a statement from civil rights leader Dolores Huerta. 25 years after we banned leaded fuel from cars and trucks, private planes continue to spew poison into the air that endangers the health of children from a predominantly low income people of color community. Reid-Hillview needs to be closed to protect the community from lead, noise pollution, and the danger of crashes. Community members need to be involved in planning alternatives that serve them, not the wealthy owners of private planes. [ beeping ]
12:10:17:06	Nancy Guerrero	>> We will try Huy again. Please unmute yourself to speak. Huy, please unmute yourself. Next speaker is Vecinos Activos. Please unmute yourself to speak.
12:10:43:08	Lupe Guerrero	>> Hello, I'm Lupe Guerrero with SOMOS Mayfair Vecinos Activos. I urge you to vote to close the airport immediately. You hold the lives of over 52,000 parents, children, grandparents, aunts, and uncles. How many more people have to live in fear? The land should be used in a way that could best serve the community that has been poisoned for years. Shut it down now. Thank you.
12:11:05:19	Nancy Guerrero	>> Our next speaker is Andrew Mauricec. Please accept the unmute to speak.
12:11:14:16	Andrew Mauricec	>> Good evening. My name is Andrew Mauricec, San Jose resident and Reid-Hillview tenant. The fear mongering and racial tactics used to attack this airport are despicable. I support the transitioning to unleaded fuel to alleviate the latest health fears. Reid-Hillview is an extremely valuable resource for our community. Please accept FAA grants to support and maintain Reid-Hillview Airport in a safe manner. Thank you.
12:11:41:13	Nancy Guerrero	>> Our next speaker is Brett Goldsmith. Please accept the unmute to speak.
12:11:48:04	Brett Goldsmith	>> Good evening. Uh, UC Davis environmental toxicology background, pilot, and local resident. The blood lead levels in the vicinity of Reid-Hillview are at the lower end of average. With the help of businesses at Reid-Hillview Airport, we have an opportunity to catalyst the adoption of unleaded fuels by the FAA and general aviation operators and manufacturers. By supporting this ongoing effort, we can help all communities without harming those involved in aviation, including green aviation communities who- who rely on these assets.
12:12:21:17	Nancy Guerrero	>> Our next speaker is Daniel Rayas. Please accept the unmute to speak.
12:12:28:25	Daniel Rayas	>> Thank you. My name is Daniel Rayas. Since 1974, federal government mandated the removal of lead in the gasoline engines for automotive as well as for lowering the compression ratio to lower nitrogen oxides that reduces acid rain. Lead allows high compression ratio. Removing the lead can make holes in the engine pistons. Stop making holes in our children's brains. Close the airport.

12:12:59:11	Nancy Guerrero	>> Next is caller with a number ending in -975. Please accept the unmute to speak. Caller with number ending in -975, please unmute to speak.
12:13:19:27	Anna Griffin	>> Hello?
12:13:20:24	Nancy Guerrero	>> Yes. Please begin.
12:13:22:02	Anna Griffin	>> Hello, my name is Anna Griffin and I work at Reid-Hillview Airport. I wanna know, um, you know, what study that they're gonna do for the-- check the lead that-- for the people that are working at the airport. Uh, will we be tested for lead as well? That's my question.
12:13:44:18	Nancy Guerrero	>> Our next speaker is Steven Navaro. Please accept the unmute to speak.
12:13:54:13	Steven Navaro	>> Hello?
12:13:55:09	Nancy Guerrero	>> Yes.
12:13:56:11	Dahlia Deverant	>> Okay. My name is Dahlia Deverant and I have lived 40 years, um, by the airport and have a child going near the airport. I suggest not closing the airport. I'm willing to have a secondary report in two years to see the effect of unleaded and turbine planes only. I will suggest limiting the amount of planes and maybe even a curfew. I don't want the land to turn into a Google campus and housing that's gentrifying the neighborhood and that the community did the dirty work so they could just force us out and then close it and-and we will not have it for ourselves.
12:14:28:26	Nancy Guerrero	>> Our next speaker is Linda K. Please accept the unmute to speak.
12:14:35:06	Linda Hutchins-Knowles	>> Hi, this is Linda Hutchins-Knowles, President of County District 1, co-founder of Mothers Out Front, Silicon Valley, and a member of SURJ at Sacred Heart. Our 2,000 member chapter of Mothers Out Front urges you to listen to the pleas of the community and immediately close the Reid-Hillview Airport for the health and safety of the residents. Do Black and Brown lives truly matter to you? Whose voices will you listen to? Whose needs will you center? Will you acknowledge the amount of racism that lead to them citing this airport and this area in the first place? Don't allow any more children to be poisoned. Close the airport now.
12:15:09:00	Nancy Guerrero	>> Our next speaker is Marsela Lechuga. Please accept the unmute to speak.
12:15:18:07	Marsela Lechuga	>> Can you hear me?
12:15:19:06	Nancy Guerrero	>> Yes.
12:15:20:28	Marsela Lechuga	>> This is Marsela Lechuga. I live directly below the flight path of Reid-Hillview Airport. I'm asking for immediate closure and reuse plan that centers local resident victims who live by the airport. Unleaded is too little, too late. We have suffered enough harm. Lead is only-- Lead is not the only reason why I support-- why the airport has to go. I'm tired of the noise and-and fear of planes crashing overhead. When thinking of a reuse plan, the county should give deference to local resident victims of the airport and consider dedicating a large amount of the land as open space for the usage of--
12:15:54:04	Nancy Guerrero	>> Next speaker is Maria Teresa Barcenás. Please accept the unmute to speak.
12:16:02:18	Maria Teresa Barcenás	>> Hi, can you hear me?
12:16:03:28	Nancy Guerrero	>> Yes.

12:16:05:03	Maria Teresa Barcenas	>> Yeah, uh, hi, my name is Maria Teresa Barcenas. I have 26 years living in Eastside. I have three daughters. I am part of Vecinos Activos. I'm a leader in my community. I'm asking you to close the airport as soon as possible. We know that the lead exposure causes irreversible damage not only to nature, but to our families as well. So please vote to close the airport. Thank you.
12:16:35:12	Nancy Guerrero	>> Next speaker is Rona Antonio. Please accept the unmute to speak.
12:16:41:01	Rona Antonio	>> Hello, can you hear me?
12:16:42:03	Nancy Guerrero	>> Yes.
12:16:43:20	Rona Antonio	>> Hi, everyone. My name is Rona Antonio. I'm an emergent-emergent community leader with Breathe California of the Bay Area, the local clean air and the healthy lungs leader. We urge you to review other planning and zoning documents with the Board's mission to protect populations that are overburdened with pollution. I str-strongly encourage the closing of Reid-Hillview Airport immediately because I am the one for those people are always exposed with lead contamination. Thank you for your actions to protect clean air and healthy lungs.
12:17:13:17	Nancy Guerrero	>> Our next speaker is Y.M. Traung. Please accept the unmute to speak.
12:17:22:17	Y.M. Traung	>> Hi, I am Y.M. Traung with Mothers Out Front. Please close the airport. One of the claims is that the airport was used in firefighting. Its minor role in firefighting once in 37 years does not justify allowing small aircraft to continue to poison nearby residents everyday. And the runways are not long enough to accommodate the CAL FIRE Fixed Wing Aircraft, and Hollister is where they have their base of operations. Don't wait 10 years. Close the airport now. Thank you.
12:17:52:18	Nancy Guerrero	>> Our next speaker is Andres Quintero. Please accept the unmute to speak.
12:17:58:28	Andres Quintero	>> Hi. Uh, my name-my name is Andres Quintero. I was born and raised and I'm a life-long resident of East San Jose. I also serve as an elective representative of the people of East San Jose on the Alum Rock School Board. The science is clear. The results are in. Our children in East San Jose are being poisoned by lead on a daily basis. It's unconscionable to allow our children in our entire community to continue to be hurt by the landing of death from above as planes crash into our neighborhoods. I appeal to your humanity, and as a parent on behalf of the children of my community, I join voices that are calling on you to demand that you close the airport immediately.
12:18:32:10	Nancy Guerrero	>> Next speaker is Victor Vasquez. Please accept the unmute to speak.
12:18:40:14	Victor Vasquez	>> Hi, can you hear me?
12:18:41:15	Nancy Guerrero	>> Yes.
12:18:43:02	Victor Vasquez	>> My name is Victor Vasquez, Santa Clara County resident. Work at SOMOS Mayfair, part of Sal Si Puedes Collective. I urge you to close the Reid-Hillview Airport now. We talked to the neighbors. They're tired of living in fear of crashes. They're tired of the noise. It's unacceptable that our communities of color are poisoned everyday, our children, from planes who are owned and flown by people that don't live in this community. To be clear, this land was not yours to begin with. It's Indigenous land. Close the airport now. Reparations are due, and let the community decide. Thank you.

12:19:13:25	Nancy Guerrero	>> Our next speaker is V. Grijalva. Please accept the unmute to speak.
12:19:22:11	V Grijalva	>> Good evening. My name is V. Grijalva. I'm speaking on behalf of Latina Coalition. We stand in alliance with our brothers and sisters that are on the line today. We are urging the Board of Supervisors to close Reid-Hillview. As we listened to the data this evening, it's clear that this is a racial injustice. Thank you.
12:19:49:11	Nancy Guerrero	>> Our next speaker is Sharat Lin. Please accept the unmute to speak. Sharat, can you unmute please.
12:20:01:02	Sharat Lin	>> Yes, thank you, I got it.
12:20:02:06	Nancy Guerrero	>> Thank you.
12:20:03:12	Sharat Lin	>> Okay, so I am Dr. Sharat Lin. I'm a medical scientist. And, you know, the-the scien-scientific studies are-- make it very unmistakable that-that the-the lead levels in children are due to the aircraft, not to other sources. So I urge you to immediately mandate an expedited process to close Reid-Hillview Airport and transfer all air-aircraft outside of this metropolitan area. But this still would take months if not years, so we need to inmo-- invoke emergency public health authority to-to close-- to shut it down.
12:20:35:15	Nancy Guerrero	>> Our next speaker is Mai Hien Lu. Please accept the unmute to speak. Mai Hien, can you please unmute? Okay, we'll move on to the next speaker and I will come back to them. Next speaker is Paula Escobar. Please accept the unmute to speak.
12:21:02:29	Paula Escobar	>> Hello, can you hear me?
12:21:04:07	Nancy Guerrero	>> Yes.
12:21:06:02	Paula Escobar	>> Everyone, my name is Paula Escobar, and I'm a community member, and high school student here in San Jose. I wanted to advocate on behalf of the youth, especially children here and talk about how important it is to prioritize our needs. The land used needs to have community input, and we must close the Reid-Hillview Airport. In addition to this, we must issue a ban on all lead-based fuels to protect our communities and put forward the needs of our youth and-and invest in their futures. Thank you, and close Reid-Hillview Airport.
12:21:39:08	Nancy Guerrero	>> Our next speaker is Reginald Swilley. Please accept the unmute to speak.
12:21:46:18	Reginald Swilley	>> Hello, my name is Reginald Swilley. I am an Associate Pastor at Maranatha Christian Center and a member of a Black Leadership Kitchen Cabinet. Uh, this is almost an embarrassing conversation. I hope that none of our supervisors would allow themselves to be pigeonholed in the hole that Flint has come into, and-and that the people that are trying to, uh, speak on behalf of keeping it open sound like people that were, uh, speaking against the cancer in the cigarettes. We've gotta do better.
12:22:21:06	Nancy Guerrero	>> Next is Mai Hien Lu. Please accept the unmute to speak. Mai Hien, can you please unmute.
12:22:32:20	Mai Hien Lu	>> Hi, my name Mai Hien Lu.
		[speaking foreign language]
12:23:08:09	Mike Wasserman	>> A translation.
12:23:09:05	translator	>> Hello, my name is Mai Hien Lu, and I live in zip code 95148. And I also, um, support the health and environment, and I support the closure of the, uh,



		this airport. And I also support the idea of, um, collecting the information and idea in order to, um, use the airport in a useful way. Thank you.
12:23:41:23	Nancy Guerrero	>> Our next speaker is Aneita Gage. Please accept the unmute to speak.
12:23:49:01	Aneita Gage	>> Thank you, Board of Supervisors. Uh, my name's Aneita Gage. I am a board member from the African American Community Service Agency. I'm also a kid that grew up and resided in this district. I played in the soil where these emissions landed. I suffer from the poisoning effects. Now that we know better, let's do better. Let's put the health of our community, safety of our kids first. Let's not visit this next week, next year, next month. Do the right thing. Close the airport. Let's clean up the land. Thank you.
12:24:21:26	Nancy Guerrero	>> Our next speaker is Jackie. Please accept the unmute to speak.
12:24:27:10	Jackie Rivera	>> Hi, my name is Jackie Rivera, I'm with the South Bay Community Land Trust, and I too, like the speaker prior, am calling for the closure of the Reid-Hillview Airport, and that time has passed for all of these things to have had impact and not-- It's time to heal the land and heal the community, but most importantly, clean up toxicity that's been going on for the past 60 years before we can imagine and recreate. We not only want it to be community centered to push, but community owned and community led. Thank you very much.
12:24:59:24	Nancy Guerrero	>> Our next speaker is Josh Marxen. Please accept the unmute to speak. Josh?
12:25:10:25	Josh Marxen	>> Hi, uh, can you hear me?
12:25:12:07	Nancy Guerrero	>> Yes.
12:25:13:10	Josh Marxen	>> Uh, thank you. My name is Josh Marxen. I'm a resident of Santa Clara County, also here with Showing Up for Racial Justice and Extinction Rebellion Silicon Valley. This Board must work to close the Reid-Hillview Airport as soon as possible to halt the damage being done to the health of children and in our communities and the world's atmosphere with needless emissions from hobbyists. The communities in East San Jose, including many working class communities of color who historically have, uh-- please close the Reid-Hillview Airport. Um, it's a racial justice issue and environmental justice issue. Thank you.
12:25:44:28	Nancy Guerrero	>> Our next speaker is John Choey. Please accept the unmute to speak.
12:25:51:25	John Choey	>> Hi, can you hear me?
12:25:52:23	Nancy Guerrero	>> Yes.
12:25:53:29	John Choey	>> Awesome. Dear Board, I'm asking you to consider that countless studies, such as Miranda et al 2011 indicate that children living near airports have average blood lead levels that are higher than other children. Empirically, it is clear that maintaining upkeep of the Reid-Hillview Airport for the next 10 years until the FAA money runs dry only benefits prior plane owners and harms the long-term value of San Jose children, whose families can't afford to move elsewhere. This is racial justice and public health issue which requires decisive action by reappropriating the plot for community lots like affordable housing. I urge you to close Reid-Hillview Airport immediately. Thank you.
12:26:26:15	Nancy Guerrero	>> Next is John Engles. Please accept the unmute to speak. John, can you unmute yourself, please?
12:26:40:24	John Engles	>> Yes, hi. Sorry about that. Good evening. Thanks for staying up late to hear

		us all. Uh, I'm John Engles, resident of Santa Clara County, and I'm proud of the irreplaceable infrastructure that we have here. Uh, we've heard that lead seems to be the biggest problem, but there are already two widely used fuels for planes, only one of which has lead, so just ban that one. Don't use this as a pretext for selling out the land. Uh, and keep the safer airport fuel that's used by CAL FIRE helicopters that protect the neighborhoods of East San Jose from wildfires as recently as last year, flying from Reid-Hillview.
12:27:15:12	Nancy Guerrero	>> Our next speaker is Nicole Rivers. Please accept the unmute to speak.
12:27:23:13	Nicole Rivers	>> Hi, there, can you hear me?
12:27:24:24	Nancy Guerrero	>> Yes.
12:27:25:29	Nicole Rivers	>> Fantastic. Um, I live in Glenn Holden, in East San Jose near Lake Cunningham under the flight path of Reid-Hillview. I'm against the shut down of the airport until we can get a legal commitment that the area will not be developed until after an EPA clean up operation. If the airport's really such a source of lead, the actual ground of the airport is a major long term environmental hazard. Even if the goal is to build homes near a region where a two-bedroom apartment cost over \$800,000, who wants kids to be playing ball and growing up on heavily leaded ground?
12:27:57:11	Nancy Guerrero	>> Our next speaker is Sue T. Please accept the unmute to speak.
12:28:03:11	Sue T.	>> Hi, good evening. Uh, thank you for giving me this time. I live in East San Jose, District five. I would re-re-request you to please keep the airport open and study it for the next 10 years to see the impact of the unleaded fuel. The blood lead levels aren't average. Nobody's saying that here. This-- There is no elevated blood lead levels, so we need to study this more. Um, the opponents are just reading from a script that was sent in a mass email to make it look like there's more opposition, I feel. Thank you for your time.
12:28:35:20	Nancy Guerrero	>> Next speaker is Jonathan Bortka. Please accept the unmute to speak.
12:28:43:27	Jonathan Bortka	>> Hi, can you hear me?
12:28:44:26	Nancy Guerrero	>> Yes.
12:28:45:25	Mike Wasserman	>> Yes.
12:28:46:18	Jonathan Bortka	>> Uh, good evening, Board of Supervisors. My name is Jonathan Bortka, and I work at the School of Arts and Culture. Uh, and I live in East San Jose near Reid-Hillview Airport. My late grandparents have lived on Hopkins Drive since the 1970s. I understand that the issue is mixed, layered, and can be complicated. I can also say that I can see value in some sides of both arguments, but for me, nothing is more important than closing the airport because the risk of leaded fuel to our current and our future youth, uh, does not outweigh any benefit. Uh, please shut-- consider shutting it down, and gathering community input. Thank you.
12:29:20:14	Nancy Guerrero	>> Next speaker is Mandeep Johal. Please accept the unmute to speak.
12:29:27:09	Mandeep Johal	>> Hello?
12:29:28:12	Nancy Guerrero	>> Yes.
12:29:29:29	Mandeep Johal	>> Hi, everyone, my name is Mandeep. I'm an emerging community leader with Breathe California. There are more than 12,000 children who live within 1.5 miles from the airport. As a concerned community member, I urge you to vote yes on item 37 to immediately prevent-- um, to take all necessary actions,

		including closure to immediately prevent lead contamination. Thank you.
12:29:58:16	Nancy Guerrero	Our next speaker is Advit. Please accept the unmute to speak.
12:30:07:27	Advit	Hello. I am a college student and environmentalist living in East San Jose. This is a lead pollution crisis. However, a false dichotomy has been presented today. We can keep the airport open and eliminate lead emissions by switching to unleaded fuel. The airport serves as a community center and is a vital disaster response asset for San Jose. Closing the airport is tremendously short-sighted, given the risk of a major earthquake on the Calaveras Fault or catastrophic fires and flooding projected to get worse with climate change. Keep the airport open.
12:30:43:08	Nancy Guerrero	Our next speaker is Sam Ho. Please accept the unmute to speak.
12:30:50:11	Sam Ho	Good evening, Board of Supervisors and thank you for the opportunity to speak tonight. I'm a volunteer at San Jose-- at the Asian American Center of Santa Clara County and also serve on the board of many non-profit organizations including my neighborhood associations and I would urge the board to please vote to close the, uh, Reid-Hillview Airport. We have clear evidence of health impact negatively on thousands of our children and residents in the area. So please, uh, I urge you to vote, uh, close the Reid-Hillview Airport. Thank you.
12:31:29:10	Nancy Guerrero	Our next speaker is Eric C. Please accept the unmute to speak.
12:31:36:25	Eric C.	Hi, my name is Eric. Dr. Sammy's conclusion reads, it appears to be due to the lead from airplanes. He did not say definitely due to airplanes. It appears to be -- I mean, if "it appears to be" is enough justification to close the airport, then there are many places to close in San Jose. My two teenagers have lived their lives next to an airport and they are fine in terms of intelligence. There are other crisis that needs immediate attention than closing Reid-Hillview. Let's not close the airport.
12:32:10:13	Nancy Guerrero	Our next speaker is Shawn Turner. Please accept the unmute to speak.
12:32:17:22	Shawn Turner	Hello, my name is Shawn Turner. I'm a resident of Santa Clara County. I urge you to keep the airport open. The studies that cite blood lead levels have been shown by the, uh, San Jose examiner to be, uh, in line with, uh, averages for the county. And what we've seen is that this airport is a critical resource for the survival of this area. Given the recent wildfires, this area was-- Reid-Hillview Airport was used as a staging base and if you were to close that, then you're condemning those communities of color that live near, uh, where the fires took place to burn.
12:32:50:22	Nancy Guerrero	Our next speaker is Ted. Please accept the unmute to speak.
12:32:56:20	Ted Scarlett	Good evening, supervisors. My name is Ted Scarlett. Most of you know me. Uh, first, I want the statement of never let a good crisis go to waste. And it was outrageous to make that statement. And it is outrageous, this meeting is a violation of the Brown Act. And you've whipped up the hysteria of-of people and caused fear into them for no good reason. This is nothing but a land grab, and the people out there are being used as pawns and when that property's developed, nobody will want to live out there.
12:33:32:12	Nancy Guerrero	Our next speaker is Ted. Please accept the unmute to speak.
12:33:38:09	Ted Scarlett	Can you hear me?

12:33:39:06	Nancy Guerrero	Yes.
12:33:40:02	Mike Wasserman	Yes.
12:33:40:27	Ted Scarlett	Did you hear what I already said?
12:33:43:13	Nancy Guerrero	Oh, I'm sorry. You have already spoken.
12:33:45:09	Ted Scarlett	No. Let me- Let me- Let me say this again, because this is a violation of the Brown Act. You're-you're-- this is hysteria of the people out there.
12:33:53:27	Mike Wasserman	No, he can't. Just mute it.
12:34:02:18	Nancy Guerrero	Our next speaker is Vicenta. Please accept the unmute to speak.
12:34:15:00	Vicenta	(speaking Spanish)
12:34:40:09	Mike Wasserman	The translation.
12:34:42:18	translator	Hi, my name is Vicenta and I belong to SOMOS Mayfair community. And how important for you are the lives of kids? We have lead in the air and now it's polluted. So let's close the airport and do something for the benefit of children. Thank you.
12:35:02:15	Nancy Guerrero	Our next speaker is Bodie. Please accept the unmute to speak.
12:35:08:10	Bodie	Yeah, hi. Uh, can you hear me?
12:35:09:24	Nancy Guerrero	Yes.
12:35:11:03	Bodie	Hi, I'm Bodie. I'm a volunteer pilot. Even if we got rid of the airport, the study shows that lead levels will drop by 25 to 35% when compared to the control) in the outer ring zone in the study. When researching about why, I found that the water lead levels in San Jose/Santa Clara are 5,000 times that of a place like Foster City, despite there being apparently no safe levels of lead. I would urge the city to look at all sources of lead and come up with a fair and scientific solution for the problem by listening to people who are offering solutions and not just blindly talking about closing the airport. Thank you.
12:35:41:16	Nancy Guerrero	Our next speaker is Olivia Ortiz. Please accept the unmute to speak.
12:35:51:07	Olivia Ortiz	Can you hear me?
12:35:51:27	Nancy Guerrero	Yes.
12:35:52:13	Mike Wasserman	Yes.
12:35:53:07	Olivia Ortiz	Good evening. My name is Olivia Ortiz. I'm a resident of District 5. I'm a mother of two children and I'm an active leader of Vecinos Activos. Sir, East San Jose has been affected by racist policies and this shows they have negatively affect our community. If you all decide not to close the Reid-Hillview airport, you are turning your back on your community. You will be repeating the same story. We know in advance that this airport does not benefit our community of East San Jose. On the contrary, it negatively affects the health of our children. I ask that you please close the airport and ensure that this space benefits the East San Jose community. I am positive that you will make the right decision, which you morally you-
12:36:26:23	Nancy Guerrero	Next speaker is Ihab Owad. Please accept the unmute to speak.
12:36:34:22	Ihab Owad	Um, hello. I currently own a very small, quiet airplane at Reid-Hillview with three others. We knew lead is bad without a \$90,000 study, and we begged for unleaded for years, but the county did nothing. Now Reid-Hillview is moving fl-flight training to unleaded, and that will eliminate most lead.

		Meanwhile, as an environmentalist who chose to commute with my bike rather than a car for decades, I do worry about environmental issues. But does the county really want to house low income children on a superfund site?
12:37:08:06	Nancy Guerrero	Our next speaker is Denet Capur. Please accept the unmute to speak.
12:37:16:14	Denet Capur	Hi, um, I am-- I want for the closure of the airport. Definitely, um, we do not want lead poisoning in this community. I would urge, uh, the Board of Supervisors to make the right decision. I also agree with, uh, a number of other speakers, who have voted in favor of-of developing the land so that it benefits the community. And then, I would like to approve our San Jose State University, uh, spokesman who wanted to do the right thing. Thank you.
12:37:49:08	Nancy Guerrero	Next speaker is Lynn. Please accept the unmute to speak. Lynn, please unmute to speak. Okay, we will come back to Lynn. Next speaker is Liz Fenny. Please accept the unmute to speak.
12:38:11:22	Liz Fenny	Hi, my name is Liz Fenny. I'm with, uh, SURJ at Sacred Heart, and I am also advocating for you to close the Reid-Hillview Airport. Like many before me have said, no, there is no acceptable blood le-- uh, lead level in the blood and I feel like we should really close this airport and allow the people who live there to choose what we do with the land. Thank you.
12:38:34:00	Nancy Guerrero	Our next speaker is Tracy Christianson. Please accept the unmute to speak.
12:38:42:28	Tracy Christianson	Good evening. I support moving immediately to unleaded fuel as a solution to the lead problem. I do not support a solution that simply moves the problem to another community such as the San Martin Airport, which does have an elementary school a half mile from the airport. I have a family with two children, and I have planes flying over my house as well from the San Martin Airport. I do not want to increase the air traffic and pollution from that airport just by moving the traffic from Reid-Hillview to San Martin. Thank you.
12:39:13:00	Nancy Guerrero	The next speaker is Lucy Khuu. Please accept the unmute to speak.
12:39:21:01	Lucy Khuu	Good evening, Board of Supervisors. Uh, my name is Lucy Khuu, and I am representing Assemblymember Evan Low. On behalf of Assemblymember Low, I respectfully ask for the Board of Supervisors to support the closure of Reid-Hillview Airport. For more than 60 years, the Reid-Hillview Airport has caused irreversible damage to residents in the East San Jose area due to lead exposure. By closing the airport, we'll be protecting our community by ending the pollution and dangers caused by Reid-Hillview. Thank you.
12:39:52:26	Nancy Guerrero	The next speaker is Margarita Oroyo. Please accept the unmute to speak.
12:39:59:04	Margarita Oroyo	Good evening. My name is Margarita Oroyo, and I work and serve families, uh, and children in the Eastside of San Jose near Reid-Hillview Airport. I am here to urge you to please close the Reid-Hillview Airport. The damage of more than 60 years of exposure to leaded aviation fuel emissions cannot be undone. But we're counting on you to firmly commit to a more equitable county by doing everything in your power to close this airport and continue a robust community input process to fund the future of this public site for families of the eastside of San Jose. Thank you.
12:40:30:27	Nancy Guerrero	We will go back to Lynn. Please unmute yourself to speak.
12:40:36:26	Jocelyn Mortin	Hello, can you hear me?
12:40:38:10	Nancy Guerrero	Sure can.

12:40:39:26	Jocelyn Mortin	Um, good evening, board members. My name is Jocelyn Mortin, and I'm here to ask you to vote to close down the airport as soon as possible. Allowing these planes to continue to fly over our community means that we are allowing our youth to be at risk of extremely harmful lead. Please do what's right and close the airport now. Thank you, and have a good night.
12:41:04:17	Nancy Guerrero	Next speaker is John Laba. Please accept the unmute to speak.
12:41:14:16	John Laba	Hello?
12:41:15:03	Nancy Guerrero	Yes.
12:41:16:27	John Laba	Hi, good evening. My wife and I grew up near Reid-Hillview and attended Alum Rock schools. 200 technicians work at the airport and live here. Dozens of San Jose state aviation students study there. Emergency services use the airport regularly. The county received \$16 million in a settlement to remediate lead paint in homes. What happened to that money? San Carlos switched to unleaded fuel 5 years ago. Why didn't we? If Reid-Hillview is contaminated, why build housing there? Please keep the airport open. Go lead free now. Thank you.
12:41:48:19	Nancy Guerrero	Our next speaker is Andrea Flores-Shelton. Please accept the unmute to speak.
12:41:56:02	Andrea Flores-Shelton	Good evening, I'm Andrea Flores-Shelton, a resident of East San Jose of 47 years, a mother of 2, and my own mother taught in Most Holy Trinity in the '80s and '90s. When the Board unanimously declared racism a public health crisis in June of 2020, it was said that a resolution was only as good as the actions that follow it. Please side with the facts. Decide to close the airport, which is in the best interest of our young people and the area already suffering from significant racial health disparities. Tonight will be a test of the integrity of advancing racial and environmental justice for all. Thank you.
12:42:30:15	Nancy Guerrero	The next speaker is Joshua Kim. Please accept the unmute to speak.
12:42:37:06	Joshua Kim	Just like with leaded gasoline in cars I believe that we should immediately ban leaded gasoline to stop the impact of contamination. However, Supervisor Chavez is being intentionally dishonest by pretending that the airport presents an ongoing health risk in the future. Tearing down this public infrastructure asset and selling its land to private property developers is a major conflict of interest. Closing the airport will be a death sentence to SJSU's Aviation program. It will prevent mostly working class and minority communities in San Jose the opportunity to learn, obtain a degree in and diversify the field of aviation.
12:43:09:06	Nancy Guerrero	Our next speaker is Nicole. Please accept the unmute to speak. Nicole, can you please unmute yourself? You may begin. Nicole, I see that you have unmuted yourself. Okay, we will come back to you. Next speaker is Matt Moore. Please accept the unmute to speak.
12:43:45:23	Matt Moore	Good evening. I'm speaking in support of keeping the airport open. I don't think it's right to just push that problem down the-- down the road to somebody else's neighborhood. We have the opportunity with the recent availability of unleaded fuels to make an immediate impact on the airborne lead situation. Uh, the majority of aircraft at the airport can operate on unleaded fuel. Aerodynamic Aviation represents close to 60% of daily flight operations at Reid-Hillview airport. It completely converted 21 aircraft. Let's make this a role

		model for other airports around the country.
12:44:19:27	Nancy Guerrero	Our next speaker is Nelsie Sepuldada. Please accept the unmute to speak. Nelsie, please unmute yourself.
12:44:32:12	Christian Sepuldada	Hey, good evening, Board Supervisors. Uh, this is Christian Sepuldada. I'm the parent living within one mile from the airport. I urge you to follow the science and close the airport to prevent further lead poisoning to our community. If you vote not to close the airport and believe this is not an issue of concern I invite you and your family to come live within our community to show us support for keeping the airport in place. Listen to the community as it is overwhelming. The majority does not support keeping the airport. I hope you're actively listening. Thank you.
12:45:05:04	Nancy Guerrero	We are back to Nicole. Please accept the unmute to speak. Nicole, I see that you have unmuted yourself. We cannot hear you. We'll move on to the next speaker and come back to you. Patty Andrade, please accept the unmute to speak.
12:45:32:15	Patty Andrade	Hello. Good evening, Board of Supervisors. My name is Patty Andrade and I am a member of the board of trustees for the Evergreen School District, a resident of Evergreen, and also a mother of three boys. I am calling in support of closing Reid-Hillview Airport. The poisoning of children has been going on since the existence of the airport. There is no justification for keeping the airport open. As a mother, this is alarming, and I cannot imagine what those parents are feeling knowing that their children have been exposed to lead only because of where they live. We have a moral obligation to those children. Thank you.
12:46:06:00	Nancy Guerrero	Our next speaker is Patty Andrade. Please accept the unmute to speak.
12:46:13:02	Patty Andrade	I already spoke. Thank you.
12:46:14:21	Nancy Guerrero	Oh, I'm sorry.
12:46:15:12	Patty Andrade	Okay.
12:46:18:29	Nancy Guerrero	Our next speaker is Jose Vayai. Please accept the unmute to speak.
12:46:29:27	Jose Vayai	My name is Jose Vayai from Big Eastside San Jo, Silicon Valley De-Bug. I grew up near the Hillview airport in a low income, government housing project, now known as San Jose apartments. I've lived there for two decades. I walk this line alongside the airport every day, to and from Fischer Middle School and Overfelt High Schools. I am for the shutdown of the airport due to lead poisoning and advocate for testing if the land is even habitable and lead poisoning, uh, testing for families who lived and attended school there in the past and live and go to school there today before taking any type of--
12:47:04:15	Nancy Guerrero	Our next speaker is Mimi. Please accept the unmute to speak.
12:47:12:25	Mimi Hernandez	Good afternoon, I'm Mimi Hernandez, Executive Director of Prosperity Labs and small business advocate. I'm going to challenge those supporting the continued of the poisoning of these San Jose residents who now affirm that moving away from lead can take care of the issue by asking them, why did it take this massive community mobility to get them to take to clean up their act? Any attempt at appeal citing, uh, Reid-Hillview as an emergency response, um, cited is completely disingenuous. The science and facts support what many of us have known for some time. It is time to close it.

12:47:47:10	Nancy Guerrero	Our next speaker is Henry Tusel. Please accept the unmute to speak. Henry, can you please unmute yourself?
12:48:00:15	Henry Tusel	Hello, can you hear me?
12:48:01:21	Nancy Guerrero	Yes.
12:48:02:14	Mike Wasserman	Yes.
12:48:03:11	Henry Tusel	All right, it is rather improper to assume pilots love lead. Many abhor it. It is not mentioned at all the harm lead can do to airplane engines, nor the incredibly important reason why it was used in the first place. San Carlos already sells UL 94 for cheaper than 100 low lead. Costs will drop with demand in infrastructure that is already established. On top of that, maintenance costs will fall as UL 94 is overall better for the integrity of engines. It serves the purpose of that 100 low lead did without the lead. Closure merely puts a tiny bandaid on a massive wrong aviators are eager to right. Unleaded fuels can absolutely work just as long as-- just as they did with cars.
12:48:37:16	Nancy Guerrero	We will go back to Nicole one more time. Please accept the unmute to speak. I see that you have unmuted yourself, Nicole, but we still cannot hear you. My apologies. Then we'll move on to the next speaker. Next speaker is Brian Ang. Please accept the unmute to speak.
12:49:07:10	Brian Ang	Yeah, hi, can you hear me?
12:49:08:21	Nancy Guerrero	Yes.
12:49:09:19	Brian Ang	My name's Brian Ang. I'm a flight instructor at Aerodynamic Aviation at Reid-Hillview. When you consider closing Reid-Hillview please take into account that this airport's integral to the training of pilots. Hundreds of flight instructors and students rely on this airport for our livelihood and future careers. In addition, there's a multitude of independently-independently owned flight schools that'll be forced to close with no immediate options for relocation. This includes San Jose State's aviation program, which trains future airline pilots. Please consider keeping Reid-Hillview open so that future aviators can continue to be trained and developed for the safety of all passengers and travelers.
12:49:43:12	Nancy Guerrero	Next speaker is Joseph Osternik. Please accept the unmute to speak.
12:49:49:23	Joseph Osternik	Hi, uh, my name's Joseph Osternik. I am speaking on behalf of the South Bay Chapter of Jewish Voice for Peace. We at South Bay Chapter of Jewish Voice for Peace support-support closure of Reid-Hillview Airport because of the evidence presented earlier establishing it's a hazard. Specifically, we urge closure to the airport now, continuing the visioning process, and given the history and demographics of that neighborhood. Please address racial justice by using the land in a way to address community. Also, I live very close, 1.3 miles away from the airport, at the cor-- at, uh, Mount Herman Drive and want--
12:50:22:26	Nancy Guerrero	Next speaker is Sharon Luna. Please accept the unmute to speak. Sharon, can you please unmute? There you are.
12:50:34:09	Sharon Luna	Okay. Good evening, Supervisors. When you have a concern, you look for a solution. The solution to this problem was stated by the doctors and that is unleaded gas will resolve the issue. Shifting to San Martin, making it the 40th busiest airport, where our residents are on wells and septic systems, is not what everybody has been saying. Socially, racially, and environment--



12:51:09:12	Nancy Guerrero	Next speaker is Cole Bodin. Please accept the unmute to speak.
12:51:20:12	Cole Bodin	Hey there, can you hear me?
12:51:21:22	Nancy Guerrero	Yes.
12:51:22:09	Mike Wasserman	Yes.
12:51:23:00	Cole Bodin	Hi, my name's Cole Bodin. I'm a resident that lives in central San Jose. Reid-Hillview was built in the 1930s and it's representative of dozens of airports in the state-- Watsonville, Salinas, Livermore, and Hayward all have airports similarly situated in neighborhoods. Instead of closing the airport San Jose should push strongly for the adoption and implementation of lead free fuel. We have the opportunity to be a role model for other small airports in the state and the nation and pilots are eager to adopt lead free fuel. Don't close the airport.
12:51:55:17	Nancy Guerrero	Next speaker is Umba. Please accept the unmute to speak.
12:52:00:15	Umba	Can you hear me?
12:52:01:09	Nancy Guerrero	Yes.
12:52:02:08	Mike Wasserman	Yes.
12:52:03:00	Umba	All right, I am Umba, a resident of East San Jose. Children or not, no one should be exposed to lead toxicity. Anyone wanting to maintain the airport is callous. Someone outright disregarding the smoke that we see clouding the east hills this last week. Fires will not stop as the climate crisis continues. Planes in this airport, however, will stop because more than-- more than anything, wasting land and people's health away for rich people's leisure activity, that's-that's stupid. The county will prioritize reparations for the surrounding community.
12:52:36:26	Nancy Guerrero	Next speaker is Shawn. Please accept the unmute to speak.
12:52:42:16	Shawn	The aviation community has been working to replace leaded fuel for 30 years. We did not neglect the problem. It was a tremendous engineering challenge to achieve. Unleaded fuels are finally available and being used at Reid-Hillview as we speak. And even so, the blood levels shown in the study are average. Let's not forget that Reid-Hillview Airport is a valuable resource for technical jobs. I personally know children from the local community who have begun their aviation career at the airport and are doing very well for themselves. Closing the airport would be robbing excellent career opportunities to a community that cannot afford to lose it. Keep the airport open.
12:53:16:16	Nancy Guerrero	Next speaker is Andy Garcia Trides. Please accept the unmute to speak.
12:53:22:26	Andy Garcia Trides	Good evening, my name is Andy and I've lived a block away from the Reid-Hillview Airport for 25 years. I support its immediate closure. This is a public health emergency. The land occupied by Reid-Hillview Airport is not being taken care of and it is harming the communities that reside near it. We deserve to heal from the harm that Reid-Hillview Airport has caused and we cannot sit around for the next plane to crash over trees, at the park while kids are playing. People should not be learning to fly planes over homes and living humans, period. I urge you to shut it down. Thank you.
12:53:54:13	Nancy Guerrero	Our next speaker is Connie Romo-Ludwick. Please accept the unmute to speak.
12:54:03:10	Connie Romo-Ludwick	I've lived in, uh-- within one-- for the first years of my life I lived within 1.5 miles of Reid-Hillview Airport and believe the hysteria to be political. Let's be smart

		and work together to solve problems. Don't discriminate against the youth who could learn aviation skills in their own community. In December of 2018, the board of supervisors could've voted for unleaded fuel rather than to close an asset of east San Jose that offers minorities skills for their future. Environmental justice must include San Martin. Do not continue the pattern of prejudice of dumping in San Martin.
12:54:40:03	Nancy Guerrero	Our next speaker is Luis Moreno. Please accept the unmute to speak. Luis, if you can unmute yourself-- there you go.
12:54:52:18	Luis Moreno	Hello, I am Luis Moreno, a member of the Colonial Action lot. We are here because we have a problem. Children and their families are being contaminated every single day. Past public servants and plane owners need to be accountable for poisoning the community and the land. Today, public servants have the opportunity to start cleaning and solving this problem. I urge our public servants to vote to clean this mess. Thank you very much.
12:55:21:13	Nancy Guerrero	Our next speaker is Ian Barth. Please accept the unmute to speak.
12:55:29:07	Ian Barth	Hi, can you hear me?
12:55:30:13	Nancy Guerrero	Yes.
12:55:32:13	Ian Barth	Hi, my name is Ian Barth, and I'm a local resident and pilot. I'm confused because San Jose and San Martin airport also have piston aircraft use, and all traffic from Reid-Hillview would likely transition there, just moving the problem. If any level of lead is toxic, then San Martin and San Jose are just as concerning now. If the issue is truly about lead, and you choose to close the airport, I ask that you set aside the land for future aviation use as we work with the FAA to find a good solution. Sadly, this appears to be politics and all about a land grab. Thank you.
12:56:04:10	Nancy Guerrero	Our next speaker is Wen Yu Zang. Please accept the unmute to speak. Wen Yu, I see that you are unmuted.
12:56:20:16	Wen Yu Zang	Hi, can you hear me?
12:56:21:28	Nancy Guerrero	Yes.
12:56:22:26	Wen Yu Zang	Okay, my name is Wen Yu, and I'm a proud Asian. I live closely to San Jose International Airport. Closing Reid-Hillview diverts all traffic to San Jose International. It will cause problems in our neighborhood. Are you going to also close San Jose International as well? Closing an airport doesn't fix the problem [indistinct] (12:56:39). Getting unleaded fuel as soon as possible is the correct and long-term solution. Thank you.
12:56:49:09	Nancy Guerrero	Next speaker is Jason Upadout. Please accept the unmute to speak.
12:56:56:25	Jason Upadout	Hi, can you hear me?
12:56:57:17	Nancy Guerrero	Yes.
12:56:59:13	Jason Upadout	This study has misled members of the public. We need to compare lead numbers with the rest of the county. Supervisor Lee in Milpitas, 2.5% of kids under 6 were above the threshold. Supervisor Ellenberg in Western Santa Clara, it's 2.7%. Supervisor Simitian in Cupertino, it's 4.4%. And then southern Sunnyvale, 5.3% of kids under 6 were above the threshold, almost two times higher than East San Jose. You can see these data prove we have a countywide lead problem not limited to San Jose. Studies office have not done their due diligence-- [beeping]

12:57:31:12	Nancy Guerrero	Next speaker is Joel Reyes. Please accept the unmute to speak.
12:57:39:14	Joel Reyes	Okay, hi, my name is Joel Reyes. I'm a San Jose student. Okay, hi, my name's Joel Reyes. I'm a San Jose student, and I'm here in favor to close Reid-Hillview airport. We need to protect our children. We need to protect our environment. We need to protect the 52,000 families that are dealing with this unfortunate lead issue, stop neglecting our underprivileged communities. We need to fight this fight. Thank you very much.
12:58:07:08	Nancy Guerrero	Our next speaker is Alma Arredondo. Please accept the unmute to speak.
12:58:14:13	Alma Arredondo	Good evening, my name is Alma Arredondo, and I live in East San Jose. I'm here representing [indistinct] (12:58:20) advocates. I urge you to do two things. One, vote to close the airport. And two, continue a critical community input process to plan the future of this public site for the families of East San Jose. Lead exposure in children in the US was determined to be harmful in '79. '75 was the year unleaded gas became available. [beeping]
12:58:50:22	Nancy Guerrero	Our next speaker is Charlesy Chang. Please accept the unmute to speak.
12:58:55:16	Charlesy Chang	Hi, my name is Charlesy, and I'm speaking on behalf of Assemblymember Alex Lee. The report that was conducted shows concerning levels of lead in children closest to the airport and the detrimental impacts to the community. It's unconscionable that while lead paint and leaded gasoline for cars have been banned, the federal government and the FAA still allow leaded aviation fuel. We support the staff recommendation and we must also put pressure on the federal government to make the switch to unleaded fuel. Thank you.
12:59:24:02	Nancy Guerrero	Our next speaker is Zach3051. Please accept the unmute to speak. Zach, you may begin. Zach, you have unmuted. You may begin speaking. Okay, we will move on to next speaker and come back to Zach. I have another Zach. Please accept the unmute to speak.
13:00:05:06	Zach	Hello, I'd like to start out by saying that I'm a dietician with a public health background, so I understand the lead concern. But I am also a pilot, so I do have a bias. I just feel as if the information provided really gives false hope to the local community by letting them believe that there is a sense of hope that this land is going to be, um, a benefit to the society. We have to remember that the le-- that the land is tainted, and we have to work to deviate the traffic that is going to be offset if the airport's closed. [beeping]
13:00:39:20	Nancy Guerrero	Next speaker is KeithA. Please accept the unmute to speak.
13:00:47:07	Keith Anderson	Hi, my name is Keith Anderson. I'm the so-called impacted. I grew up licking the dirt by Eastridge right under the flight line on Brahms avenue. I went to school with the so-called lower-IQ students whom were being shoved through a lackluster education system. I'm not-- I've not seen the research towards the other outside influences I experienced, such as bad plumbing systems, leaded paint, overpopulated schools, et cetera. All the people speaking against the airport are the same people who hypocritically drive cars. This is a clear exercise in bias confirmation put together to pull heartstrings and drive social emotion with the objective to help the rich landowners grab land-- [beeping]
13:01:22:25	Nancy Guerrero	We will try Zach3051 once again. Please accept the unmute to speak. Zach3051, please unmute yourself. I see that you have unmuted. Can you begin speaking? Okay, we'll move on to the next speaker. Wallner Audio. Please accept the unmute to speak.

13:01:59:15	Patrick Wallner	Good evening, supervisors. My name is Patrick Wallner. I'm a pilot and aircraft owner and a member of CalPilots and AOPA. I urge you to keep the airport open and mitigate the use of low-lead to unleaded fuel over a reasonable timeframe. I also know that lead comes from more than one source, such as paint. In older homes leaded plumbing fixtures including lead-soldered fittings that leech into your potable water were the norm before the early 2000s. While not mentioned in the study, please look at the whole picture. The closure of this critical airport or any other airport will have unintended consequences affecting such things as emergency medical evacuations-- [beeping]
13:02:33:00	Nancy Guerrero	We will try Zach3051 one last time. Please unmute yourself to speak. Zach, I see that you have unmuted. Can you begin speaking?
13:02:48:21	Maria	Yes, my name is Maria, and I'm one of the ones that our children have been affected by this lead. We've had enough discrimination and abuse in our community, and it's time for the supervisors to close the airport down. Thank you.
13:03:04:21	Nancy Guerrero	Next speaker is Victoria Pardia. Please accept the unmute to speak.
13:03:13:01	Adrian Marquez	Hi, yes, my name is Adrian Marquez, and I'm a resident nearby from the airport. And you know, based on this evidence I want the airport to be closed immediately due to the health hazard. Um, and obviously the airport does not care about our health or our children in this community. Thank you.
13:03:36:14	Nancy Guerrero	Next speaker is Matthew Reed. Please accept the unmute to speak.
13:03:46:10	Matthew Reed	Yes, my name is Matthew Reed from Silicon Valley at home. Um, we are here to support the calls for the closure of the airport as soon as possible. To be honest, although the study's essential, we believe that this has been widely known to be a problem in the community. Generations and decades of leaders have been pushing for this, and we're eager to continue to support the community process to repurpose the area to meet the community needs. Thank you. [beeping]
13:04:19:15	Nancy Guerrero	Our next speaker is Samantha Wang. Please accept the unmute to speak. Samantha?
13:04:31:14	Samantha Wang	Hello, I'm a constituent in Santa Clara county, not a fancy executive, just a normal high school student of science. I have doubts about the methodology behind the test. The Santa Clara board presented speculative information based on data gathered using unclear methods to paint general aviation as the primary villains and fear-mongering while doing absolutely nothing to support the community affected. I worry that the airport land will be used for more real estate developments that will line the board's pockets yet do nothing to address the lead poisoning, just like Flint, Michigan. [beeping]
13:05:04:13	Nancy Guerrero	Next speaker is Liz Perez Banson. Please accept the unmute to speak.
13:05:11:05	Liz Perez Banson	Thank you. I'm a representative of the San Martin Neighborhood Alliance, and we're requesting and urging a transparent and well-publicized community engagement process in order to protect the future of our valuable San Martin airport as well as protect the schoolchildren and the livelihoods of the San Martin community. We believe unleaded fuel is a part of that protection among other assurances that will need to be put in place. Thank you.
13:05:42:16	Nancy Guerrero	The next speaker is Uri Martinez Mendoza. Please accept the unmute to speak.

13:05:53:06	Uri Martinez Mendoza	[speaking Spanish]
13:05:54:14	Nancy Guerrero	Si.
13:05:56:03	Uri Martinez Mendoza	[speaking Spanish] [beeping]
13:06:30:10	Nancy Guerrero	Our next speaker is Rowan Young. Please accept the unmute to speak.
13:06:39:04	Rowan Young	Hello, do you hear me?
13:06:40:17	Nancy Guerrero	Yes.
13:06:42:00	Rowan Young	Hello, my name is Rowan Young. I come to you as a realist and a high school student. I want to shed light on economic and aviation impacts on all communities. The uniqueness of the airport causes many challenges when going through with the closure. To move to other airports such as San Martin will divert large amounts of traffic to an airport that simply couldn't handle it. To move traffic from one of the busiest general aviation airports in the United States to an airport with zero air traffic control or other pertinent facilities is simply reckless and dangerous. Keep Reid-Hillview open.
13:07:14:02	Nancy Guerrero	Our next speaker is Jerry J. Please accept the unmute to speak.
13:07:26:24	Jerry J.	It seems pretty clear to me that the solution to the problem is not to close this airport which we might need when we have the next major earthquake, which will be sooner or later. The solution to me seems to be to go ahead with changing the fuel, transitioning fuel to nonleaded fuel. Now all this nonsense about all the planes falling out of the sky, I've lived southeast of the airport for 30 years, and I haven't seen-- I've seen one crash on Eastridge, uh-- [beeping]
13:08:01:11	Nancy Guerrero	Jerry was the final person on our list of speakers when the speakers were capped, so this concludes our public comment.
13:08:10:16		Okay, let me get my screen joined in, and I'm trying to get my view fullscreen. There's everybody. Thank you very much. And, Nancy, uh, kudos to you again for your continual speaking and talking and being with us for the last 13 hours in such a proactive way.
13:08:41:02	Mike Wasserman	We are now gonna go to item number 36. Um, Supervisor Chavez is going to speak first. I'd like to speak on 36D, but I'm turning this over now to Supervisor Chavez.
13:08:57:15	Cindy Chavez	Supervisor Wasserman, just as a-- from a process perspective, what I was hoping to do was to take all of the, um, items in one, um, bunch, you know, to take 3-- to take 36, 37, 38, and 126. And my hope by doing that was that if there were components of the-- of any of these actions that somebody wanted to vote against, they'd be able to do that by calling out the number and the letter.
13:09:28:19	Mike Wasserman	Okay, um, depending on what it is that you put forward, I would either need to put in a friendly amendment or a substitute motion. Um, certainly on the one that I put forward I want to speak on, but 36D was important to me that I speak as well. So I can speak first if you wish, and then you can put forward what you like, or I'll be happy to speak after you. I just wanted to give you a heads-up, because I-I know none of us like surprises.
13:10:01:14	Cindy Chavez	No, that's right, I totally appreciate that. Um, if it's okay if I could try a motion, and if, um-- and then, Supervisor, if I get a second on that motion, we can take whatever-- in whatever order that you prefer. Um, if I can try that and then just

		see if that would work for everybody.
13:10:23:00	Mike Wasserman	All righty. On-on item 36, do you just want to make a motion to approve B and C?
13:10:31:21	Cindy Chavez	On 3-- what I was going-- my motion, which I made public yesterday, was to, um, accept the staff recommendations for 36, 37, 38, and to include your 126 as well. And then, um, I was gonna speak to that motion. So it would be to-- I'm sorry, 36, 37, 38, and then the additions that I had that I sent out to all of you.
13:11:01:17		[overlapping chatter]
13:11:02:09	Mike Wasserman	Okay, I've got prepared comments on 36D. I was going to use the chairman's prerogative and speak first, but I'll be happy to speak after you. And I've got about ten words I need to add on to staff's recommendation on 37.
13:11:16:13	Cindy Chavez	Okay, so if I can make a-- I'll make that as a motion. And then if I can get a second--
13:11:23:11	Susan Ellenberg	I'll second.
13:11:24:00	Cindy Chavez	Okay, and I have a second from Supervisor Ellenberg. And then, Supervisor Wasserman, since you are president of the board, why don't you go ahead and speak, and I'll speak to my-- to the motion after you.
13:11:34:08	Mike Wasserman	Okay, thank you. Um, on 36D, I've got, for me, lengthy comments. And I'm gonna make them as quickly as I can. What I've written out originally I entitled "lead is poison." We remove the lead or stop the poison. And so Santa Clara County contracted with Mountain Data Group and Dr. Zahran to study existing data to establish whether a significant relationship between leaded fuel emissions and blood lead levels in children residing within a clean-- a certain study area.
13:12:04:21		Dr. Zahran's study proved the exhaust from airplanes using Reid-Hillview airport is putting lead in the blood of children living near the airport as well as those going to school near the airport. This is horrible. This is a public health issue that we must stop as soon as possible. And when I finish reading my prepared remarks, I'm gonna make a motion to stop this public poisoning in the fastest way I can think of. Dr. Zahran's extensive and lengthy study concluded the closer you live to an airport with planes using leaded fuel, the more lead you will breathe, and the more lead will get into the blood of our children.
13:12:38:21		He also described in great detail how harmful high blood levels are in children and the lifelong developmental effects it has on them. It was very concerning. This study confirmed my fears and the reasons for my April 28th referral four months ago, when I asked that unleaded gasoline be made available at our airports. My thought was switch the unleaded gas and stop the lead poisoning. And I'm glad to say that day and opportunity is here.
13:13:04:17		Clearly all of you who have called and emailed and signed petitions want to put an end to the lead poisoning Dr. Zahran has proven are harming children as soon as possible. So do I. Unfortunately, reducing airborne lead emissions at Reid-Hillview won't address the lead in pipes, paint, cosmetics, hair dye, batteries, and roof materials. It will dramatically reduce the lead in the air, and that, as Dr. Zahran said at the community meeting last Thursday, will reduce the blood lead levels in children.

13:13:35:07		His exact words that night were, "it's true that as we decrease the quantity of lead-formulated gasoline sold at the airport, the blood lead levels in children will subside." That is the public health issue before us tonight. That is our number one priority. Remove the lead. Stop the poisoning. So let's do that. Sure there might be obstacles such as potential restrictions imposed by FAA, grant obligations, or part 16 complaints, or something else, but we have to try and we have to try now.
13:14:06:16		I hope the FAA acknowledges the emergency and reads Dr. Zahran's report, and understands the President of the United States wants cleaner air, too. And if anyone contests our converting to unleaded gas only, I like our chances. I can't imagine the FAA or a court saying, "Santa Clara county, you must sell leaded gas at your airports so that small aircraft can poison the nearby children in their homes and schools."
13:14:36:23		The federal government says it wants America to be healthier and more environmentally friendly, so let's see if they'll let us go completely lead-free right away. And if they don't, I feel we're on the right side and will prevail. Not only is switching to unleaded the right thing to do, it's the smartest and quickest way to address and remedy this serious health hazard. The airport is not the enemy. The lead is the enemy. Remove the lead. Stop the poison.
13:15:05:00		As for those desires of closing Reid-Hillview for other reasons, getting the FAA to allow that any time soon or at all is a questionable and multi-year legal battle with unknown results. We have before us a solution that will substantially reduce lead emissions in District 2 by switching to unleaded aviation gas. It's an excellent solution. It also benefits the four other [indistinct] (12:15:28) districts. The county owns Reid-Hillview, but the FAA owns the airspace.
13:15:35:10		If Reid-Hillview closes San Jose's airport, because they receive FAA grants, it cannot stop small aircraft from flying in and taking off. Small airplanes fly at slower speeds than commercial jetliners, but they would all share the same runways. The backups that would occur could be hugely disruptive to the 15 million people, 141,000 flights, and 120 million pounds of cargo that annually travel through San Jose Mineta.
13:16:05:28		The doubling of operations, takeoffs and landings could also cause the FAA to create new routes over communities that currently don't have airplanes flying over them. The county should not create problems such as these by trying to close reliever airports such as Reid-Hillview. Simply remove the lead from the gas and stop the poisoning. The county should solve the lead poisoning problem by converting to unleaded gas.
13:16:34:02		Please remember, closing the airport is uncertain at best. Selling unleaded gas stops the harmful emissions right away. While I and many others have been advocating and researching how to bring unleaded fuel to our airports, I'm excited to say a group of concerned, creative, and assertive individuals just made it happen. Yes, you heard me right. They got unleaded gasoline to Reid-Hillview. Until ten days ago, it was my understanding that getting lead-free gas for airplanes to California airports would be difficult to accomplish and take several years.
13:17:08:13		Like so many amazing things that happen in California each year, a way was found. Unleaded gas was delivered to San Carlos airport last week and will be

		delivered to Watsonville airport next week, and as I said previous, was delivered to Reid-Hillview last week. Yes, several aircraft that call Reid-Hillview airport home filled up on unleaded fuel yesterday, and continue to do so today, reducing the lead emissions harming children in Santa Clara county right now.
13:17:39:02		Think about that. As I speak, change is happening, and happening for the good, and this is just the beginning. Remember, Dr. Zahran said, if we decrease the quantity of lead gasoline sold at the airports, the blood lead levels in children will subside. Well, guess what. We're following doctor's orders. And for the first time in the 82-year history of Reid-Hillview airport, we started providing lead-free gas a couple of days ago.
13:18:07:21		Reducing poisonous emissions. Let's show our united support for what just started happening, the brand-new usage of unleaded gas just 8.5 miles down the road, and agree to make lead free gas the only gas available at Reid-Hillview and San Martine airports so as to greatly reduce lead exposure to our children ASAP. It's time to embrace unleaded fuel. Everyone wins. The community's children around the airports will be safer.
13:18:34:04		Pilots can continue their training and fill the nation's high demand for pilots, and there is no disruption to the roughly 15 million people who annually enter Silicon Valley through San Jose Airport. Since we have unleaded fuel available today that many aircraft can use, which will immediately reduce the lead emissions poisoning our children. I make the following motion to direct county administration and county council to work with the private sector pilots and Reid-Hillview airport FBOs responsible for getting lead-free gas delivered to Reid-Hillview a few days ago.
13:19:10:15		To do what's necessary to transition to carrying unleaded gas only at both county airports ASAP with the understanding that the sales of leaded gas will not be permitted at either county airport after December 31st of this year, except for emergency operations. That's my motion, and the first step of removing the public health hazard of lead in the air that's harming our children. I ask for a second.
13:19:41:00	Cindy Chavez	So Supervisor Wasserman, just to be clear, you're-- just if you could say the end of your motion very quiet--very clearly, it's to have unleaded gas only available at both airports starting when?
13:19:56:03	Mike Wasserman	Starting as soon as possible with the understanding that no leaded gas will be sold after December 31st.
13:20:06:15	Cindy Chavez	Uh, except for emergencies?
13:20:08:10	Mike Wasserman	Except for emergency operations, yes. That's--that's not in our control.
13:20:12:04	Cindy Chavez	Okay. And so, um, I-I-I would incorporate that in-in the motion that I have on the table.
13:20:19:19	Mike Wasserman	Thank you. And I-I apologize. That's more than I've spoken the last 13 hours, but I, uh--
13:20:24:08	Cindy Chavez	laughing ] So you just-- you just held it on. Okay.
13:20:28:11	Mike Wasserman	It was six minutes, and I get it. All right.
13:20:31:07	Cindy Chavez	Thank you. Then if it's okay, I'm gonna make my comments and read my motion formally into the record, uh, just so everybody's clear about what-what,



		um, what we're voting on. First, I-I do want to say to my colleagues and the public, thank you so much, um, for all the time that we've spent not just tonight, but in the previous public meetings to learn more about lead.
13:20:54:07		And I wanted to say to everybody that spoke, wrote letters, and we've received thousands of-of correspondence and heard hundreds of public speakers both tonight and at the previous, uh, community meetings, that there's a lot of pain, uh, passion, vision, and hope in everybody's comments. And, you know, no matter what action we take tonight, which I-I hope it's the action that will be in my motion, tonight really is historic. And for me, I only see one clear choice.
13:21:31:15		The study that clearly shows the impact of toxic lead on families around the airport is so clear that we have a moral obligation to-to-- really to close it as soon as possible. The negative impacts on children exposed to lead are lifelong. Lead from private planes at Reid-Hillview are-are impacting our children and-and just to be clear, we're talking about 52,000 people who live around this airport with 12,000 children and 21 schools, and as earlier stated, there are 4 million people living in the same proximity across this country.
13:22:07:07		Voting today to close Reid-Hillview is not just a vote for our children, our-- and public health, environmental justice and equity in our community, but it is one that reflects a movement across this country to really energize the FAA and EPA to mandate unleaded fuel. In addition to that, we have to recognize that this was a land use mistake, particularly in this location that should have been remedied decades ago.
13:22:37:28		We already know that many-many of our communities that live on the East side are facing historical and structural inequities. And we know that these were the neighborhoods hardest hit by COVID-19. But now we know that we have scientific proof that the neighborhood's children are being poisoned, and that's been going on for generations. The community is looking for leadership and looking for us to protect their children and their families. To protect then the health and safety of our children, I think we have to take all necessary actions, so here is my motion.
13:23:11:15		I would like to move that we accept all of the staff's recommendations with the additional request from my memorandum, and I will read those aloud into the record. My memo asks for these additional requests. To receive reports and approve all recommendations. To direct administration-- item 2-- to offer technical assistance and expertise to other local jurisdictions considering similar airborne lead emissions studies.
13:23:39:07		To direct the administration to prepare and implement a robust culturally and linguistically appropriate community education and awareness campaign to educate parents and families relating to the health risks, available medical services and next steps given the results of the lead-- the airborne lead study. Four, to direct administration to amend and update all county health assessments to include the epidemiology of lead airborne studies.
13:24:08:12		Five, to direct administration to recommend actions., particularly around anti-displacement policies, public safety locations, disaster response, and community recreation, including East Ridge Little League throughout the Reid-Hill vision-- uh, Reid-Hillview vision plan process. Six, to direct the administration to continue the already improved engagement process with the

		San Martin community relating to the future iteration and usage of the San Martin airport.
13:24:38:25		And, um, one thing that I want to add is that I'd also like us to, um, start testing the lead levels of children who are incarcerated in our juvenile hall. As a lifelong parent and, you know, res-- I've lived in this, uh, community since I was 18, i just want to urge my coll-colleagues to join in a legacy that will protect the health and well-being of children in our families who've suffered long enough, and to recognize that we--
13:25:07:22		while there are many, many actions that we're gonna be taking as we move forward, that we need to work together, I agree, with-with our communities to make sure that whatever happens in this community, uh, and at this location, that we do not sell the airport land. It is a public asset, and the public should benefit from it. Thank you.
13:25:30:29	Mike Wasserman	Thank you. And I'll interject now with the, uh, president's privilege and I'll recognize Supervisors Lee and-and Ellenberg. Um, Supervisor Chavez, what I wanted to add... you mentioned, I believe, your motion included 126, is that correct?
13:25:52:00	Cindy Chavez	Yeah, that's correct.
13:25:53:15	Mike Wasserman	kay, because I think it was your Item Number 6 that you said-- I believe your-your Item Number 6 that mentioned San Martin Airport. Is that correct?
13:26:06:03	Cindy Chavez	That's correct, and that item--
13:26:07:22	Mike Wasserman	Okay, could you repeat what you said?
13:26:09:15	Cindy Chavez	Absolutely. It's to direct administration to continue the already approved engagement process with San Martin community relating to the future iteration-iteration and usage of the airport, and you may recall that in 2018, that was a body of work that the staff was still undertaking. So what I wanted to do was accept your resolution but not stop that planning process.
13:26:34:18	Mike Wasserman	Okay, well, I think my resolution and the planning process are-are in conflict. Um--
13:26:40:01	Cindy Chavez	Because you don't want any more-- any more engagement down there with-with the airport.
13:26:46:07	Mike Wasserman	We-- at San Martin, there's-- there's-- a study was done. The number of tie downs, the number of hangars. They are approximately 50-- 40, 50% vacant down there right now for a variety of reasons. And all of that study was done on what the appropriate environmental capacity for that airport was, so I'm not desirous of seeing any further new development plans change what's there.
13:27:14:05		It's only now at 50% of capacity, and if some changes take place, and if some pilots move down there, that would double what's there, so I would not be in support of that part of your motion, and if necessary, I would ask that we address 126 separately. The other part that I have is on item 37. The-- your motion was to approve staff recommendations. In the agenda packet, it says direct administration and county council to take all necessary actions.
13:27:47:21		It happens to say, "Including closure," and I think a lot of people misinterpreted that as a vote to close the airport, and in fact, what it says is "Take all necessary actions including closure," And what I would do, either in the form of a friendly amendment-- and I think that's the best way for me to try with you

		right now-- is add in these ten words: "And conversion to lead-free only gas in both airports.
13:28:17:04		But I think that's kind of implied in 36, but you're the motion maker, so I want to make sure it's okay with you. But I want to make sure that people understand that approval of 37 is giving administration direction to take all necessary actions to immediately prevent lead contamination from-- I'm-- That's-- I'm reading it from our book-- from operations.
13:28:42:06		Therefore, if converting to lead-free gas immediately prevents lead contamination from operations, then we are done, because that is what the item says to do, and it is my position that by going to lead-free gas, we can quote "immediately prevent lead contamination from operations." And I just wanted to make sure we're on the same page, or-or I can go a different route. I-I don't know what you'd like.
13:29:12:03	Cindy Chavez	Thank you. What I'd like to do is ask staff if, um, just to comment on Supervisor Wasserman's, uh, contention about the staff intention with this-this, uh, both with this recommended action, but just to make sure that what Supervisor Wasser-Wasserman is saying isn't in conflict with the, um, with the staff action because there-there is one addition that I'm concerned about that I want to make sure this is not negating, but I will wait to see if, um, if staff could respond.
13:29:45:17	Mike Wasserman	Thank you. Please.
13:29:46:28	Otto Lee	Yeah, let me, uh, jump in here a little bit. Um, I'll have to back up a little bit to give some context, and then try to directly answer your question. Um, as we said earlier, um, given the FAA's enabling legislation and regulations, it's a lot easier in this country to poison kids with lead than it is to stop that.
13:30:15:08		Um, a-as we said earlier, um, given the FAA's enabling legislation and regulations, it's a lot easier in this country to poison kids with lead than it is to stop that. Um, and it's going to take a multi-prong approach to actually eliminate lead poisoning coming from the airports. It's possible that we could get the FAA to agree to unilaterally eliminate, um, lead fuel. It's also possible we could el-- we could get them to allow us to only pump unleaded fuel, but it's not by any means a guarantee.
13:30:47:13		There's many regulatory hoops that need to be jumped through. Um, and on top of that, as you noted in, uh, the lead study report, reducing the use of lead fuel reduces the contamination, but doesn't completely eliminate it unless you eliminate it from all of the operations at the airport, including the maintenance and, um, mechanics' operations and also the currently contaminated ground level, uh, dirt.
13:31:26:10		So it's a more complex issue than just saying we aren't going to pump, uh, fuel anymore. It includes that, but it's not as simple as that. Um, so theren-- the concepts are not in conflict. I just want to make sure that the board understands that, um, we do need to have the authority to do anything and everything legally permissible, um, in order to prevent the contamination, because it will require, uh, efforts legally, as well as administratively, as well as politically.
13:32:08:15		And, um, we will obviously keep the board informed about that in the appropriate forum in closed session regarding legal issues. Uh, obviously right now with the FAA listening in on our conversation, um, we certainly don't want

		to get into too much detail about legal issues.
13:32:32:17		So the straight answer, up and up, is that the amendment is not in conflict with what the staff recommendation is, um, but it's not sufficient either.
13:32:48:08	Mike Wasserman	>> Thank you, Dr. Smith. What my addition was-- where we said "all necessary activities, including closure," I wanted to add in "and conversion to lead-free-only gas at both airports," which I think, Supervisor, you were okay with that. My-My point was to try everything. I will certainly be happy to-to bet a dollar-- I only bet dollars. I'll certainly be happy to bet a dollar that the county will be able to convert to lead-only gasoline long before it has the ability to close our airports.
13:33:23:29		That-That is my contention. We'll see what happens down the road. I don't know what'll happen from the FAA or the Title 16 or anything else. All I said was I want to add that onto item 37, because while we said directive administration and county council would take all necessary actions, staff added in "including closures." And I'm saying there's several other things that could happen. So I would either remove "including closures," or I would add in "and conversion to lead-free-only gas."
13:33:59:03	Cindy Chavez	>> So, um, let me- let me ask, uh, staff another question. So one thing that-- that my understanding, um, or my hope was, and maybe I just need to make sure this is, um-- that-that-that I'm correct about this, is that-- oh, maybe I need to be explicit, um, on this, is that I am, Mike, I'm comfortable with-- I was comfortable with the "unleaded gas only as soon as possible," um, by the, um, end of this year, um, as-as part of the other item.
13:34:33:12		I'm less comfortable with it here, and I just want to explain why. What I was hoping that the other action that would come out of this is that we would be-- or my understanding was that we would be petitioning the FAA now for early closure of Reid-Hillview airport. And, um, if that's not explicit in the staff report, I-I would want to make that explicit as part of the action we're taking tonight. So again, I would ask staff the answer to that question.
13:35:03:07	Mike Wasserman	>> Okay, understood.
13:35:07:01	Cindy Chavez	>> So we would be using the administrative pro-process to begin the process for early closure. We're not accepting airport improvement grants any longer, so closure right now would be 2031. But the process-- but I'm interested in us pursuing the FAA administrative process now.
13:35:24:19	Dr. Jeff Smith	>> Yes.
13:35:26:06	Cindy Chavez	>> So that is- that is in this motion, that we begin that FAA administrative process now.
13:35:33:00	Dr. Jeff Smith	>> We have built into the-- the three staff reports include, um, the EPA process, which is separate, plus an early petition for closure to the FAA, which is exactly what you were talking about, yes.
13:35:48:26	Cindy Chavez	>> Okay, because that-that-- okay, that-that's helpful. And I think, um, Supervisor Wasserman, I'm-I'm-I'm not comfortable with the addition on 3-- on-on-on 37. I am comfortable with it on 36, because of the language you used on 36 versus the language on 37.
13:36:10:21	Mike Wasserman	>> Thank you, I understand that. And unfortunately, we need to discuss it further with you, which is, uh, unfortunate at 11 o'clock, but we've got to get it right. Um, again, I am reading, "direct the administration county council to take

		all necessary actions, including closure," and I wanted to add in "and conversion, um, to lead-free gas at both airports, to immediately prevent lead contamination from operations at Reid-Hillview." And what my point is, we're directing staff to take all actions to immediately prevent lead contamination.
13:36:44:29		And I'm just saying if we do that by going to lead-free gas, then that accomplishes what this recommended action is, which is to immediately prevent lead contamination. It sounds to me what you're doing is you're using this to go beyond lead contam-- preventing lead contamination and actually close the airport.
13:37:08:16	Cindy Chavez	>> Yes.
13:37:09:12	Mike Wasserman	>> So if we do it another way, let's say we do it with gas, and let's say we're able to do it in 90 days, is it your desire still to close the airport, even though there's no lead contamination?
13:37:21:14	Cindy Chavez	>> Yes, and I think that the reason is that I-I don't have the confidence that you do that this will be resolved in 90 days. We already have an out-date of 2031, and my belief is that part of the process that we should employ concurrent to trying to eliminate, um, leaded fuels is to go through the FAA process.
13:37:44:10		And so I want to be able to do both. And what Dr. Smith is saying is that it is the intention of the staff as part of item 37. So he's confirming that they were already gonna- gonna do that.
13:37:57:26	Mike Wasserman	>> Okay, and Dr. Smith, I understood you were going to do that as one of all necessary actions. At the same time, we were gonna go for lead-free gas only at both airports. But it was my understanding from the way this one sentence is written is that whoever got there first, meaning pr-preventing lead contamination, then the race was over. I did not see this as prevent lead contamination and let's continue forward closing the airport early.
13:38:31:27		So with that, I think we've got a-- we've got three other hands up. And, Supervisor Chavez, if it's okay with you, I'm gonna recognize the three other supervisors.
13:38:41:13	Cindy Chavez	>> Absolutely.
13:38:42:08	Dr. Jeff Smith	>> Maybe-- could I just respond to your question?
13:38:45:25	Mike Wasserman	>> Sure.
13:38:48:04	Dr. Jeff Smith	>> Probably James will jump in in a second, but I'll pretend I'm a lawyer for the moment and, um, point out that the way that the law is written currently and the regulations are written currently, the board doesn't have the unilateral authority to do either one. Um, that is, you don't have the authority without theoretical approval from the FAA to mandate only lead-free, um, airplanes at the airport.
13:39:24:28		Nor do you have the authority to mandate instantaneous closure. So what we're trying to get at with the language in 37 is that this is gonna take a concerted effort on multiple fronts, um, and we're asking the board for authority to begin that effort and that process. Now it is possible, and you have a dollar on the table, that suggests that the FAA, who are listening right now, might send us a letter tomorrow saying, you know, free-- lead-free gas is totally permissible, but I doubt that'll happen.

13:40:03:28		And so given that fact, um, we certainly would want to petition for both lead-free usage and early closure and do other activities as necessary to keep the board informed in closed session regarding litigation.
13:40:23:16	Mike Wasserman	>> Thank you, Dr. Smith. And I'll cut you off there. And we'll go to James. And again, what you just said is in your words, "take all necessary actions." So I agree, attack on all fronts. But what the sentence is, "take all necessary actions to prevent lead contamination." That's what the recommendation is. Uh, James?
13:40:47:07	James Williams	>> Yes, so I think-I think what I would say to kind of sum-sum things up is that there are many pathways, uh, available to the county. And we, you know, have been consistent with what, uh, the county executive was saying. We need to take, uh, multiple approaches at the same time to address the severity of this issue, um, and that the motion, um, or the recommended action, uh, under item 37 affords the discretion to explore and simultaneously pursue these multiple pathways.
13:41:23:15		Um, and so you know, that'll have to happen at the same time. There will definitely be conversation with the FAA as the county executive indicated. Um, but I think there'll be movement on several fronts, and that it'll be evolving and specific follow-on actions will need to be taken kind of based on the outcome as that proceeds.
13:41:47:24	Mike Wasserman	>> Thank you, I'm just ar- I'm just arguing the mission is to prevent lead contamination. Vice President Ellenberg.
13:42:01:15	Susan Ellenberg	>> Thank you. Um, I-I s-strongly support, uh, all of the motion on the table, um, including Supervisor Chavez's, uh, addition. In fact, um, I was going to make a similar request, um, which I-I won't do, but I'll-I'll-I'll reference, um, the study is clear. We-We need to do better. We need to do more for our counties, kids, and families.
13:42:30:07		And is-- we are all in agreement that lead exposure for residents living near Reid-Hillview is unacceptable and must be alleviated. Um, we did hear tonight and-and through a press release earlier in the week that many pilots support conversion to unleaded fuel. Um, but staff's report also made very clear that it's highly unlikely that FAA-- that it-that it's highly likelythat the FAA would still require leaded fuel to be available, um, for at least some types of aircraft.
13:43:04:21		So in my view, the only way to ensure that no leaded fuel is used at all in any circumstance is to close the airport. Um, so again, I'm supporting our administration's recommended options in the report to close down the airport as soon as possible. Um, I-I would note also that as the, uh, doctors referenced at the beginning of the report, that there are other sources of lead that disproportionately impact kids who live in low-income communities and neighborhoods with older housing stock.
13:43:37:28		And while closing the airport will eliminate ongoing lead emissions and is a critical step that we must take, we as a county also need to address other sources of lead and their impact on communities. So I'm going to, um, express appreciation for Supervisor Chavez's additional requests. Um, if this is redundant, it can be rolled in.
13:44:00:07		But I-I would like to make sure that in there with all of the requests that you made, uh, Supervisor Chavez, that, uh, that we can receive a report from our public health department that will detail, uh, information on childhood lead

		screening and prevention activities in the county, including any current or potential funding sources, uh, that are available for community remed-remediation efforts. And-And if that wasn't included, um, I-I hope that you will see that as a friendly amendment. And if it was already included and intended, I'm-I'm fine with it.
13:44:35:23	Cindy Chavez	>> Yeah, I think that's- that's great to be explicit, uh, Supervisor Ellenberg, thank you.
13:44:39:28	Susan Ellenberg	>> Thank you very much.
13:44:40:25	Cindy Chavez	>> I'll add it on.
13:44:42:01	Mike Wasserman	>> Thank you. Supervisor Simitian.
13:44:46:06	Joe Simitian	>> Thank you, uh, Mr. Chair, and, um, uh, Supervisor Chavez, uh, I want to lead off by saying I want to get to yes with you on this. So, as I poke and prod a little bit, if you're trying to figure out where am I headed, I'm trying to get to yes. Uh, and I think we can. Uh, but I have to go back to this problematic sentence and, um, item 37 and the staff recommendation.
13:45:12:24		And, uh, candidly, I shared with staff, both the county executive and the deputy county executive that I thought this one sentence recommended action was ambiguous, uh, in a way that was gonna make it problematic, because the committee-- the community deserves to know what it is we're voting on. And the board needs to know what it is we're voting on. And as this discussion has highlighted, there is a difference between saying the goal is to close the airport and saying the goal is to eliminate the lead.
13:45:51:18		And they, you know, uh, may be goals that some people share in common and others not. So, I think the path to yes here-- is just one board member, I know-- is to talk a little bit with the administration again about what this is intended to convey, and perhaps ask you if you're comfortable with it as the maker of the motion, to recraft this sentence and/or add a bullet point or two or three so that everybody knows what we're voting on and what the outcome for the community will be.
13:46:24:03		So, let me go back to Dr. Smith and say first, I appreciated the fact that you mentioned a couple times, Dr. Smith, the phrase, "legally permissible." So, I infer from that-- and this is a serious question-- I infer from that that you wouldn't close the airport if there was an injunction at the court level telling you you couldn't do it. Is that a fair inference for me to draw? Is that what you're trying to say?
13:46:54:03	Jeff Smith	>> Correct.
13:46:55:09	Joe Simitian	>> Okay.
13:46:55:25	Jeff Smith	>> We're not gonna break the law. The-the--
13:46:58:10	Joe Simitian	>> All right.
13:46:59:08	Jeff Smith	>> Probably heard in Chicago a few years ago that the mayor just went out on-- in-in the middle of the night and tore up the airport. We're not doing that. We're not gonna break the law, we're not gonna violate an injunction.
13:47:13:19	Mike Wasserman	>> Thank you.
13:47:14:10	Joe Simitian	>> And the reason I think that is of more than chuckling interest is because when you use the phrase like, "take all necessary actions," you know, that-that could be construed as, "taking all necessary actions." So, it's kind of important

		that we know what that phrase means, including the reference to including closures. And I-I heard you say that you anticipated, uh, pursuing action at the Environmental Protection Agency with respect to the lead content, yes?
13:47:50:06	Jeff Smith	>> Right.
13:47:51:24	Joe Simitian	>> But that's not actually in the recommended action as it stands now, unless I'm missing it in that one sentence. Is that correct?
13:47:59:01	Jeff Smith	>> It's in, uh, it's in 36.
13:48:03:28	Joe Simitian	>> And in 36, A, B, C-- so, is it 36C that you're talking about?
13:48:16:04	Jeff Smith	>> Let me pull it up for sure. 36C, yes.
13:48:24:10	Joe Simitian	>> Okay. And then I also heard you say that we would pursue the opportunity to provide lead-free, uh, gasoline, avgas. And again, that's not in 37, but I'm guessing that you're talking about the reference in 36D, yes?
13:48:42:06	Jeff Smith	>> 36D, yes.
13:48:43:27	Joe Simitian	>> Okay. And I also heard Supervisor Chavez reference, and I thought I heard you incorporate it as well, the notion of an early petition-- or a petition, rather, to the FAA to, uh, withdraw from operation of the airport prior to the 2031 date. Is that something that you do or do not anticipate either in some section of 36, 38, or 126, or in the general language of the recommended action in 37?
13:49:18:14	Jeff Smith	>> That I would include in the general language of 37 based on the background and history that's listed there under 37 related to the options available to the board given their independent authority.
13:49:36:17	Joe Simitian	>> Okay, so--
13:49:37:16	Jeff Smith	>> Meaning that the board can't just unilaterally close the airport. We have to-- it's a joint effort with FAA and others, but we have to be smart about how we do it.
13:49:52:25	Joe Simitian	>> Okay. So, a lawful closure permitted either administratively or judicially. Is that what you're anticipating there?
13:50:02:22	Jeff Smith	>> Yup.
13:50:04:07	Joe Simitian	>> Pursuant to a petition to close the site prior to 2031. Yes? Consistent with Supervisor Chavez's earlier comment?
13:50:15:14	Jeff Smith	>> Yes.
13:50:16:26	Joe Simitian	>> Okay, so--
13:50:17:22	Jeff Smith	>> Among-Among other approaches. Uh, you're getting me into the legal world, so I'm going to have to ask you if--
13:50:24:02	Joe Simitian	>> Well, I do- I do wanna interrupt for a minute, and excuse me, Dr. Smith, but I think it was helpful to say, "Okay, two of these items are in C and D of item 36." The key question of-- a-and I would look to Supervisor Wasserman and say that I think, um, his goal to make sure that we were pursuing unleaded avgas, uh, at the earliest opportunity could be incorporated in 36D.
13:50:55:07		And I'll tease him a little at this late hour and say that might be a time to take yes for an answer. You all know why that's, uh, an inside joke. And then back to the 37 language, Supervisor Chavez, again, trying to get to yes, um, is there any reason either Dr. Smith or staff, Miss Gallegos, or Supervisor Chavez, since it's your motion, that the-the language couldn't include a reference to, um, directing administration take actions consistent and in



		compliance with all applicable federal, state, and local law, including court order.
13:51:28:22		So that it was explicit that we weren't gonna do anything that was in violation of the-the law or an administrative direction, how much we d-- however much we disliked it, or a court order, however much we might dislike it. Any problem with that?
13:51:44:25	Cindy Chavez	>> No.
13:51:46:14	Joe Simitian	>> And if we went on then through the chair to say, "Including, but not limited to closure," um, that would give Mr. Wasserman some comfort that his avgas issue was addressed, I hope, I think it might. And, um, in addition to saying, "Including, but not limited to closure, pursuant to an, uh, petition to the FAA for early closure," which might give Mr. Wasserman some heartburn, but which would in-in fact put in writing, Supervisor Chavez, the thing I think you're saying you want us to say yes to tonight. And then we'd have a straight up or down vote on that.
13:52:28:03	Cindy Chavez	>> Yes.
13:52:29:00	Joe Simitian	>> Am I-- okay. Uh, I know it's long-winded, but I really am trying to be helpful here. And-And then, the other thing, Dr. Smith, is, if we've given you the authority to petition the FAA and we've given you the authority in 36C and D to go off and, uh, make our case with the EPA and to pursue unleaded avgas, I-I am then uncomfortable about the need to give you, uh, authority to take all necessary actions without knowing what they are, because this is the worst of all possible worlds.
13:53:03:23		It's a delegation of authority without knowing what we delegated authority to you to do. But if we have explicitly given you the authority, back to Supervisor Chavez's motion, to pursue an early closure and to pursue alternative fuels and to work at the EPA, then I think Supervisor Chavez, those three things effectuate the goal that you've advanced and that we've heard from people about so much tonight. Did I miss something that-- else that you wanna do on the substance there?
13:53:39:04	Cindy Chavez	>> Uh, Supervisor Simitian, thank you, uh, for that, um, clarification. That was actually extremely helpful. I-I would just ask, um, uh, James Williams to weigh in on this-on this question, because I think you're asking a really important one, and I wanna make sure that the staff has the bandwidth-- I mean, the-- h-- has the-- for lack of a better word, the permission they-they need to take whatever actions they need to take, and if there's anything that needs to be more explicit, James, this would be the time to-to be clear with all of us on that.
13:54:13:12	Mike Wasserman	>> James.
13:54:15:03	James Williams	>> Sure. A-As I understand it, the item under 37 is intended to give flexibility to pursue a variety of avenues, um, and there are many. So, I-I've p-- voluntary petition has been referred to a couple times, but that's only one avenue, um, of engagement potentially with the FAA.
13:54:38:24		And so, you know, I think the, um-- mm-- I think what-what would be helpful in terms of clarity is to be clear on the goal and outcome, but to provide discretion on the manner and mechanisms. Um, and so, what I'm hearing from the various conversations, both Supervisor Simitian and from Supervisor

		Wasserman, is, you know, that I think having clarity on the question of whether the options are inclusive of closure or focused solely on fuel, I think is, uh, a salient point.
13:55:23:05		Uh, but I think within those options, um, retaining kinda flexibility in terms of proceeding is the best approach, and then we'll see kind of how that process starts to play out. Because it's the beginning of, I think, uh, multifaceted process. That will be-- you know, it'll be iterated out.
13:55:49:13	Mike Wasserman	>> Thank you. Uh, Supervisor Lee.
13:55:53:23	Joe Simitian	>> Hey, before we move on--
13:55:54:15	Mike Wasserman	>> Supervisor Simitian.
13:55:55:21	Cindy Chavez	>> Yeah.
13:55:56:09	Joe Simitian	>> Yeah, I'm-I'm sorry. I-I, um, I-I'm hoping we can nail that down, if not right now, at some point, but I had some other questions for the maker of the motion. Uh, and I also, um, have comments, but I-I gather you'd like us to hold off on comments and stay with questions for the moment or not, Mr. Chair?
13:56:13:00	Mike Wasserman	>> I just wanna be able to hear from all supervisors before we get something done.
13:56:18:06	Joe Simitian	>> Got it. And, um, I-- then what I would like to say, uh, and this will tip my hand and I'm okay with that and, uh, I hope it'll get us to a resolution. Uh, I am prepared to vote tonight to authorize the petition to the FAA for early closure. Uh, a-and given the second you've got, Supervisor Chavez, I don't know where my colleagues will end up, but I think that's three votes.
13:56:41:29		That being said, it is important to me that we say we're gonna do it consistent and in compliance with all applicable federal, state, and local law, including court order. I-I see this as the beginning of a process. I wish we could give folks a clear answer sooner rather than later, but I don't think we can. I frankly think we have a weak hand, both administratively and judicially. But I also think if we don't force the issue, it won't get forced. So, I think it's time for us to say let's force the issue and say, uh, let's take a look at it.
13:57:14:03		Now, all that being said, I'm a little nervous because we're making these decisions on one study that's been out for less than a few weeks. I don't have any problems with the study. I'm not critiquing the study, I'm not even second guessing the study, but, you know, we said it was peer reviewed, but really what we've got is one study. I'd like to suggest we get a second study, and I know there's a cost associated with that, but we've already heard from people who are critiquing the study, and if we're gonna end up doing battle with the FAA or the EPA, then I think we'd be better off to have two studies and say the same thing, and we'd also have more credibility out in the community by saying, hey, we did it not once, but twice and we got the same answer, which is what I think we'll get. So, I'd like--
13:57:58:05	Mike Wasserman	>> Supervisor Simitian, I need clarification from you. When you said "force the issue," was the issue we were forcing with the FAA the-- to expedite the removal of lead? Or to close the airport?
13:58:14:01	Joe Simitian	>> Yes, both.
13:58:16:18	Mike Wasserman	>> Okay, 'cause for me, as I think I've made it clear, they're mutually exclusive. I'm in favor of getting rid of the lead ASAP, and I think unleaded gas

		is the fastest. I'm not in favor of closing the airport, because I think there's other ways they can accomplish getting rid of the- of the public health issue.
13:58:36:05	Joe Simitian	>> And I am not as optimistic as I suspect some of our board members are that we will prevail with the FAA or that we will prevail with the EPA or that the changing political climate and the new administration will work to our advantage. So, I'm of the view that if you don't know what the future looks like and you're trying to solve the problem and you have two paths, I'd like to rundown both as fully and far and fast as we possibly can.
13:59:07:04		But I wanna be honest with the community. One possibility is that the optimists are right and a year or two from now, we're-we're wrapping up business. Another possibility, and I think it's the more likely one, but I don't know, is that three years from now and five years from now, we'll still be in a tug of war with all these various federal agencies because the FAA has been very clear that they have no desire to let us take back the airport and that their first primary concern is with civil aviation, not with the wellbeing of the surrounding community.
13:59:42:07		I don't mean that disrespectfully, they pretty much said that in plain language, it goes to their charter. So, back to item 37, Supervisor Chavez, it-- you know, if you'd like, I can take a minute to try and craft a friendly amendment that is the language that I hope would satisfy at least a majority of us. Uh, and, um, I- I would also ask that your item 6, which I support, in the update, which was to direct administration to continue the already approved engagement process with the San Martin community related to future iteration and usage of San Martin airport.
14:00:21:13		I-I support Mr. Wasserman's 126, and I think you do, too. And I think all you're saying is let's keep talking to the folks at San Martin about how that works out. So I'd like to fold in the folks at Mineta and Palo Alto, the other two aviation-- general aviation airports, uh, if Mineta can be characterized in that way, um, so that we have those conversations.
14:00:43:11		People have expressed concern. I think it's understandable. I think you're making a good faith effort here, which I support, to say, hey, let's keep talking to folks who might be affected by any closure. I just think that should include the other two airports, even though they're not county airports, if you're amenable to that.
14:01:00:14	Cindy Chavez	>> I-I think that's fine. And actually, um, one other thing, um, I almost called you Dr. Smith, sorry. Uh, Supervisor Simitian, the other thing that I would just recommend is that I do think that those conversations should include Moffett and, uh, Palo Alto as well. And I think that's for a whole host of reasons, including the issues relative to, um, um, how we deal with-with, uh, you know, the leaded fuel anyway. So I think that's right, and I-- that is very comfortable to me to do.
14:01:34:00	Joe Simitian	>> And between the two of us, you said Moffett, I said Mineta, and I'd forgot to include Moffett. So actually what I mean is add those three, which would give us a total of those three plus, uh, San Martin for your motion if that's still agreeable.
14:01:47:18	Cindy Chavez	>> That-That makes sense, yeah.
14:01:48:26	Mike Wasserman	>> And Supervisor Simitian, if I could ask before you put forth your motion that we give Supervisor Lee an opportunity to speak.

14:01:56:00	Joe Simitian	>> Absolutely, and that will give me a minute to see if I can craft a sentence that's acceptable.
14:02:00:04	Mike Wasserman	>> I understand that. Supervisor Lee. Oh, you're muted--
14:02:08:11	Otto Lee	>> Yes, thank you, President Wasserman. It's getting a little late here. And, uh, first of all, I wanted to thank, uh, Supervisor Chavez and Supervisor Simitian here for trying to put this motion together, uh, at this late hour, um, almost, uh, 11:30. Um, first of all, I wanted to thank the staff for the comprehensive work on this report and to the large number of community members that come out to address their concerns on this important issue regarding the airport's location, the lead [ audio cuts ], and pilot training.
14:02:41:27		Since my childhood, I always loved watching airplanes. Having served as a Navy aviation supply officer onboard aircraft carriers and a former student pilot flying assistant myself, I'm particularly emp-empathetic to the planes and aviation community's concerns.
14:02:55:26		I want to acknowledge and thank the representative of the Reid-Hillview Pilots Association and the California Pilots Association for their efforts to promote the use of unleaded fuel at the Reid-Hillview airport, Carol Ford from the California Pilots Association, and former sou-- uh, Santa Clara county airport commissioner, Douglas [ indistinct ] support in this very important change. [ audio cuts ] impact to Reid-Hillview and the surrounding community.
14:03:24:16		Specifically, I also want to thank John Gowan, John [ distorted audio ] pilots providing me with hundreds of pages educating me about all the background and history of Reid-Hillview for the past few years. And I also wanted to thank San Jose State University aviation program for committing to a specialized on a level field and work with the county to continue its aviation training program.
14:03:46:11		This is by far the most controversial issue I've encountered since joining this esteemed board. I've tried hard to keep an open mind, to learn about the issues regarding airport location, concerns about accidents in adjacent neighborhoods, noise pollution, health issues, and environmental concerns, and also issues related to emergency preparedness and in case of calamities such as the next earthquake or wildfires and its value as one of the best schools for flight training for future pilots.
14:04:17:03		And that Reid-Hillview airport predated the neighborhood residents. But a new lead study has shown how the use of leaded avgas affects the surrounding community around the airport. These neighborhoods have already suffered from COVID-19 disproportionately, and this toxic impact of lead has further contributed to neighboring Latinx, Asian health disparities and especially to children. [ audio cuts ] is by no means a new issue.
14:04:47:10		It has been discussed, studied, debated, EIR, written for over 40 years. [ audio cuts ] including Rod Diridon Sr., Dan McCorquodale, Zoe Lofgren, Mike Honda, Lon Calvarado, just to name a few, have all attempted this closure.
14:05:09:23		The staff report also included a one-pager listing accidents compiled since 1983. 38 years ago there had been at least 37 accidents or mishaps, averaging about one mishap a year.
14:05:21:04		Plenty of these accidents result in injuries with eight fatalities including crash landing in a residential park, trailer and house, [ indistinct ] expressway, and it just so happened I even witnessed one that crash-landed in Eastridge Mall,

		coming too low and hitting a tree over a decade ago.
14:05:39:26		On the issue of emergency preparedness, which is of course extremely important, my office has reached out to CalFire and other local first response agencies to confirm their emergency preparedness needs at Reid-Hillview for them. So most recently, in August 2020, CalFire deployed a mobile retardant base consisting of two water tanks, a mixing station, and two retardant dip tanks to the north of the Reid-Hillview runways. Three helicopters used the base to [ audio cuts ] the SCU wildfire for three days.
14:06:17:13		These helicopters flew approximately 49 missions, but did not need to even land at Reid-Hillview during the operation. Now CalFire uses primarily Hollister and Sacramento airports for fixed-wing aircrafts and the Sonoma station for helicopters. When asked why, CalFire stated that Reid-Hillview is actually not usable for fixed-wing firefighting apparatus, because the runways are too short, and the aircrafts are actually too heavy.
14:06:46:20		CalFire has a fixed-wing base at Hollister airport that houses spotter aircraft and two retired Naval S-2 aircraft for initial attack. If and when additional resources are needed, CalFire uses its fleet of C-130 aircraft based out of McClellan airport in Sacramento. If necessary, CalFire will also deploy contractual aircraft for suppression using 747, DC-10, or other large heavy-wing aircraft. According to San Jose police, fire, county sheriff, and county fire, they have not used Reid-Hillview for disaster or emergency response for landing planes.
14:07:25:06		Other airports are available to support first responders in emergencies certainly include the San Jose International, Moffett Federal field, Palo Alto, San Carlos, San Martin, Livermore, and even Watsonville. We as county supervisors have to balance the needs of the entire community: pilots, aviation school operators and students, emergency responders, neighboring communities. We must make and protect the health, well-being, and safety of our community is what is at risk right now. Administration and federal officials have the responsibility to end the lead exposure at Reid-Hillview airport now.
14:08:09:24		Therefore, I ask that the administration work closer with public health departments and those schools surrounding this area to provide support to the community to address the lead issue immediately.
14:08:22:02		As mentioned, switching to unleaded gas should also take place immediately. I want to thank John Gowan and his association for trucking the unleaded UL-94 fuel to start providing unleaded gas. I recommend that we also explore displacement of businesses and residents that may be affected during the closure and after the closure to provide an exit plan for the aviation schools and the current lease for pilot [ indistinct ] when we actually close.
14:08:51:11		As the community vision planning process continues, we must explore possibilities of helicopter landing at the current Reid-Hillview for emergency responders usage and consider impact to other adjacent airports. I believe Supervisors Simitian and Chavez just include this to the motion to include the comprehensive study on the impact on San Martin airport, recommendation for improvement of this county-owned asset to serve the aviation community and absolutely minimizing the impact to its surrounding communities as well. Thank you.
14:09:23:22	Mike Wasserman	>> Thank you, Supervisor Lee. Supervisor Chavez, your hand?

14:09:27:29	Cindy Chavez	>> Yes, thank you. Um, I know that Supervisor Simitian is working on some language--
14:09:34:21	Mike Wasserman	>> He's probably there.
14:09:37:02	Cindy Chavez	>> And so I wanted to, uh, give him a chance to, um, to walk us through that. And in the-- and, um, Supervisor Simitian, while you're-you're still on mute. Are you-are you, uh--
14:09:52:17	Joe Simitian	>> I'm willing to take a shot at it, Madame, uh, Supervisor and Mr. Chair.
14:09:57:28	Mike Wasserman	>> Thank you. Dr. Smith just raised his hand. May we hear from Dr. Smith first, Supervisor Chavez and Simitian?
14:10:05:08	Cindy Chavez	>> Sure, that makes totally--
14:10:06:23	Mike Wasserman	>> Go ahead, Dr. Smith.
14:10:10:09	Jeff Smith	>> I just wanted to put another fact on the table, just to make it even more confusing.
14:10:15:01	Mike Wasserman	>> Right.
14:10:15:21	Jeff Smith	>> Um, the-- one can file a petition for early closure, but there's no responsibility on the FAA's part to actually respond to that petition.
14:10:26:25	Mike Wasserman	>> Right.
14:10:28:17	Cindy Chavez	>> Right. And so, my expectation was that, um, you know, Su-- what Supervisor Simitian said earlier, which I thought was really helpful, is that we really are working on two tracks. Um, in, you know, early closure and immediate prevention of, uh, continued, um, contamination of lead on the community. Those were the two paths. And if those are the two paths, then there are gonna be multiple-multiple, um, mechanisms to getting to those two paths.
14:11:01:26		And what I was hoping Supervisor Simitian, uh, S-Simitian's language would allow us to do is pursue those two paths lawfully with an expansive portfolio of mechanisms to do both, uh, or each and both.
14:11:17:29	Mike Wasserman	>> And let's just agree, everything we're recommending is lawful.
14:11:21:02	Cindy Chavez	>> That's right. I-I-- yes.
14:11:22:19	Mike Wasserman	>> We don't need to add that in each time. Supervisor Simitian.
14:11:26:19	Joe Simitian	>> Um, thank you. I, uh, know it's a little bit cumbersome, but given the, uh, conversation, I thought we might-- and I can send the language to the county council, if you'd like it, "direct administration and county council to take such actions as may be necessary to prevent lead contamination from operations at Reid-Hillview Airport, (consistent and in compliance with all applicable federal, state, and local law, including court order) including but not limited to a petition to the FAA for immediate closure)."
14:12:01:19		So that we have explicitly called that out as a direction, indicated that it is not limited to that, but that they should take such actions as may be necessary. It's not quite as broad as do anything you darn well please, even if it's something we've never heard of before. But it's still pretty expansive. And then--
14:12:22:17	Mike Wasserman	>> Supervisor Simitian-- Supervisor Simitian, do me a favor. Please repeat your motion. I understand you're explaining it right now, but I wanna know where your motion started and ended.
14:12:31:24	Joe Simitian	>> Actually, I'm offering it as a friendly amendment to Supervisor Chavez. I

		wanna respect her effort to pull four different items together here, which is a minor miracle if we can get it done tonight. So, I would share with, uh, her and all the board as well as with council, uh, a possible friendly amendment is, "Direct administration and county council to take such actions as may be necessary to prevent lead contamination from operations at Reid-Hillview Airport..."
14:13:05:04	Mike Wasserman	>> Okay.
14:13:07:03	Joe Simitian	>> "...(consistent and in compliance with all applicable federal, state, and local law, including court order) including but not limited to a petition to the FAA for immediate closure." Now, I'm guessing I get a C for drafting tonight from, uh, my law professor, but I think it does capture what, uh, a majority of the board has expressed some interest in.
14:13:32:26	Mike Wasserman	>> Thank you. I will say that sounded very attractive to me when I would ask when you said "including," um, I wanted to have somewhere in there the conversion to lead-free only gas. Now, are we saying that's included already in 36D?
14:13:53:29	Cindy Chavez	>> That's been added--
14:13:54:17	Joe Simitian	>> I believe--
14:13:55:19	Cindy Chavez	>> Pardon me. For my purposes, that's correct.
14:13:58:03	Mike Wasserman	>> Okay. Okay.
14:13:59:25	Cindy Chavez	>> But, um, but Supervisor Simitian, let me just add one-one, um, one deviation that may be- may be significant or may not be. Um, what I'm suggesting is that we're both gonna deal with lead contamination, concurrent with pursuing early closure. And the way you've written that, early closure is a sub- a subset of preventing, um, uh, dealing with the lead issue, but I'm suggesting that we're pursuing both concurrently.
14:14:32:02		And so, what I wanna do, if it's all right with you, Supervisor Simitian, is ask council to draft something that, um, that meets-- that has both of those prongs in it, uh, not because your teacher would give you a C, but more because I wanna make sure they understand that-that both-both and-- and the reason is is that I wanna give the staff the flexibility, if necessary, to use whatever administrative processes are available within the FAA, including legal action, if that's necessary in the court.
14:15:02:27		So, um, could I ask, um, James, can you take a crack at that, and would you need, like, five minutes to do it?
14:15:13:12	Mike Wasserman	>> James?
14:15:14:07	James Williams	>> Sure. Yeah, um, I can work on that. Give me a couple minutes.
14:15:20:00	Mike Wasserman	>> Okay, because let's- let's not leave this meeting 'til we have a vote taken. Yes, Supervisor Simitian?
14:15:27:17	Joe Simitian	>> And what I'm going to do, whether he wants it or not, is forward my first draft to Mr. Williams so he can see what I was trying to communicate.
14:15:35:23	Mike Wasserman	>> Good.
14:15:36:17	Joe Simitian	>> Uh, and I am sympathetic with Supervisor's Chavez's desire for clarity that, uh, we're doin' both things, um, in parallel, but, uh, independent of one another if necessary. And I'm not texting--

14:15:50:11	Cindy Chavez	>> That's exactly right.
14:15:51:04	Joe Simitian	>> I'm not texting, uh, uh, friends at 11:40. I'm trying to use this as my, uh, device to craft something, so I'll send it along.
14:15:58:01	Mike Wasserman	>> I-I agree with that, and I also-- while I appreciate you putting in all this lawful-- with all these different organizations, I think we have to say, on the record, that everything we suggest at any given time on any given day is expected to be lawful, and within the laws, and everything else, so I'm always concerned [ indistinct ] and when we add something like that in, and we don't include it in something else, I just take it as an assumption we're all law-abiding citizens.
14:16:26:09	Joe Simitian	>> Uh, I-I would never compare you to Mayor Daley, but, uh, Dr. Smith was right in his, uh, assessment that I had that little piece of, uh, arcane history in mind and that the language as it was presented in Item 37 gave me pause, because when you say, "Take all necessary actions to close," one can think that means putting a padlock on the front gate and putting the sheriffs there to guard it, uh, even if the FAA has told us that that's unlawful, and I just want to make sure that's not what we were contemplating.
14:17:02:28	Mike Wasserman	>> Thank you. I appreciate the clarification. I-I started this Red Bull 14 hours ago, and I still have 2 ounces left, so I may be, uh, a little more concerned than I should be. All right, it looks like Supervisor Ellenberg's getting smaller on her screen. There we go. All right, well, the Giants won today. Um--
14:17:30:10	Joe Simitian	>> Supervisor, if you're-if you're-- if we're trying to give Mr. Williams some time--
14:17:34:08	Mike Wasserman	>> Yes.
14:17:35:06	Joe Simitian	>> I-I do think an interesting challenge for us and the community to contemplate is what happens if the courts, the FAA, and the EPA are not helpful to, uh, a closure effort, and on this parallel path, there is a significant amount of progress made in terms of lead-free, uh, avgas, and five years from now, uh, we're still having this conversation?
14:18:06:19		Or at least some members of the board are, and all of a sudden, somebody says, "You know, I'm not sure you need to close any longer, because now you've got avgas readily available." Uh, I look forward to letting Supervisors Ellenberg and Otto Lee, uh, deal with that challenge if and when it arises...
14:18:24:09	Mike Wasserman	>> I-I agree with you.
14:18:25:07	Joe Simitian	>> ...but to Supervisor Chavez's earlier point, I am prepared tonight, to say we go down both paths at the same time, and the two aren't mutually exclusive. Indeed, I see them as complementary.
14:18:37:15	Mike Wasserman	>> I-- very interesting thought. I-I think right now the gas we were serving up today could handle 75% of the operations, which is very-very different than 50% of the engines, because most of the operations at Reid-Hillview are related to [ audio cuts ] back and forth.
14:19:00:24	Joe Simitian	>> Could I pursue whether or not the maker of the motion, uh, has any thoughts about my suggestion, or perhaps Dr. Smith, about having a second study commissioned?
14:19:09:14	Cindy Chavez	>> Oh, you know, um, S-Supervisor Simitian, thank you for raising that, 'cause that-that is actually something I-I'm really interested in discussing with you.



		You know, um, what I'm wondering, and I-and I-I don't know, I mean for these doctors, it must be 2:00 in the morning somewhere, but, uh, wherever they are, but, um, I-I'm wondering about the-the--
14:19:33:29		a-and just to say that-- I'm not sure a better way to say it. I'm wondering about that relative to the other studies that I-that I think they're going to be kicking off in partnership with, like, for example the city of Palo Alto from a timing perspective, and then second, I'm also wondering about the process of this getting to publication-- whether or not, you know, the outcome of that is peer reviewed.
14:19:56:08		And-And Supervisor Simitian, are you requesting it because-- for validation or-- maybe you just talk a little bit more about the outcome.
14:20:04:02	Joe Simitian	>> I think I am requesting it for validation. I don't have problems with the study, but I think what we heard tonight is a preview of what we will hear in even greater volume in the future, which is that people who have a problem with the direction we take tonight will critique the study, and I think we will be on a stronger footing in the community, and I feel very sure that we'll be on strong--
14:20:33:26		on stronger footing with the FAA or the EPA if we're trying to make the case-- if we can say, no, this isn't just one study. We've actually had another study. Because I understand there are experts in the field who could do such a study, and it's-- we've proven it not once, but twice. And peer review-peer review is a useful tool, but we're about to embark on what I fear may be a years-long multimillion-dollar legal, uh, battle, and if so, I'd like to be well-armed with a second study if that's possible.
14:21:07:14	Mike Wasserman	>> Thank you. I'm going to recognize Supervisor Ellenberg. Personally, I agree lead is poison. I don't need any discussion. Supervisor Ellenberg?
14:21:15:19	Susan Ellenberg	>> Thanks. I-I'll address a couple of the points that I-I've heard over the last little bit. I-I don't believe that we need another study. This is not something unique, um, to our area.
14:21:31:05		We know that leaded fuel is, uh, is a toxic. We know the-the damage that it creates. There are studies, you know, for decades talking about that. The EPA is already considering, um, h-has already agreed to consider-- We need to push them a little faster-- um, uh, banning leaded fuel for aviation, so I-I think it's a little bit of a- of a red herring to say that we need to prove it a-a second time twice over in this specific area.
14:22:08:20		I think that the general, um, the general circumstance really speaks for itself. Um, the-- to your, duh, perhaps hypothetical question, uh, Supervisor Simitian, since, um, uh, perhaps only a-a few of us will be left on the board by this-- the time this comes to fruition, um, if the unleaded gas, fully 100% unleaded, happens first, that, to me, suggests that we have then eliminated one problem.
14:22:45:03		We still have other issues and concerns with the appropriateness of the airport. We've heard loud and clear from the community most directly impacted, so I-I don't think that that will be such a conundrum if that-if that arises. If we-- If the unleaded fuel process happens faster than the-- than an earlier closure, that's great.
14:23:11:26		Let's get every piece that we can to promote safety, but I don't think, um, I don't think that the achievement of one goal necessarily precludes moving ahead on another. The immediate crisis is the lead. The big picture is the

		airport.
14:23:29:24	Mike Wasserman	>> Well, go to Supervisor Simitian first. Then we're going to Dr. Smith.
14:23:32:25	Joe Simitian	>> Thank you. Through the Chair, on the issue of the second study, I, um, I-I'm, uh, as I say, I'm happy to let the conundrum, uh, linger out there for future boards. The-The reason I think a second study might be valuable is-is this, and I-I will try at this late hour to be concise and clear.
14:23:53:06		I think one of the challenges we're gonna have with the FAA is they're going to say, "Gosh, if we let Santa Clara County close Reid-Hillview early because of lead, we're going to be besieged by requests from around the country to do the same thing," And that's going to make them reticent to say yes to us, because it's gonna create a civil aviation issue for them around the country when their primary reason for being is the perpetuation of civil aviation.
14:24:30:10	Mike Wasserman	>> Yep.
14:24:31:02	Joe Simitian	>> So we know something from the study as well, and from other studies, which is that the lead level associated with Reid-Hillview is, if not unique, at least particularly high. It is up at the top. So I think our strongest case will be in making a claim for the special circumstances at Reid-Hillview so that the FAA doesn't go, "Oh, my gosh, if we say yes, we're gonna have to say yes to 20, 40, 100 other airports."
14:25:07:06		They can say yes to us, and I think our ability to make the claim will be reinforced by saying, let us give you not one study, but two, showing you how uniquely or unusually positioned we are in terms of the high lead levels.
14:25:24:07		Now we don't have to decide that tonight if we want to have that conversation with Council as things progress, but I just sort of thought getting a head start and having that in our arsenal, if you will, sooner rather than later, would be to our benefit, if people are concerned, as I believe they are, about moving sooner rather than later.
14:25:44:10	Mike Wasserman	>> All right. We won't even deliberate if the new study comes back contrary to the first study. Dr. Smith, you were up next.
14:25:52:17	Jeff Smith	>> Yes, um-- [ clears throat ] I'm a little reluctant to debate, uh, legal strategy, uh, with Miss Setmayer who-- from the FAA on the line, but-but, um, you'll notice in 36, um, we did ask for authority for another \$90,000 to complete the, uh, publication process for the current study,
14:26:24:10		which means actually a formal, um, peer review process and publication, and we envision from an administrative perspective that it's likely that the other studies will be, um, secured, or be-- other jurisdictions will be interested in doing similar studies, and of course, I think Supervisor Simitian stated the-the fact of the matter with regard to convincing the FAA to actually think of this more positively is distinguishing Reid-Hillview from other general aviation airports,
14:27:06:29		which we think we have a good case to make. Uh, the density of-of, um, sensitive receptors around the airport, the density of schools, the density of children. Uh, one thing that we didn't talk too much about that's in the report has to do with the implicit bias and explicit, um, land use processes that were enabled ages ago that created an environment where, uh, disparity is the root of the environmental, um, bias.
14:27:46:22		Um, so we think we can make a case very convincingly, um, that Reid-Hillview

		is different than other, uh, general aviation airports in many different ways.
14:28:00:04	Mike Wasserman	>> We'll end it there with James' hand having appeared, and we'll get into where the tenth busiest airport in California operations go on another day, which technically is in ten minutes. Mr. Williams, you are up.
14:28:16:28	James Williams	>> Oh, I have some proposed modified language. Um, let me see if I can maybe just cast this, which might be the easiest.
14:28:27:22	Mike Wasserman	>> And for the record, this is item number 37, correct?
14:28:30:24	James Williams	>> This would just be for 37.
14:28:33:01	Mike Wasserman	>> Okay.
14:28:34:04	James Williams	>> I took the language from Supervisor Simitian and made a few modifications to try to accommodate the conversation as I understood it and some other pieces of things.
14:28:44:10	Mike Wasserman	>> All right.
14:28:47:18	James Williams	>> Let's see. Can folks see that?
14:28:52:09	Mike Wasserman	>> Yes.
14:28:54:03	Cindy Chavez	>> No.
14:29:00:21	James Williams	>> So, uh, directing the Administration and County Council to take such actions as may be necessary to expeditiously eliminate lead exposure from operations at Reid-Hillview airport consistent with all established federal, state, and local laws, and all court orders. Such actions may include, but are not limited to, prohibiting the sale or use of leaded fuel and seeking FAA consent for early closure.
14:29:23:28	Cindy Chavez	>> This isn't, um, actually reflective of the language, uh, that I asked for. So what I asked specifically for was to be able to, um, pursue early closure, and I wasn't just looking for FAA consent for early closure but-but to pursue whatever steps that we needed to pursue for-for early closure of the-- of Reid-Hillview Airport.
14:29:47:24		That-- the lead-- you know, pursuing the-the lead exposure-- not exposure, but, um, eliminate-- yeah, eliminate lead, great. But the, um-- but I'm-- but I'm interested in the-the two tracks, uh, early closure and dealing with the lead contamination.
14:30:05:25	Mike Wasserman	Excuse me. Yup, Supervisor Simitian. I'll just say, I can support, um, what I see on my screen. Supervisor Simitian.
14:30:14:17	Joe Simitian	Thank you. Supervisor Chavez, forgive me, I'm-I'm having a little tech trouble here because my screen is now taken up with Mr. Williams's draft. But I think it's a good step in the right direction. Supervisor Chavez, might I suggest that if it said, uh, instead of, uh, "such actions may include..." that it says, "such actions shall include." And, Mr. Williams is often inclined to remind us of the very important difference between may and shall.
14:30:42:16		But if it says "shall include," that means it shall include prohibiting the sale or use of leaded fuel and seeking FAA consent for early closure. And then one more, uh, comma and phrase, if Mr. Williams can make it work, which would be to say, um, "or pursuing other closure by such--" or, "pursuing early closure by other such means, uh, as may be available." So that it's not just limited to the FAA consent.

14:31:13:23	Cindy Chavez	And it's not just limited to the-- to the lead fuel issue. It's a-- it's an incompatible land use. We-we know that already, and so, what I'm-- what I'm-- that's what I'm seeking, uh, Supervisor Simitian, is closer to what you just said than what I see on the screen. So, James, can you take another crack at it?
14:31:31:27	James Williams	Sure, I do not recommend changing may to shall. Um, I-I think there-- depending on how things progress, we may not necessarily want to do, uh, one of the specific courses of action. But I, um, uh, but I do think we can add more to the-- to the item, um... but I don't recommend converting may to shall.
14:32:07:17	Joe Simitian	Supervisor Chavez, I could live without the may to shall if we could accommodate your desire to indicate that there might be other paths to closure besides the FAA consent.
14:32:19:19	Cindy Chavez	That's right. And it's gonna be decoupled from the lead issue. It's just-- we're we're looking at both paths concurrently. They may or may not overlap. And, um, and so--
14:32:31:03	Joe Simitian	Does-does simply having the word "both," uh, make that work for you, Supervisor?
14:32:36:19	Cindy Chavez	Let me see.
14:32:37:02	Joe Simitian	So that it would-- it would say--
14:32:38:26	Mike Wasserman	And Supervisor Ellenberg. Oh, sorry, Supervisor Simitian. I thought you finished when you said "both."
14:32:43:27	Joe Simitian	Uh, no, I just-- I was hoping that if it said, "but or not limited to, both prohibiting the sale or use of leaded fuel and seeking--" the both and and would make it clear, I think, Supervisor Chavez, that we were talking about--
14:32:58:14	Cindy Chavez	Much better.
14:32:59:08	Joe Simitian	...both and and.
14:33:02:11	Cindy Chavez	Yeah, much better. And, um, s-- that looks much better to me.
14:33:07:16	Susan Ellenberg	I-I would like to add a note, that, um, seeking their consent is-is one path, but it's a little bit more of a passive one. I wanna make sure that we're also looking at the proactive, um, actions that we can take on our part, uh, to-to force that sooner. So, if-- and-and other paths to closure incorporates that, then that works.
14:33:35:21	Cindy Chavez	And Supervisor Ellenberg, what if we said, "and pursue other paths"?
14:33:40:01	Susan Ellenberg	Good action verb.
14:33:44:02	Mike Wasserman	James, can you make those changes and then give us your thought?
14:33:57:02	Susan Ellenberg	He's writing us his thought.
14:33:58:25	James Williams	Yup. That accomplish the goal?
14:34:09:26	Susan Ellenberg	God, I need a bigger font.
14:34:12:17	Mike Wasserman	You can go ahead and change the text [indistinct] (14:34:13:00).
14:34:17:06	Susan Ellenberg	Maybe, actually, James, can you-- could you, uh, that wasn't really a joke. It-it's 11 point font, which is really hard for me to see.
14:34:28:07	Mike Wasserman	There you go.
14:34:29:07	Susan Ellenberg	Thank you.
14:34:31:17	Cindy Chavez	To-- and perhaps the only other thing would be to add o-other pa-- pursue

		other paths to early-- to early closure prior-- and then pri-- 'cause we're really saying it's prior-prior to 2031. And then that would do it.
14:34:49:09	Joe Simitian	At this point, I don't think we can say other paths, only because we no longer have reference to the petition for permission.
14:34:56:04	Susan Ellenberg	Right, we don't have the permission.
14:34:57:26	Joe Simitian	So we just say, "and pursue available, uh, available paths to early closure prior--"
14:35:05:06	Susan Ellenberg	Well, any-any and all available paths.
14:35:08:05	Cindy Chavez	Perfect. Any and all available paths. Good.
14:35:13:23	Joe Simitian	And again, we're on the record as meaning any and all lawful paths to-- yes?
14:35:19:16	Mike Wasserman	Yes.
14:35:20:15	Susan Ellenberg	How did we even get there?
14:35:22:06	Mike Wasserman	I don't-- I don't know, but for the record, at midnight, we are doing things lawfully, yes.
14:35:28:03	Joe Simitian	Thank you.
14:35:31:18	Cindy Chavez	All right. I like it.
14:35:35:16	Susan Ellenberg	[indistinct] (14:35:36:00).
14:35:38:25	Cindy Chavez	Susan, are you--
14:35:39:25	Susan Ellenberg	I'm still-- I'm finishing it.
14:35:41:11	Cindy Chavez	Go ahead, please.
14:35:44:12	Susan Ellenberg	Just gonna read it out loud. "Direct administration and county council to take such actions as may be necessary to expeditiously eliminate lead exposure from operations at Reid-Hillview Airport, consistent with the law, such-- period. Such actions may include--" It's not a sentence, though. The semicolon should be a period. And then, "Such actions may include, but are not limited to both prohibiting the sale or use of leaded fuel and pursuing any and all available paths." Yeah. Can you make it two sentences? A period after "orders," and then an uppercase S for "such."
14:36:26:04	James Williams	All right then. Okay.
14:36:29:12	Susan Ellenberg	Thanks. I like it.
14:36:33:07	Mike Wasserman	Okay, I will be supporting that as well. James, if you can just shoot us all a copy of that so we can read it in the morning. Um, and I-- I mean, we're all there. And everybody can see it and read it. We've got hands raised now. All right, Supervisor Ellenberg, do you have further comment?
14:36:49:18	Susan Ellenberg	I don't.
14:36:50:13	Mike Wasserman	Dr. Smith?
14:36:53:02	Jeff Smith	Just wanna thank the 300 people who hung in there with us until past midnight.
14:36:57:19	Mike Wasserman	Yes. Yes. Breakfast at Supervisor Chavez's head-- uh, house.
14:37:04:12	Cindy Chavez	No problem, Mike. I'm making burritos.
14:37:06:26	Mike Wasserman	Supervisor Simitian, any other comments?
14:37:09:07	Joe Simitian	No, sir.

14:37:11:11	Mike Wasserman	Okay, James. Any other comments?
14:37:16:10	James Williams	Nothing from me.
14:37:18:09	Mike Wasserman	Okay. So, we had a motion by Chavez. Who was the second yesterday?
14:37:22:24	Cindy Chavez	Supervisor Ellenberg.
14:37:24:03	Susan Ellenberg	Yes.
14:37:25:02	Mike Wasserman	Supervisor Ellenberg. Okay. All right. Nancy, are you still with us?
14:37:34:13	Susan Ellenberg	Nancy!
14:37:35:06	Nancy Guerrero	I am.
14:37:36:18	Susan Ellenberg	Yay!
14:37:39:02	Mike Wasserman	Wow. Nancy, please take a final roll call vote from this multi-day meeting.
14:37:46:02	Nancy Guerrero	I'd be happy to. Supervisor Lee?
14:37:48:25	Otto Lee	Aye.
14:37:49:22	Nancy Guerrero	Supervisor Chavez?
14:37:50:29	Cindy Chavez	Yes.
14:37:52:01	Nancy Guerrero	Supervisor Simitian?
14:37:53:20	Joe Simitian	Aye.
14:37:54:20	Nancy Guerrero	Vice President Ellenberg?
14:37:57:03	Susan Ellenberg	Yes, with much gratitude.
14:37:59:29	Nancy Guerrero	President Wasserman?
14:38:01:16	Mike Wasserman	Yes, and that was 36, 37, 38, 126. Any other comments, anybody else? No, great. I'm-- I am adjourning this meeting. I'd have to look. I imagine it's in one week or two. Nancy, when is it?
14:38:20:22	Nancy Guerrero	8, 31st.
14:38:21:11	Susan Ellenberg	August 31st.
14:38:22:27	Mike Wasserman	What's that? 31st?
14:38:24:11	Nancy Guerrero	Yes.
14:38:24:28	Mike Wasserman	Super. Thank you all very much. Uh, enjoy the rest of your day.
14:38:29:19	Cindy Chavez	Thank you all. Thank you.
14:38:31:05	Susan Ellenberg	Good night.
14:38:32:00	Cindy Chavez	And thank you-- and thank you to all the interpreters and to the doctors. Thank you all very, very much. And to my colleagues--
14:38:37:08	Susan Ellenberg	And the clerks and our teams.
14:38:39:04	Cindy Chavez	And to my colleagues, I am so grateful, forever grateful. Thank you.
14:38:43:00	James Williams	Thank you so much.
14:38:44:04	Mike Wasserman	Thank you, yeah.
14:38:44:24	Susan Ellenberg	And the community.
14:38:45:15	James Williams	Bye-bye.
14:38:46:04	Cindy Chavez	Yes. To all those people, thank you.
14:38:53:05	computer	Recording stopped.

14:39:03:14	woman	And this that, this meeting is adjourned. Thank you, have a great day.
14:39:09:15	man	Thank you, everyone.

# Exhibit F



Site Id	State Id	City	Name	Fuel Types
00985.*A	AR	FORREST CITY	HUTFLY	A
01818.*A	CA	LOS ANGELES	LOS ANGELES INTL	A
01906.*A	CA	MONTAGUE	SISKIYOU COUNTY	A
18877.*A	OK	BURNS FLAT	CLINTON/SHERMAN	A
03938.1*A	GA	NASHVILLE	BERRIEN COUNTY	A
50684.4*A	AK	SAND POINT	SAND POINT	A
03001.*A	DC	WASHINGTON	RONALD REAGAN WASHINGTON NTL	A
53146.*A	PR	PONCE	MERCEDITA	A
50284.*A	AK	GUSTAVUS	GUSTAVUS	A
05108.1*A	IN	BATESVILLE	BATESVILLE	A
23882.2*A	TX	FORT HOOD/KILLEEN	ROBERT GRAY AAF	A
50308.*A	AK	HEALY	HEALY RIVER	A
52402.*A	HI	LANAI CITY	LANAI	A
24030.121*A	TX	HEBBRONVILLE	JIM HOGG COUNTY	A
23418.25*A	TX	BEEVILLE	CHASE FLD INDUSTRIAL	A
50682.*A	AK	ST PAUL ISLAND	ST PAUL ISLAND	A
50801.*A	AK	UNALASKA	UNALASKA	A
12540.*A	MT	VALIER	VALIER	A
26395.*A	WA	SEATTLE	SEATTLE-TACOMA INTL	A A1
02203.*A	CA	SAN JOSE	REID-HILLVIEW OF SANTA CLARA COUNTY	A UL94
02213.4*A	CA	SAN MARTIN	SAN MARTIN	A UL94
25649.*A	VA	BRIDGEWATER	BRIDGEWATER AIR PARK	A+
27805.*A	WY	GUERNSEY	CAMP GUERNSEY	A++
50009.*A	AK	ADAK ISLAND	ADAK	A1
51512.*A		BABELTHUAP ISLAND	BABELTHUAP/KOROR	A1
51518.01*A		MAJURO ATOLL	AMATA KABUA INTL	A1+
24955.15*A	TX	UVALDE	OX RANCH	A1+
27415.1*A	WI	NEILLSVILLE	NEILLSVILLE MUNI	MOGAS
04928.8*A	IL	PALMYRA	ZELMER MEML AIRPARK INC	MOGAS
27573.*A	WI	SHIOCTON	SHIOCTON	MOGAS
15879.*A	NY	OVID	OVID	MOGAS
25538.1*A	VT	SHELBURNE	SHELBURNE	MOGAS
25117.4*A	UT	FAIRFIELD	WEST DESERT AIRPARK	MOGAS
06791.*A	KS	NEODESHA	NEODESHA MUNI	MOGAS
08073.01*A	ME	LEVANT	GRIFFIN FLD	MOGAS
13046.*A	NV	DENIO	DENIO JUNCTION	MOGAS
50097.*A	AK	CHICKEN	CHICKEN	MOGAS
18963.9*A	OK	FAIRMONT	FAIRMONT FLD	MOGAS
27627.1*A	WI	SURING	PISO	MOGAS
05740.6*A	IN	WATERLOO	WALKER/ROWE WATERLOO	UL91
27505.6*A	WI	PRAIRIE DU SAC	SAUK/PRAIRIE	UL94
12045.01*A	MO	QUEEN CITY	APPLEGATE	UL94
10046.01*A	MI	MANCHESTER	ROSSETTIE	UL94
18717.1*A	OH	WILMINGTON	HOLLISTER FLD	UL94
23781.11*A	TX	DUBLIN	DUBLIN MUNI	UL94
02341.1*A	CA	TEHACHAPI	MOUNTAIN VALLEY	None
04749.*A	IL	HINCKLEY	HINCKLEY	None

16828.95*A	NC	KILL DEVIL HILLS	FIRST FLIGHT	None
01588.*A	CA	FRANKLIN	FRANKLIN FLD	None
25767.*A	VA	FOREST	NEW LONDON	None
03033.2*A	FL	ARCHER	FLYING TEN	None
07751.*A	LA	TALLULAH	SCOTT	None
06973.*A	KS	WICHITA	BEECH FACTORY	None
23902.9*A	TX	FRANKSTON	AERO ESTATES	None
15707.*A	NY	MONTAUK	MONTAUK	None
01201.*A	AR	WEINER	SALLY WOFFORD	None
16785.*A	NC	HENDERSONVILLE	HENDERSONVILLE	None
01076.4*A	AR	MARKED TREE	MARKED TREE MUNI	None
15684.*A	NY	MIDDLETOWN	RANDALL	None
11944.*A	MO	MOSCOW MILLS	GREENSFIELD	None
01016.2*A	AR	HOLLY GROVE	HOLLY GROVE MUNI	None
03539.2*A	FL	VERO BEACH	NEW HIBISCUS AIRPARK	None
01141.5*A	AR	PIGGOTT	PIGGOTT MUNI	None
26305.*A	WA	MOSES LAKE	MOSES LAKE MUNI	None
17018.3*A	NC	PLYMOUTH	DONALD'S AIR PARK INC	None
03180.01*A	FL	EUSTIS	MID-FLORIDA	None
11052.8*A	MN	WARREN	WARREN MUNI	None
14817.*A	NY	ARGYLE	ARGYLE	None
26304.21*A	WA	MONROE	FIRST AIR FLD	None
07801.1*A	LA	WOODWORTH	WOODWORTH	None
07722.*A	LA	RAYVILLE	JOHN H HOOKS JR MEML	None
09605.*A	MI	BRIGHTON	BRIGHTON	None
18056.*A	OH	KELLEYS ISLAND	KELLEYS ISLAND LAND FLD	None
24285.81*A	TX	MANVEL	WOLFE AIR PARK	None
03575.5*A	FL	ZELLWOOD	BOB WHITE FLD	None
26408.*A	WA	SILVERDALE	APEX AIRPARK	None
07572.9*A	LA	JENA	JENA	None
07784.*A	LA	WELSH	WELSH	None
26162.*A	WA	COLFAX	PORT OF WHITMAN BUSINESS AIR CENTER	None
11266.3*A	MS	HOLLANDALE	HOLLANDALE MUNI	None
26123.1*A	WA	BREWSTER	ANDERSON FLD	None
02496.1*A	CA	YUCCA VALLEY	YUCCA VALLEY	None
17034.4*A	NC	RALEIGH	TRIPLE W	None
03326.*A	FL	MIAMI	DADE-COLLIER TRAINING AND TRANSITION	None
03443.1*A	FL	PIERSON	PIERSON MUNI	None
16588.7*A	NC	CARTHAGE	GILLIAM - MC CONNELL AIRFIELD	None
23525.*A	TX	CADDO MILLS	CADDO MILLS MUNI	None
27475.1*A	WI	PALMYRA	PALMYRA MUNI	None
07522.41*A	LA	FRANKLINTON	FRANKLINTON	None
07476.1*A	LA	COLUMBIA	CALDWELL PARISH	None
26213.*A	WA	FORKS	FORKS	None
10933.01*A	MN	RED LAKE FALLS	RED LAKE FALLS MUNI	None
11143.3*A	MS	BELZONI	BELZONI MUNI	None
11744.*A	MO	GIDEON	GIDEON MEML	None

17386.11*A	ND	LARIMORE	LARIMORE MUNI	None
26193.1*A	WA	ELECTRIC CITY	GRAND COULEE DAM	None
04773.*A	IL	KANKAKEE	KANKAKEE	None
17191.*A	NC	WAXHAW	JAARS-TOWNSEND	None
01591.5*A	CA	FRESNO	SIERRA SKY PARK	None
04178.7*A	ID	CRAIGMONT	CRAIGMONT MUNI	None
01650.01*A	CA	HAYFORK	HAYFORK	None
11204.2*A	MS	DREW	RULEVILLE-DREW	None
17178.3*A	NC	WALNUT COVE	MEADOW BROOK FLD	None
10367.22*A	MI	TECUMSEH	TECUMSEH MILLS	None
27572.*A	WI	SHELL LAKE	SHELL LAKE MUNI	None
15652.*A	NY	MATTITUCK	MATTITUCK	None
02414.*A	CA	VISALIA	SEQUOIA FLD	None
03281.1*A	FL	LAKELAND	SOUTH LAKELAND	None
04899.685*A	IL	NEWARK	CUSHING FLD LTD	None
20037.1*A	PA	CHAMBERSBURG	FRANKLIN COUNTY RGNL	None
08628.*A	MD	RIDGELY	GOODEN AIRPARK	None
50544.*A	AK	NORTHWAY	NORTHWAY	None
06675.*A	KS	HOXIE	HOXIE-SHERIDAN COUNTY	None
19596.1*A	OR	SANDY	SANDY RIVER	None
01710.1*A	CA	KERNVILLE	KERN VALLEY	None
14162.*A	NJ	PEDRICKTOWN	OLDMANS TOWNSHIP	None
15279.8*A	NY	GANSEVOORT	HEBER AIRPARK	None
01153.8*A	AR	RECTOR	RECTOR	None
01276.*A	CA	AVALON	CATALINA	None
06775.5*A	KS	MINNEAPOLIS	MINNEAPOLIS CITY COUNTY	None
50764.4*A	AK	TOGIAK VILLAGE	TOGIAK	None
02968.5*A	DE	FARMINGTON	CHORMAN	None
19289.2*A	OK	VINITA	VINITA MUNI	None
16820.*A	NC	JONESVILLE	SWAN CREEK	None
02013.*A	CA	PALMDALE	PALMDALE USAF PLANT 42	None
14865.*A	NY	BAYPORT	BAYPORT AERODROME	None
00945.*A	AR	DERMOTT	DERMOTT MUNI	None
25805.*A	VA	GORDONSVILLE	GORDONSVILLE MUNI	None
01494.61*A	CA	DEATH VALLEY NATIONAL PARK	FURNACE CREEK	None
05074.*A	IL	YATES CITY	TRI-COUNTY	None
53085.1*A	PR	ISLA DE VIEQUES	ANTONIO RIVERA RODRIGUEZ	None
01570.41*A	CA	FIREBAUGH	FIREBAUGH	None
04925.03*A	IL	OTTAWA	SKYDIVE CHICAGO	None
10139.*A	MI	NAPOLEON	NAPOLEON	None
27065.*A	WI	BRODHEAD	BRODHEAD	None
50068.6*A	AK	BIG LAKE	BIG LAKE	None
17406.*A	ND	MAYVILLE	MAYVILLE MUNI	None
16770.*A	NC	HATTERAS	BILLY MITCHELL	None
26323.4*A	WA	ODESSA	ODESSA MUNI	None
04975.*A	IL	ROCKFORD	COTTONWOOD	None
20204.*A	PA	DANVILLE	DANVILLE	None
05247.2*A	IN	ELKHART	MISHAWAKA PILOTS CLUB	None
07481.*A	LA	CROWLEY	LE GROS MEML	None

27408.2*A	WI	NECEDAH	NECEDAH	None
20438.*A	PA	GERMANSVILLE	FLYING M AERODROME	None
50093.95*A	AK	CHANDALAR CAMP	CHANDALAR SHELF	None
01443.*A	CA	CORNING	CORNING MUNI	None
10901.*A	MN	PELICAN RAPIDS	PELICAN RAPIDS MUNI-LYON'S FLD	None
02362.1*A	CA	TRINITY CENTER	TRINITY CENTER	None
00875.*A	AR	BALD KNOB	BALD KNOB MUNI	None
00507.02*A	AL	SAMSON	LOGAN FLD	None
07418.01*A	LA	ARCADIA	ARCADIA-BIENVILLE PARISH	None
07120.*A	KY	FALLS-OF-ROUGH	ROUGH RIVER STATE PARK	None
03384.*A	FL	NAVARRE	FORT WALTON BEACH	None
12143.*A	MO	STEELE	STEELE MUNI	None
07487.1*A	LA	DELHI	DELHI MUNI	None
10998.*A	MN	SLEEPY EYE	SLEEPY EYE MUNI	None
26273.*A	WA	LIND	LIND	None
22204.01*A	SC	CLIO	CLIO CROP CARE	None
26304.8*A	WA	MORTON	STROM FLD	None
18423.*A	OH	PUT IN BAY	PUT IN BAY	None
12357.*A	MT	FORSYTH	TILLITT FLD	None
26389.1*A	WA	ROSALIA	ROSALIA MUNI	None
23034.*A	TN	JOHNSON CITY	JOHNSON CITY	None
10037.*A	MI	MACKINAC ISLAND	MACKINAC ISLAND	None
51533.1*A	MP	TINIAN ISLAND	TINIAN INTL	None
26274.7*A	WA	LOPEZ	LOPEZ ISLAND	None
04125.*A	ID	ABERDEEN	ABERDEEN MUNI	None
26440.*A	WA	TWISP	TWISP MUNI	None
03959.*A	GA	QUITMAN	QUITMAN BROOKS COUNTY	None
02978.*A	DE	LAUREL	LAUREL	None
15344.*A	NY	GREAT VALLEY	GREAT VALLEY	None
24388.8*A	TX	MOUNT VERNON	FRANKLIN COUNTY	None
01668.11*A	CA	HOLLISTER	FRAZIER LAKE AIRPARK	None
07077.2*A	KY	CADIZ	LAKE BARKLEY STATE PARK	None
01559.1*A	CA	EUREKA	KNEELAND	None
04208.21*A	ID	HOMEDALE	HOMEDALE MUNI	None
09820.*A	MI	FRANKENMUTH	WM 'TINY' ZEHNDER FLD	None
03936.*A	GA	MOULTRIE	SPENCE	None
16845.*A	NC	KNIGHTDALE	RALEIGH EAST	None
05536.2*A	IN	NOBLESVILLE	NOBLESVILLE	None
07599.*A	LA	LAKE PROVIDENCE	BYERLEY	None
11591.*A	MO	CAMPBELL	CAMPBELL MUNI	None
00640.53*A	AZ	BULLHEAD CITY	EAGLE AIRPARK	None
18602.2*A	OH	UPPER SANDUSKY	WYANDOT COUNTY	None
20678.*A	PA	KRALLTOWN	BERMUDIAN VALLEY AIRPARK	None
01400.5*A	CA	CHOWCHILLA	CHOWCHILLA	None
27209.*A	WI	FRANKSVILLE	CINDY GUNTLY MEML	None
09866.*A	MI	GREGORY	RICHMOND FLD	None
26376.5*A	WA	QUILLAYUTE	QUILLAYUTE	None
27039.*A	WI	BARRON	BARRON MUNI	None
27269.*A	WI	IOLA	CENTRAL COUNTY	None
17701.2*A	OH	CENTERBURG	CHAPMAN MEML FLD	None

17400.*A	ND	MADDOCK	MADDOCK MUNI	None
04889.3*A	IL	MOUNT MORRIS	OGLE COUNTY	None
05087.3*A	IN	ALEXANDRIA	ALEXANDRIA	None
00520.2*A	AL	STEVENSON	STEVENSON	None
07745.1*A	LA	SPRINGHILL	SPRINGHILL	None
26388.*A	WA	RITZVILLE	PRU FLD	None
02804.*A	CT	EAST HADDAM	GOODSPEED	None
23760.1*A	TX	DEVINE	DEVINE MUNI	None
17580.*A	OH	BEACH CITY	BEACH CITY	None
15174.1*A	NY	EAST MORICHES	SPADARO	None
01399.*A	CA	CHIRIACO SUMMIT	CHIRIACO SUMMIT	None
26191.1*A	WA	EATONVILLE	SWANSON	None
14791.1*A	NY	ALBION	PINE HILL	None
27652.*A	WI	WASHINGTON ISLAND	WASHINGTON ISLAND	None
07582.1*A	LA	JONESBORO	JONESBORO	None
27335.*A	WI	LA POINTE	MAJOR GILBERT FLD	None
17666.51*A	OH	CALDWELL	NOBLE COUNTY	None
16995.*A	NC	OCRACOCKE	OCRACOCKE ISLAND	None
16040.1*A	NY	ROME	BECKS GROVE	None
19381.*A	OR	CAVE JUNCTION	ILLINOIS VALLEY	None
50124.*A	AK	CORDOVA	MERLE K (MUDHOLE) SMITH	None
20318.1*A	PA	EIGHTY FOUR	BANDEL	None
24353.52*A	TX	MIDLOTHIAN	EAGLE'S NEST ESTATES	None
26323.21*A	WA	OCEAN SHORES	OCEAN SHORES MUNI	None
26293.*A	WA	MEAD	MEAD FLYING SERVICE	None
27534.1*A	WI	RIO	GILBERT FLD	None
11179.1*A	MS	CHARLESTON	CHARLESTON MUNI	None
05136.61*A	IN	BOONVILLE	BOONVILLE	None
22694.*A	SD	HIGHMORE	HIGHMORE MUNI	None
11141.*A	MS	BAY SPRINGS	THIGPEN FLD	None
08457.*A	MD	BALTIMORE	ESSEX SKYPARK	None
50278.6*A	AK	GOOSE BAY	GOOSE BAY	None
09555.1*A	MI	BEAVER ISLAND	WELKE	None
15292.4*A	NY	GENESEO	GENESEO	None
26159.*A	WA	CLE ELUM	CLE ELUM MUNI	None
02431.1*A	CA	WEAVERVILLE	LONNIE POOL FLD/WEAVERVILLE	None
07347.5*A	KY	PROVIDENCE	PROVIDENCE-WEBSTER COUNTY	None
07477.2*A	LA	COUSHATTA	THE RED RIVER	None
00871.11*A	AR	AUGUSTA	WOODRUFF COUNTY	None
13044.8*A	NV	DAYTON/CARSON CITY	DAYTON VALLEY AIRPARK	None
06752.*A	KS	MANKATO	MANKATO	None
50125.*A	AK	CORDOVA	CORDOVA MUNI	None
24137.611*A	TX	JUSTIN	PROPWASH	None
05418.*A	IN	LAKE VILLAGE	LAKE VILLAGE	None
01784.*A	CA	LODI	LODI AIRPARK	None
26222.1*A	WA	GOLDENDALE	GOLDENDALE	None
11319.2*A	MS	LUMBERTON	I H BASS JR MEML	None
02549.8*A	CO	CRAWFORD	CRAWFORD	None
17772.3*A	OH	COLUMBIA STATION	COLUMBIA	None
17279.1*A	ND	CANDO	CANDO MUNI	None

18079.*A	OH	LEIPSIC	RUHE'S	None
04360.2*A	ID	YELLOW PINE	JOHNSON CREEK	None
01340.25*A	CA	BOONVILLE	BOONVILLE	None
06737.51*A	KS	LUCAS	LUCAS	None
09893.*A	MI	HARRISON	CLARE COUNTY	None
01569.*A	CA	FALL RIVER MILLS	FALL RIVER MILLS	None
12258.*A	MT	BIGFORK	FERNDALE AIRFIELD	None
16756.6*A	NC	GREENSBORO	GREENSBORO EXEC	None
27542.*A	WI	ROCHESTER	FOX RIVER	None
04543.*A	IL	COMPTON	BRESSON	None
11778.23*A	MO	HERMANN	HERMANN MUNI	None
12911.*A	NE	SARGENT	SARGENT MUNI	None
03930.1*A	GA	MONTEZUMA	DR C P SAVAGE SR	None
03831.1*A	GA	HAWKINSVILLE	HAWKINSVILLE-PULASKI COUNTY	None
04672.*A	IL	GENESEO	GEN-AIRPARK	None
24180.3*A	TX	LAKE DALLAS	LAKEVIEW	None
22554.*A	SC	TRENTON	EDGEFIELD COUNTY	None
04302.*A	ID	PRIEST RIVER	PRIEST RIVER MUNI	None
19312.*A	OK	WESTPORT	WESTPORT	None
08593.*A	MD	MASSEY	MASSEY AERODROME	None
08957.2*A	MA	HANSON	CRANLAND	None
21888.*A	RI	BLOCK ISLAND	BLOCK ISLAND STATE	None
27628.7*A	WI	THREE LAKES	THREE LAKES MUNI	None
13128.3*A	NV	SANDY VALLEY	SKY RANCH	None
04334.01*A	ID	SMILEY CREEK	SMILEY CREEK	None
06757.*A	KS	MARYSVILLE	MARYSVILLE MUNI	None
22811.*A	SD	TIMBER LAKE	TIMBER LAKE MUNI	None
05751.*A	IN	WESTFIELD	WESTFIELD	None
02363.*A	CA	TRONA	TRONA	None
26438.*A	WA	TONASKET	TONASKET MUNI	None
16811.*A	NC	HOLLY RIDGE	HOLLY RIDGE/TOPSAIL ISLAND	None
07793.*A	LA	WINNFIELD	DAVID G JOYCE	None
10763.*A	MN	KARLSTAD	KARLSTAD MUNI	None
10318.*A	MI	ST JOHNS	SCHIFFER ACRES	None
18291.*A	OH	NEW LEXINGTON	PERRY COUNTY	None
09818.01*A	MI	FOWLerville	MAPLE GROVE	None
26266.2*A	WA	LANGLEY	WHIDBEY AIR PARK	None
52294.*A	HI	KAUNAKAKAI	MOLOKAI	None
16896.*A	NC	MARION	SHIFLET FLD	None
12512.*A	MT	STANFORD	STANFORD/BIGGERSTAFF FLD	None
26454.*A	WA	WARDEN	WARDEN	None
25213.*A	UT	MORGAN	MORGAN COUNTY	None
26384.12*A	WA	REPUBLIC	FERRY COUNTY	None
06350.11*A	IA	SPIRIT LAKE	SPIRIT LAKE MUNI	None
07384.1*A	KY	WEST LIBERTY	WEST LIBERTY	None
24726.1*A	TX	SANGER	IRONHEAD	None
17945.*A	OH	GARRETTVILLE	GATES	None
20369.91*A	PA	FAIRFIELD	MID ATLANTIC SOARING CENTER	None
11458.1*A	MS	TUNICA	RALPH M SHARPE	None
50146.02*A	AK	DELTA JUNCTION	DELTA JUNCTION	None

05315.*A	IN	GREENFIELD	POPE FLD	None
12648.*A	NE	BLOOMFIELD	BLOOMFIELD MUNI	None
11581.6*A	MO	BUFFALO	BUFFALO MUNI	None
02358.*A	CA	TRACY	NEW JERUSALEM	None
03102.*A	FL	CEDAR KEY	GEORGE T LEWIS	None
04178.3*A	ID	COTTONWOOD	COTTONWOOD MUNI	None
27174.*A	WI	EDGERTON	JANA	None
01882.2*A	CA	MENDOTA	WILLIAM ROBERT JOHNSTON MUNI	None
27131.8*A	WI	CRANDON	CRANDON/STEVE CONWAY MUNI	None
19083.11*A	OK	MADILL	MADILL MUNI	None
06792.4*A	KS	NESS CITY	NESS CITY MUNI	None
24977.1*A	TX	WACO	WINGS FOR CHRIST INTL FLIGHT ACADEMY	None
27645.1*A	WI	WALWORTH	BIG FOOT AIRFIELD	None
04366.*A	IL	ALEDO	MERCER COUNTY	None
13034.5*A	NV	CAL NEV ARI	KIDWELL	None
11072.*A	MN	WHEATON	WHEATON MUNI	None
19292.*A	OK	WAGONER	HEFNER-EASLEY	None
19405.4*A	OR	CONDON	CONDON STATE PAULING FLD	None
00823.*A	AZ	WHITERIVER	WHITERIVER	None
02321.*A	CA	STRATHMORE	ECKERT FLD	None
12390.*A	MT	HARLEM	HARLEM	None
05251.51*A	IN	EMINENCE	PAM'S PLACE	None
19449.4*A	OR	GLENEDEN BEACH	SILETZ BAY STATE	None
00246.*A	AL	CREOLA	MARK REYNOLDS/NORTH MOBILE COUNTY	None
20928.12*A	PA	MIFFLINTOWN	MIFFLINTOWN	None
04282.*A	ID	PARMA	PARMA	None
17428.*A	ND	NAPOLEON	NAPOLEON MUNI	None
00226.5*A	AL	CHATOM	ROY WILCOX	None
00250.1*A	AL	DAUPHIN ISLAND	JEREMIAH DENTON	None
05655.*A	IN	SHERIDAN	SHERIDAN	None
11621.*A	MO	CARUTHERSVILLE	CARUTHERSVILLE MEML	None
26478.1*A	WA	WOODLAND	WOODLAND STATE	None
26444.4*A	WA	VANCOUVER	FLY FOR FUN	None
09953.*A	MI	INDIAN RIVER	CAMPBELL-PRATT	None
22675.1*A	SD	FAULKTON	FAULKTON MUNI	None
11785.1*A	MO	HORNERSVILLE	HORNERSVILLE MEML	None
00218.7*A	AL	CENTREVILLE	BIBB COUNTY	None
00823.6*A	AZ	WHITMORE	GRAND CANYON BAR TEN AIRSTRIP	None
04178.2*A	ID	COOLIN	CAVANAUGH BAY	None
50593.*A	AK	PILOT POINT	PILOT POINT	None
04208.55*A	ID	HOWE	HOWE	None
19403.3*A	OR	CHRISTMAS VALLEY	CHRISTMAS VALLEY	None
50693.*A	AK	SELDOVIA	SELDOVIA	None
53008.*A	PR	ARECIBO	ANTONIO/NERY/JUARBE POL	None
18858.*A	OK	CHATTANOOGA	CHATTANOOGA SKY HARBOR	None
04270.5*A	ID	MUD LAKE	MUD LAKE/WEST JEFFERSON COUNTY	None
18825.*A	OK	BOISE CITY	BOISE CITY	None
11698.95*A	MO	EL DORADO SPRINGS	EL DORADO SPRINGS MEML	None

16814.*A	NC	INDIAN TRAIL	GOOSE CREEK	None
06529.*A	KS	CIMARRON	CIMARRON MUNI	None
06069.12*A	IA	INDIANOLA	NASH FLD INDIANOLA	None
26104.1*A	WA	BATTLE GROUND	GOHEEN	None
09668.*A	MI	CHESANING	HOWARD NIXON MEML	None
12243.*A	MT	ANACONDA	BOWMAN FLD	None
17381.7*A	ND	LA MOURE	LA MOURE ROTT MUNI	None
22817.*A	SD	WALL	WALL MUNI	None
01218.*A	CA	AGUA CALIENTE	AGUA CALIENTE SPRINGS	None
11299.51*A	MS	LEXINGTON	C A MOORE	None
24606.51*A	TX	RHOME	RHOME MEADOWS	None
24770.11*A	TX	SEYMOUR	SEYMOUR MUNI	None
10992.5*A	MN	SILVER BAY	SILVER BAY MUNI	None
22329.52*A	SC	HOLLY HILL	HOLLY HILL	None
01134.1*A	AR	PARIS /SUBIACO/	PARIS MUNI	None
06713.11*A	KS	LA CROSSE	RUSH COUNTY	None
12638.1*A	NE	BENKELMAN	JONES	None
25496.1*A	VT	MORRISVILLE	MORRISVILLE-STOWE STATE	None
26290.9*A	WA	MATTAWA	DESERT AIRE RGNL	None
22976.8*A	TN	GAINESBORO	JACKSON COUNTY	None
00207.1*A	AL	CAMDEN	CAMDEN MUNI	None
13079.25*A	NV	JACKPOT	JACKPOT/HAYDEN FLD	None
13383.*A	NH	PLYMOUTH	PLYMOUTH MUNI	None
01346.*A	CA	BRIDGEPORT	BRYANT FLD	None
03453.2*A	FL	PORT ST JOE	COSTIN	None
13060.*A	NV	FERNLEY	SAMSARG FLD	None
18427.*A	OH	RADNOR	PACKER	None
00498.*A	AL	ROANOKE	ROANOKE MUNI ENLOE	None
00911.2*A	AR	CALICO ROCK	CALICO ROCK-IZARD COUNTY	None
25581.2*A	VT	WEST DOVER	DEERFIELD VALLEY RGNL	None
10562.*A	MN	BIGFORK	BIGFORK MUNI	None
50235.*A	AK	FORT YUKON	FORT YUKON	None
15192.8*A	NY	EDINBURG	PLATEAU SKY RANCH	None
18230.*A	OH	MOUNT GILEAD	MORROW COUNTY	None
23995.1*A	TX	GRUVER	GRUVER MUNI	None
03633.1*A	GA	ASHBURN	TURNER COUNTY	None
02294.4*A	CA	SHELTER COVE	SHELTER COVE	None
04142.5*A	ID	BIG CREEK	BIG CREEK	None
11327.2*A	MS	MARKS	SELS	None
19403.*A	OR	CHILOQUIN	CHILOQUIN STATE	None
26341.*A	WA	PACKWOOD	PACKWOOD	None
14632.1*A	NM	JAL	LEA COUNTY/JAL	None
01686.*A	CA	INDEPENDENCE	INDEPENDENCE	None
04099.1*A	GA	WAYNESBORO	BURKE COUNTY	None
16720.1*A	NC	FARMVILLE	FLANAGAN FLD	None
04163.4*A	ID	CAREY	CAREY	None
09593.*A	MI	BOIS BLANC ISLAND	BOIS BLANC ISLAND	None
19631.*A	OR	VERNONIA	VERNONIA MUNI	None
23710.1*A	TX	DALLAS	AIR PARK-DALLAS	None
00920.02*A	AR	CLINTON	HOLLEY MOUNTAIN AIRPARK	None



26135.*A	WA	CASHMERE	CASHMERE-DRYDEN	None
03793.1*A	GA	FOLKSTON	DAVIS FLD	None
01195.51*A	AR	WALDRON	WALDRON MUNI	None
04411.21*A	IL	BEARDSTOWN	GREATER BEARDSTOWN	None
17308.83*A	ND	DRAYTON	DRAYTON MUNI	None
18862.1*A	OK	CHEROKEE	CHEROKEE MUNI	None
19150.*A	OK	PAWHUSKA	PAWHUSKA MUNI	None
24384.*A	TX	MORTON	COCHRAN COUNTY	None
24548.11*A	TX	POST	POST-GARZA COUNTY MUNI	None
15346.*A	NY	GREENE	GREENE	None
27698.*A	WI	WHITEWATER	GUTZMER'S TWIN OAKS	None
05120.*A	IN	BLOOMFIELD	SHAWNEE FLD	None
19132.*A	OK	OKEENE	CHRISTMAN AIRFIELD	None
00786.2*A	AZ	SAN LUIS	ROLLE AIRFIELD	None
24676.1*A	TX	SALADO	SALADO	None
19432.312*A	OR	ESTACADA	VALLEY VIEW	None
11258.1*A	MS	HERNANDO	HERNANDO VILLAGE AIRPARK	None
13864.*A	NJ	JOBSTOWN	REDWING	None
24219.6*A	TX	LINDSAY	FREEDOM FLD	None
04207.*A	ID	HAZELTON	HAZELTON MUNI	None
01001.32*A	AR	HAMPTON	HAMPTON MUNI	None
13080.*A	NV	KINGSTON	KINGSTON	None
00135.*A	AL	ASHLAND/LINEVILLE	ASHLAND/LINEVILLE	None
11950.11*A	MO	MOUNTAIN GROVE	MOUNTAIN GROVE MEML	None
00463.1*A	AL	ONEONTA	ROBBINS FLD	None
02332.1*A	CA	SUSANVILLE	SPAULDING	None
26240.5*A	WA	IONE	IONE MUNI	None
23950.2*A	TX	GOLDTHWAITE	GOLDTHWAITE MUNI	None
24174.1*A	TX	KNOX CITY	HARRISON FLD OF KNOX CITY	None
23887.2*A	TX	FORT WORTH	KENNETH COPELAND	None
03178.5*A	FL	ENGLEWOOD	BUCHAN	None
07837.*A	ME	BELFAST	BELFAST MUNI	None
11445.*A	MS	STARKVILLE	OKTIBBEHA	None
06818.*A	KS	OSAGE CITY	OSAGE CITY MUNI	None
12966.*A	NE	WALLACE	WALLACE MUNI	None
53083.*A	PR	ISLA DE CULEBRA	BENJAMIN RIVERA NORIEGA	None
09989.1*A	MI	KALKASKA	KALKASKA CITY	None
11713.*A	MO	EXCELSIOR SPRINGS	EXCELSIOR SPRINGS MEML	None
17388.1*A	ND	LEEDS	LEEDS MUNI	None
21614.*A	PA	TOWER CITY	BENDIGO	None
03509.*A	FL	TALLAHASSEE	TALLAHASSEE COMMERCIAL	None
50108.*A	AK	CIRCLE HOT SPRINGS	CIRCLE HOT SPRINGS	None
25668.*A	VA	CHASE CITY	CHASE CITY MUNI	None
11687.5*A	MO	DONIPHAN	DONIPHAN MUNI	None
07966.*A	ME	ELIOT	SEACOAST AIRFIELD	None
23224.1*A	TN	TIPTONVILLE	REELFOOT LAKE	None
50708.*A	AK	SKWENTNA	SKWENTNA	None
27134.*A	WI	DELAVAN	LAKE LAWN	None
01152.1*A	AR	PRESCOTT	KIZER FLD	None
09965.*A	MI	IRON RIVER	STAMBAUGH	None

18194.11*A	OH	MIDDLE BASS ISLAND	MIDDLE BASS ISLAND	None
06253.7*A	IA	OSAGE	OSAGE MUNI	None
01561.*A	CA	EUREKA	SAMOA FLD	None
06828.*A	KS	OXFORD	OXFORD MUNI	None
25845.*A	VA	LAWRENCEVILLE	BRUNSWICK COUNTY	None
04275.9*A	ID	NEZPERCE	NEZPERCE MUNI	None
08096.1*A	ME	LIVERMORE FALLS	BOWMAN FLD	None
12468.*A	MT	PLAINS	PLAINS	None
16888.*A	NC	MAIDEN	LANEYS	None
27003.*A	WI	ALBANY	ALBANY	None
13256.*A	NH	FRANCONIA	FRANCONIA	None
17222.*A	NC	WINTERVILLE	SOUTH OAKS AERODROME	None
15268.6*A	NY	FREEHOLD	FREEHOLD	None
25148.*A	UT	GLEN CANYON NATL REC AREA	BULLFROG BASIN	None
04196.31*A	ID	GARDEN VALLEY	GARDEN VALLEY	None
11545.*A	MO	BISMARCK	BISMARCK MEML	None
22764.*A	SD	PINE RIDGE	PINE RIDGE	None
03288.2*A	FL	LAKE WALES	CHALET SUZANNE AIR STRIP	None
10527.*A	MN	BAGLEY	BAGLEY MUNI	None
06766.*A	KS	MEDICINE LODGE	MEDICINE LODGE	None
23990.*A	TX	GROVETON	GROVETON-TRINITY COUNTY	None
24893.1*A	TX	TEAGUE	TEAGUE MUNI	None
27902.*A	WY	WHEATLAND	PHIFER AIRFIELD	None
10518.*A	MN	APPLETON	APPLETON MUNI	None
14617.1*A	NM	HATCH	HATCH MUNI	None
19635.*A	OR	WASCO	WASCO STATE	None
18033.6*A	OH	HURON	HINDE	None
12344.5*A	MT	FAIRFIELD	FAIRFIELD	None
26180.*A	WA	DARRINGTON	DARRINGTON MUNI	None
27270.*A	WI	IRON RIVER	BAYFIELD COUNTY	None
17503.*A	ND	WISHEK	WISHEK MUNI	None
03427.*A	FL	PANACEA	WAKULLA COUNTY	None
22766.1*A	SD	PRESHO	PRESHO MUNI	None
19529.2*A	OR	MYRTLE CREEK	MYRTLE CREEK MUNI	None
04193.*A	ID	FAIRFIELD	FROSTENSON FLD	None
05431.1*A	IN	LEBANON	BOONE COUNTY	None
19022.*A	OK	HOLDENVILLE	HOLDENVILLE MUNI	None
17379.*A	ND	KULM	KULM MUNI	None
22665.01*A	SD	EAGLE BUTTE	CHEYENNE EAGLE BUTTE	None
22629.8*A	SD	BRITTON	BRITTON MUNI	None
19507.*A	OR	MANZANITA	NEHALEM BAY STATE	None
24874.2*A	TX	SUNRAY	SUNRAY	None
12177.1*A	MO	UNIONVILLE	UNIONVILLE MUNI	None
14646.1*A	NM	LOVINGTON	LEA COUNTY/ZIP FRANKLIN MEML	None
01764.1*A	CA	LEE VINING	LEE VINING	None
50470.*A	AK	MCKINLEY PARK	MC KINLEY NTL PARK	None
01521.*A	CA	DUNSMUIR	DUNSMUIR MUNI-MOTT	None
26414.1*A	WA	SPANAWAY	SHADY ACRES	None
11030.5*A	MN	TYLER	TYLER MUNI	None

53075.*A	PR	HUMACAO	DR HERMENEGILDO ORTIZ QUINONES	None
16557.*A	NC	BLADENBORO	BLADENBORO	None
27086.7*A	WI	CAMP LAKE	CAMP LAKE	None
03455.1*A	FL	PUNTA GORDA	SHELL CREEK AIRPARK	None
23726.14*A	TX	DECATUR	HERITAGE CREEK AIRSTRIP	None
23324.3*A	TX	AMARILLO	BUFFALO	None
08645.01*A	MD	SALISBURY	BENNETT	None
52090.*A	HI	HAWI	UPOLU	None
04031.2*A	GA	SYLVESTER	SYLVESTER	None
16993.*A	NC	OAK RIDGE	DS BUTLER FARM AND AIRFIELD	None
24540.*A	TX	PORTLAND	HUNT	None
25057.1*A	TX	WINTERS	WINTERS MUNI	None
17457.6*A	ND	ST THOMAS	ST THOMAS MUNI	None
24693.4*A	TX	SAN ANTONIO	SAN GERONIMO AIRPARK	None
27090.*A	WI	CASSVILLE	CASSVILLE MUNI	None
05370.6*A	IN	INDIANAPOLIS	POST-AIR	None
05560.1*A	IN	ORLEANS	ORLEANS	None
17493.*A	ND	WESTHOPE	WESTHOPE MUNI	None
05334.1*A	IN	HAGERSTOWN	HAGERSTOWN	None
05140.11*A	IN	BRAZIL	BRAZIL CLAY COUNTY	None
15174.12*A	NY	EAST MORICHES	LUFKER	None
04273.*A	ID	MURPHY	MURPHY	None
01390.*A	CA	CHEMEHUEVI VALLEY	CHEMEHUEVI VALLEY	None
04170.*A	ID	CHAMBERLAIN GUARD STATION	CHAMBERLAIN USFS	None
04294.01*A	ID	PORTHILL	ECKHART INTL	None
06486.3*A	KS	BEAUMONT	BEAUMONT HOTEL	None
19501.57*A	OR	MC DERMITT	MC DERMITT STATE	None
04255.*A	ID	MIDVALE	LEE WILLIAMS MEML	None
19627.*A	OR	VALE	MILLER MEML AIRPARK	None
00653.01*A	AZ	CHINLE	CHINLE MUNI	None
17418.5*A	ND	MINTO	MINTO MUNI	None
50108.3*A	AK	CLARKS POINT	CLARKS POINT	None
02119.8*A	CA	RUTH	RUTH	None
05844.1*A	IA	BEDFORD	BEDFORD MUNI	None
19406.5*A	OR	CORNELIUS	SKYPORT	None
50175.*A	AK	EAGLE	EAGLE	None
19596.01*A	OR	SANDY	COUNTRY SQUIRE AIRPARK	None
21548.5*A	PA	STERLING	SPRING HILL	None
26806.*A	WV	NEW CUMBERLAND	HERRON	None
50270.1*A	AK	GIRDWOOD	GIRDWOOD	None
01384.*A	CA	CEDARVILLE	CEDARVILLE	None
03747.*A	GA	CUTHBERT	LOWER CHATTAHOOCHEE RGNL	None
04087.1*A	GA	WARNER ROBINS	WARNER ROBINS AIR PARK	None
09994.1*A	MI	LAKE CITY	HOME ACRES SKY RANCH	None
09834.01*A	MI	GAYLORD	LAKES OF THE NORTH	None
18584.*A	OH	TREMONT CITY	MAD RIVER AIRPARK	None
26448.*A	WA	VASHON	VASHON MUNI	None
27344.*A	WI	MADISON	BLACKHAWK AIRFIELD	None
06383.1*A	IA	TRAER	TRAER MUNI	None

04116.*A	GA	WRENS	WRENS MEML	None
17853.*A	OH	DESLER	DESLER MUNI LANDING STRIP	None
05269.1*A	IN	FLORA	FLORA MUNI	None
18496.*A	OH	SHELBY	SHELBY COMMUNITY	None
22231.1*A	SC	DARLINGTON	BRANHAMS	None
04744.*A	IL	HIGHLAND	HIGHLAND-WINET	None
15578.1*A	NY	LIVINGSTON	GREEN ACRES	None
22362.*A	SC	LAKE CITY	LAKE CITY MUNI CJ EVANS FLD	None
19560.5*A	OR	PACIFIC CITY	PACIFIC CITY STATE	None
00199.1*A	AL	BUTLER	BUTLER/CHOCTAW COUNTY	None
04242.*A	ID	MACKAY	MACKAY	None
19304.1*A	OK	WAYNOKA	WAYNOKA MUNI	None
06948.51*A	KS	WAKEENEY	TREGO WAKEENEY	None
52080.*A	HI	HANAPEPE	PORT ALLEN	None
51531.*A	MP	ROTA ISLAND	BENJAMIN TAISACAN MANGLONA INTL	None
12157.7*A	MO	THAYER	THAYER MEML	None
24612.1*A	TX	RIO GRANDE CITY	RIO GRANDE CITY MUNI	None
22656.1*A	SD	DESMET	WILDER	None
19602.*A	OR	SEASIDE	SEASIDE MUNI	None
03841.*A	GA	HOMERVILLE	HOMERVILLE	None
12496.1*A	MT	SEELEY LAKE	SEELEY LAKE	None
03054.*A	FL	BELLE GLADE	BELLE GLADE STATE MUNI	None
24659.01*A	TX	ROTAN/ROBY	FISHER COUNTY	None
23337.31*A	TX	ANGLETON	FLYIN TIGER	None
23607.1*A	TX	CLARENDON	SMILEY JOHNSON MUNI/BASS FLD	None
09539.*A	MI	BANNISTER	SHADY LAWN FLD	None
50439.71*A	AK	LARSEN BAY	LARSEN BAY	None
11873.*A	MO	LINCOLN	LINCOLN MUNI	None
04214.7*A	ID	ISLAND PARK	HENRY'S LAKE	None
06224.7*A	IA	NORTHWOOD	NORTHWOOD MUNI	None
07568.1*A	LA	JACKSON	FELICIANA AIRPARK	None
13220.*A	NH	COLEBROOK	GIFFORD FLD	None
04197.*A	ID	GLENNS FERRY	GLENNS FERRY MUNI	None
23062.5*A	TN	LINDEN	JAMES TUCKER	None
07552.*A	LA	HOMER	HOMER MUNI	None
26376.83*A	WA	QUINCY	QUINCY MUNI	None
06962.1*A	KS	WASHINGTON	WASHINGTON COUNTY VETERAN'S MEML	None
50746.*A	AK	TANANA	RALPH M CALHOUN MEML	None
00939.*A	AR	DECATUR	CRYSTAL LAKE	None
13210.*A	NH	BRISTOL	NEWFOUND VALLEY	None
06613.*A	KS	FREDONIA	FREDONIA	None
06658.1*A	KS	HIAWATHA	HIAWATHA MUNI	None
19250.*A	OK	SULPHUR	SULPHUR MUNI	None
17695.1*A	OH	CARROLLTON	PARSONS	None
10430.*A	MI	WATERVLIET	WATERVLIET MUNI	None
00570.*A	AL	VERNON	LAMAR COUNTY	None
00626.*A	AZ	AJO	ERIC MARCUS MUNI	None

13134.1*A	NV	SMITH	ROSASCHI AIR PARK	None
11058.11*A	MN	WASKISH	WASKISH MUNI	None
12467.*A	MT	PHILIPSBURG	RIDDICK FLD	None
11011.5*A	MN	STARBUCK	STARBUCK MUNI	None
06909.*A	KS	STAFFORD	STAFFORD MUNI	None
16046.*A	NY	ROUND LAKE	ROUND LAKE	None
06495.2*A	KS	BIRD CITY	BRESSLER FLD	None
20016.1*A	PA	CENTRE HALL	CENTRE AIRPARK	None
24881.1*A	TX	TAHOKA	T-BAR	None
18244.*A	OH	MOUNT VICTORY	ELLIOTTS LANDING	None
00234.*A	AL	CLAYTON	CLAYTON MUNI	None
04183.*A	ID	DOWNEY	DOWNEY/HYDE MEML/	None
05828.*A	IA	AMANA	AMANA	None
18468.5*A	OH	ST CLAIRSVILLE	ALDERMAN	None
20746.*A	PA	LEHIGHTON	BELTZVILLE	None
04208.9*A	ID	IDAHO CITY	IDAHO CITY USFS	None
04182.*A	ID	DONNELLY	DONALD D COSKI MEML	None
01363.*A	CA	CALIPATRIA	CLIFF HATFIELD MEML	None
04142.*A	ID	BANCROFT	BANCROFT MUNI	None
04206.8*A	ID	HAILEY	MAGIC RESERVOIR	None
04308.65*A	ID	ROCKFORD	ROCKFORD MUNI	None
19380.*A	OR	CASCADE LOCKS	CASCADE LOCKS STATE	None
19589.1*A	OR	ROSEBURG	GEORGE FELT	None
19489.*A	OR	LAKESIDE	LAKESIDE MUNI	None
01635.85*A	CA	GUALALA	OCEAN RIDGE	None
01318.*A	CA	BIEBER	SOUTHARD FLD	None
09776.*A	MI	EAST JORDAN	EAST JORDAN CITY	None
11219.1*A	MS	EUPORA	EUPORA	None
27507.1*A	WI	PRENTICE	PRENTICE	None
05814.1*A	IA	ALBIA	ALBIA MUNI	None
22605.*A	SD	ARLINGTON	ARLINGTON MUNI	None
27704.*A	WI	WILD ROSE	WILD ROSE IDLEWILD	None
10433.*A	MI	WAYLAND	CALKINS FLD	None
18876.11*A	OK	CLEVELAND	CLEVELAND MUNI	None
21569.*A	PA	SUNBURY	SUNBURY	None
19847.*A	PA	BETHEL	GRIMES	None
27224.*A	WI	GRANTSBURG	GRANTSBURG MUNI	None
12430.1*A	MT	LINCOLN	LINCOLN	None
50090.*A	AK	CENTRAL	CENTRAL	None
06555.*A	KS	DIGHTON	DIGHTON	None
09985.1*A	MI	KALAMAZOO	NEWMAN'S	None
19271.*A	OK	TIPTON	TIPTON MUNI	None
20622.*A	PA	JERSEY SHORE	JERSEY SHORE	None
23602.*A	TX	CISCO	CISCO MUNI	None
24241.5*A	TX	LOUISE	FLYING V RANCH	None
24827.3*A	TX	SONORA	SONORA MUNI	None
24843.13*A	TX	STANTON	STANTON MUNI	None
26159.1*A	WA	CLE ELUM	DE VERE FLD	None
12346.*A	MT	FAIRVIEW	FAIRVIEW	None
05935.1*A	IA	CRESCO	ELLEN CHURCH FLD	None

09301.*A	MA	SPENCER	SPENCER	None
06508.5*A	KS	BUCKLIN	BUCKLIN	None
12279.*A	MT	BRIDGER	BRIDGER MUNI	None
12370.*A	MT	GERALDINE	GERALDINE	None
22543.*A	SC	TIMMONSVILLE	HUGGINS MEML	None
22300.*A	SC	GRANITEVILLE	TWIN LAKES	None
18585.*A	OH	TROY	WACO FLD	None
19374.*A	OR	BOARDMAN	BOARDMAN	None
02528.1*A	CO	BRUSH	BRUSH MUNI	None
00106.*A	AL	ADDISON	ADDISON MUNI	None
18663.8*A	OH	WEST UNION	ALEXANDER SALAMON	None
09920.*A	MI	HILLMAN	HILLMAN	None
04235.*A	ID	LOWMAN	WARM SPRINGS CREEK	None
19548.1*A	OR	OAKRIDGE	OAKRIDGE STATE	None
09527.*A	MI	ATLANTA	ATLANTA MUNI	None
52061.*A	HI	HANA	HANA	None
23960.51*A	TX	GRAFORD	POSSUM KINGDOM	None
00713.*A	AZ	KEARNY	KEARNY	None
11891.1*A	MO	MANSFIELD	MANSFIELD MUNI	None
52276.*A	HI	KAMUELA	WAIMEA-KOHALA	None
19103.6*A	OK	MOORELAND	MOORELAND MUNI	None
26424.3*A	WA	STANWOOD	CAMANO ISLAND AIRFIELD	None
17433.*A	ND	NEW ROCKFORD	TOMLINSON FLD	None
21549.2*A	PA	STEWARTSTOWN	SHOESTRING AVIATION AIRFIELD	None
23637.3*A	TX	COLORADO CITY	COLORADO CITY	None
23608.3*A	TX	CLARKSVILLE	CLARKSVILLE/RED RIVER CTY-J D TRISELL FLD	None
14971.6*A	NY	CAMBRIDGE	CHAPIN FLD	None
05337.*A	IN	HANOVER	LEE BOTTOM	None
11914.01*A	MO	MARYVILLE	RANKIN	None
09998.*A	MI	LAKE ISABELLA	LAKE ISABELLA - CAL BREWER MEML	None
08512.*A	MD	CUMBERLAND	MEXICO FARMS	None
05196.*A	IN	CONVERSE	CONVERSE	None
07710.*A	LA	POLLOCK	POLLOCK MUNI	None
01234.12*A	CA	ALTURAS	CALIFORNIA PINES	None
01678.*A	CA	HYAMPOM	HYAMPOM	None
15682.*A	NY	MIDDLESEX	MIDDLESEX VALLEY	None
50103.*A	AK	CHITINA	CHITINA	None
05823.*A	IA	ALLISON	ALLISON MUNI	None
11555.*A	MO	BONNE TERRE	BONNE TERRE MUNI	None
02587.*A	CO	EADS	EADS MUNI	None
23675.1*A	TX	CROSBYTON	CROSBYTON MUNI	None
25243.1*A	UT	PANGUITCH	PANGUITCH MUNI	None
25284.*A	UT	SALINA	SALINA-GUNNISON	None
04295.*A	ID	PRAIRIE	SMITH PRAIRIE	None
00700.11*A	AZ	GRAND CANYON	VALLE	None
50426.6*A	AK	KONGIGANAK	KONGIGANAK	None
01356.1*A	CA	BUTTONWILLOW	ELK HILLS-BUTTONWILLOW	None
02295.4*A	CA	SIERRAVILLE	SIERRAVILLE DEARWATER	None
04188.1*A	ID	ELK CITY	ELK CITY	None

04277.5*A	ID	OAKLEY	OAKLEY MUNI	None
04277.1*A	ID	NORDMAN	PRIEST LAKE USFS	None
22784.4*A	SD	ROSEBUD	ROSEBUD SIOUX TRIBAL	None
10139.1*A	MI	NAPOLEON	VAN WAGNEN	None
19275.1*A	OK	TISHOMINGO	TISHOMINGO AIRPARK	None
24593.*A	TX	RANGER	RANGER MUNI	None
53120.*A	PR	MAYAGUEZ	EUGENIO MARIA DE HOSTOS	None
21233.*A	PA	PHILIPSBURG	MID-STATE	None
50101.*A	AK	CHISTOCHINA	CHISTOCHINA	None
26104.11*A	WA	BATTLE GROUND	CEDARS NORTH	None
03685.2*A	GA	BUENA VISTA	MARION COUNTY	None
22399.*A	SC	LORIS	TWIN CITY	None
17016.3*A	NC	PINEHURST	DERBY AERODROME	None
17453.5*A	ND	ROLETTE	ROLETTE	None
50475.*A	AK	MANLEY HOT SPRINGS	MANLEY HOT SPRINGS	None
24457.3*A	TX	PADUCAH	DAN E RICHARDS MUNI	None
24200.13*A	TX	LEAKEY	REAL COUNTY	None
18809.*A	OK	BEAVER	BEAVER MUNI	None
11633.11*A	MO	CHARLESTON	MISSISSIPPI COUNTY	None
00999.36*A	AR	GREENBRIER	ARKAVALLEY	None
25065.*A	TX	WOODVILLE	TYLER COUNTY	None
23442.*A	TX	BISHOP	BISHOP-WINDHAM	None
24254.*A	TX	LULING	THE CARTER MEML	None
06690.5*A	KS	INGALLS	INGALLS MUNI	None
13090.5*A	NV	MINA	MINA	None
25570.*A	VT	VERGENNES	BASIN HARBOR	None
19620.3*A	OR	TOLEDO	TOLEDO STATE	None
08049.65*A	ME	ISLESBORO	ISLESBORO	None
06569.*A	KS	ELLINWOOD	ELLINWOOD MUNI	None
26062.*A	VA	WEIRWOOD	CAMPBELL FLD	None
11953.1*A	MO	MOUNT VERNON	MOUNT VERNON MUNI	None
01722.5*A	CA	KLAMATH GLEN	ANDY MC BETH	None
01548.*A	CA	EMIGRANT GAP	BLUE CANYON - NYACK	None
04176.11*A	ID	COEUR D'ALENE	MAGEE	None
50497.*A	AK	MINCHUMINA	MINCHUMINA	None
50749.1*A	AK	TATITLEK	TATITLEK	None
00658.*A	AZ	CLIFTON/MORENCI	GREENLEE COUNTY	None
50122.1*A	AK	COPPER CENTER	COPPER CENTER 2	None
14736.12*A	NM	SILVER CITY	WHISKEY CREEK	None
07947.*A	ME	DOVER/FOXCROFT	CHARLES A CHASE JR MEML FLD	None
00791.1*A	AZ	SELIGMAN	SELIGMAN	None
24638.11*A	TX	ROCKWALL	POETRY FLYING RANCH	None
06551.5*A	KS	COTTONWOOD FALLS	COTTONWOOD FALLS	None
08343.1*A	ME	STONINGTON	STONINGTON MUNI	None
16130.*A	NY	SCHUYLerville	GARNSEYS	None
23337.2*A	TX	ANGLETON	BAILES	None
06810.1*A	KS	OLATHE	CEDAR AIR PARK	None
17054.*A	NC	REIDSVILLE	WARF	None
19144.*A	OK	OLUSTEE	OLUSTEE MUNI	None
24822.*A	TX	SOMERSET	CANNON FLD	None

13106.*A	NV	OWYHEE	OWYHEE	None
12337.*A	MT	DUTTON	DUTTON	None
13011.*A	NV	ALAMO	ALAMO LANDING FLD	None
11414.5*A	MS	RIGHTON	RIGHTON-PERRY COUNTY	None
01512.*A	CA	DORRIS	BUTTE VALLEY	None
19167.*A	OK	POND CREEK	POND CREEK MUNI	None
11231.1*A	MS	FOREST	G V MONTGOMERY	None
25106.8*A	UT	BLUFF	BLUFF	None
19578.*A	OR	PROSPECT	PROSPECT STATE	None
12408.*A	MT	JORDAN	JORDAN	None
18744.*A	OH	YOUNGSTOWN	LANSDOWNE	None
27105.5*A	WI	CHILTON	FLYING FEATHERS	None
04285.7*A	ID	PINE	PINE	None
04185.*A	ID	DUBOIS	DUBOIS MUNI	None
50533.*A	AK	NINILCHIK	NINILCHIK	None
01508.*A	CA	DINSMORE	DINSMORE	None
02387.*A	CA	UPPER LAKE	GRAVELLY VALLEY	None
01569.3*A	CA	FAMOSO	POSO-KERN COUNTY	None
01494.62*A	CA	DEATH VALLEY NATIONAL PARK	STOVEPIPE WELLS	None
03937.5*A	GA	NAHUNTA	BRANTLEY COUNTY	None
04178.*A	ID	COLD MEADOWS GUARD STATION	COLD MEADOWS USFS	None
04179.*A	ID	DIXIE	DIXIE USFS	None
04214.*A	ID	INDIAN CREEK	INDIAN CREEK USFS	None
04275.5*A	ID	NEW MEADOWS	NEW MEADOWS	None
04334.*A	ID	SLATE CREEK	SLATE CREEK	None
04352.1*A	ID	WARREN	WARREN /USFS/	None
10658.95*A	MN	EAST GULL LAKE	EAST GULL LAKE	None
14583.*A	NM	CONCHAS DAM	CONCHAS LAKE	None
27131.65*A	WI	CORNUCOPIA	CORNUCOPIA FLD	None
02750.*A	CO	WALDEN	WALDEN-JACKSON COUNTY	None
22510.1*A	SC	ST GEORGE	ST GEORGE	None
17356.7*A	ND	HAZELTON	HAZELTON MUNI	None
00630.3*A	AZ	BAGDAD	BAGDAD	None
17249.1*A	ND	ARTHUR	ARTHUR	None
18845.91*A	OK	CARNEGIE	CARNEGIE MUNI	None
27722.*A	WI	WONEWOC	THREE CASTLES AIRPARK	None
06186.01*A	IA	MOUNT AYR	JUDGE LEWIS FLD/MOUNT AYR MUNI	None
06086.*A	IA	LAKE MILLS	LAKE MILLS MUNI	None
15242.*A	NY	FISHERS ISLAND	ELIZABETH FLD	None
02932.1*A	CT	WATERBURY	WATERBURY	None
27643.5*A	WI	VERONA	VERONA	None
05834.3*A	IA	ANITA	ANITA MUNI-KEVIN BURKE MEML FLD	None
05971.5*A	IA	ELDORA	ELDORA	None
06080.6*A	IA	KEOSAUQUA	KEOSAUQUA MUNI	None
10206.1*A	MI	PAW PAW	ALMENA	None
10738.5*A	MN	HILL CITY	HILL CITY/QUADNA MOUNTAIN	None
10945.1*A	MN	REMER	REMER MUNI	None
18310.*A	OH	NORTH BASS ISLAND	NORTH BASS ISLAND	None



24137.623*A	TX	JUSTIN	CLARK	None
23771.*A	TX	DORCHESTER	TXAEROSPORT AERODROME	None
26457.*A	WA	WATERVILLE	WATERVILLE	None
26463.*A	WA	WESTPORT	WESTPORT	None
27181.*A	WI	ELROY	ELROY	None
04982.12*A	IL	RUSHVILLE	SCHUY-RUSH	None
06914.9*A	KS	STILWELL	HILLSIDE	None
06604.01*A	KS	FOWLER	FOWLER	None
10796.*A	MN	LITTLEFORK	LITTLEFORK MUNI/HANOVER	None
02521.*A	CO	BLANCA	BLANCA	None
26693.02*A	WV	HUNTINGTON	ROBERT NEWLON FLD	None
06780.02*A	KS	MONTEZUMA	MONTEZUMA MUNI	None
02564.21*A	CO	DELTA	WESTWINDS	None
15128.01*A	NY	DEGRASSE	MOORES	None
23292.01*A	TX	AGUA DULCE	OLD HOPPE PLACE	None
27752.1*A	WY	CASPER	HARFORD FLD	None
06381.4*A	IA	TOLEDO	TOLEDO MUNI	None
13044.4*A	NV	CURRANT	CURRANT RANCH	None
25124.8*A	UT	DUTCH JOHN	DUTCH JOHN	None
25160.*A	UT	HANKSVILLE	HANKSVILLE	None
24874.8*A	TX	SUNRISE BEACH	SUNRISE BEACH	None
22825.*A	SD	WEBSTER	THE SIGURD ANDERSON	None
50449.01*A	AK	LEVELOCK	LEVELOCK	None
17433.7*A	ND	NEW TOWN	NEW TOWN MUNI	None
08656.*A	MD	STEVENSVILLE	KENTMORR AIRPARK	None
17410.*A	ND	MILNOR	MILNOR MUNI	None
07586.*A	LA	KEITHVILLE	BLUEBIRD HILL	None
03000.5*A	DE	WYOMING	JENKINS	None
25170.*A	UT	JUNCTION	JUNCTION	None
04340.53*A	ID	STANLEY	BRUCE MEADOWS	None
04342.5*A	ID	THREE CREEK	MURPHY HOT SPRINGS	None
04340.51*A	ID	STANLEY	STANLEY	None
50420.01*A	AK	KLAWOCK	KLAWOCK	None
18785.*A	OK	ANADARKO	ANADARKO MUNI	None
11122.5*A	MS	ACKERMAN	ACKERMAN CHOCTAW COUNTY	None
14649.1*A	NM	MAGDALENA	MAGDALENA	None
01606.*A	CA	GASQUET	WARD FLD	None
21249.*A	PA	PITTSBURGH	PITTSBURGH NORTHEAST	None
50464.01*A	AK	MCCARTHY	MCCARTHY	None
06510.*A	KS	CALDWELL	CALDWELL MUNI	None
12368.*A	MT	GARDINER	GARDINER	None
12404.4*A	MT	HYSHAM	HYSHAM	None
18656.111*A	OH	WEST LAFAYETTE	TRI-CITY	None
19348.*A	OR	ARLINGTON	ARLINGTON MUNI	None
17469.*A	ND	TOWNER	TOWNER MUNI	None
24397.21*A	TX	MUNDAY	MUNDAY MUNI	None
25070.1*A	TX	YOAKUM	YOAKUM MUNI	None
20228.81*A	PA	DOVER	LAZY B RANCH	None
15658.01*A	NY	MAYVILLE	DART	None
15301.*A	NY	GHENT	KLINE KILL	None

25190.1*A	UT	MANILA	MANILA	None
02657.*A	CO	LAS ANIMAS	CITY OF LAS ANIMAS - BENT COUNTY	None
11814.*A	MO	KAHOKA	KAHOKA MUNI	None
25659.4*A	VA	BUMPASS	LAKE ANNA	None
20616.11*A	PA	JEANNETTE	GREENSBURG JEANNETTE RGNL	None
19633.5*A	OR	WALDPORT	WAKONDA BEACH STATE	None
10618.6*A	MN	CLARISSA	CLARISSA MUNI	None
09969.5*A	MI	ISHPEMING	EDWARD F JOHNSON	None
22649.5*A	SD	CORSICA	CORSICA MUNI	None
26401.*A	WA	SEKIU	SEKIU	None
05635.*A	IN	SCOTTSBURG	HONAKER FLD	None
50055.5*A	AK	BARTER ISLAND	BARTER ISLAND	None
50742.*A	AK	TANACROSS	TANACROSS	None
04141.3*A	ID	ATLANTA	GRAHAM USFS	None
04230.*A	ID	LANDMARK	LANDMARK USFS	None
04263.*A	ID	MOOSE CREEK RANGER STATION	MOOSE CREEK /USFS/	None
26267.4*A	WA	LAURIER	AVEY FLD	None
17399.7*A	ND	MC VILLE	MC VILLE MUNI	None
26412.*A	WA	SOUTH BEND/RAYMOND/	WILLAPA HARBOR	None
06096.*A	IA	LARCHWOOD	ZANGGER VINTAGE AIRPARK	None
09777.5*A	MI	EASTPORT	TORCHPORT	None
12523.*A	MT	TERRY	TERRY	None
18837.9*A	OK	BROKEN BOW	BROKEN BOW	None
02843.4*A	CT	MARLBOROUGH	SALMON RIVER AIRFIELD	None
19295.11*A	OK	WALTERS	WALTERS MUNI	None
16127.*A	NY	SCHROON LAKE	SCHROON LAKE	None
24414.5*A	TX	NEWTON	NEWTON MUNI	None
24586.9*A	TX	QUINLAN	ROCKIN M	None
16286.1*A	NY	TROY	RENSSELAER COUNTY	None
01704.*A	CA	JACUMBA	JACUMBA	None
23726.11*A	TX	DECATUR	LAZY G BAR RANCH	None
04340.52*A	ID	STANLEY	THOMAS CREEK	None
04141.31*A	ID	ATLANTA	WEATHERBY USFS	None
50540.1*A	AK	NONDALTON	NONDALTON	None
50587.7*A	AK	PEDRO BAY	PEDRO BAY	None
26530.*A	WV	BERKELEY SPRINGS	POTOMAC AIRPARK	None
05960.*A	IA	DYERSVILLE	DYERSVILLE AREA	None
16793.1*A	NC	HICKORY	WILSON'S	None
50321.01*A	AK	HOONAH	HOONAH	None
50790.1*A	AK	UGASHIK	UGASHIK	None
00833.1*A	AZ	WINDOW ROCK	WINDOW ROCK	None
19129.*A	OK	NOWATA	NOWATA MUNI	None
24812.6*A	TX	SLIDELL	CAIN	None
07103.*A	KY	DAWSON SPRINGS	TRADEWATER	None
09622.35*A	MI	CARLETON	BUZZWICK	None
14954.1*A	NY	BUFFALO	CLARENCE AERODROME	None
23909.61*A	TX	FULSHEAR	COVEY TRAILS	None
13259.3*A	NH	GORHAM	GORHAM	None

09791.*A	MI	EVART	EVART MUNI	None
13104.1*A	NV	OVERTON	ECHO BAY	None
13130.1*A	NV	SEARCHLIGHT	SEARCHLIGHT	None
22699.*A	SD	HOWARD	HOWARD MUNI	None
14385.*A	NJ	VINELAND	KROELINGER	None
17310.1*A	ND	DUNSEITH	INTL PEACE GARDEN	None
19607.36*A	OR	SIXES	CAPE BLANCO STATE	None
50182.*A	AK	EKWOK	EKWOK	None
50528.7*A	AK	NEW STUYAHOK	NEW STUYAHOK	None
00897.13*A	AR	BERRYVILLE	TRIGGER GAP	None
00806.2*A	AZ	TEMPLE BAR	TEMPLE BAR	None
01661.*A	CA	HERLONG	HERLONG	None
02295.*A	CA	SHOSHONE	SHOSHONE	None
14596.6*A	NM	DULCE	JICARILLA APACHE NATION	None
19133.1*A	OK	OKEMAH	OKEMAH MUNI	None
50097.53*A	AK	CHIGNIK	CHIGNIK	None
50097.51*A	AK	CHIGNIK LAGOON	CHIGNIK LAGOON	None
26240.*A	WA	ILWACO	PORT OF ILWACO	None
17470.6*A	ND	TURTLE LAKE	TURTLE LAKE MUNI	None
16353.7*A	NY	WARSAW	R & R AERO	None
26354.*A	WA	POINT ROBERTS	POINT ROBERTS AIRPARK	None
18974.*A	OK	GAGE	GAGE	None
27586.01*A	WI	SPOONER	NEST OF EAGLES	None
22725.55*A	SD	MC LAUGHLIN	MC LAUGHLIN MUNI	None
05709.1*A	IN	VEVAY	ROBINSON	None
12531.1*A	MT	TOWNSEND	CANYON FERRY	None
50725.*A	AK	SUMMIT	SUMMIT	None
08745.*A	MA	BARRE/BARRE PLAINS	TANNER-HILLER	None
06564.1*A	KS	EL DORADO	PATTY FLD	None
18582.*A	OH	TORONTO	EDDIE DEW MEML AIRPARK	None
27900.2*A	WY	UPTON	UPTON MUNI	None
11199.5*A	MS	CROSBY	CROSBY MUNI	None
19566.1*A	OR	PINEHURST	PINEHURST STATE	None
18194.*A	OH	MIDDLE BASS ISLAND	MIDDLE BASS-EAST POINT	None
26328.1*A	WA	OLYMPIA	HOSKINS FLD	None
52271.*A	HI	KALAUPAPA	KALAUPAPA	None
24635.2*A	TX	ROCKSPRINGS	EDWARDS COUNTY	None
23595.31*A	TX	CHINA SPRING	WILDCAT CANYON	None
06361.7*A	IA	SULLY	SULLY MUNI	None
04242.1*A	ID	MACKAY	COPPER BASIN	None
04225.3*A	ID	KETCHUM	TWIN BRIDGES	None
19004.1*A	OK	HEALDTON	HEALDTON MUNI	None
24068.12*A	TX	HOUSTON	HOUSTON FORT BEND	None
26269.1*A	WA	LEAVENWORTH	LAKE WENATCHEE STATE	None
50447.*A	AK	LAWING	LAWING	None
23955.4*A	TX	GORDONVILLE	CEDAR MILLS	None
09892.*A	MI	HARRIETTA	EAGLES LANDING	None
18960.*A	OK	ERICK	HADDOCK FLD	None
19072.01*A	OK	LEXINGTON	MC CASLIN	None
23548.5*A	TX	CANTON	CANTON-HACKNEY	None

04008.5*A	GA	SOPERTON	TREUTLEN COUNTY	None
06917.*A	KS	SUBLETTE	SUBLETTE MUNI	None
10370.*A	MI	THOMPSONVILLE	THOMPSONVILLE	None
10875.*A	MN	NORTHOME	NORTHOME MUNI	None
12322.*A	MT	DELL	DELL FLIGHT STRIP	None
19760.2*A	PA	BALLY	BUTTER VALLEY GOLF PORT	None
23575.64*A	TX	CELINA	BISHOP'S LANDING	None
23741.21*A	TX	DELL CITY	DELL CITY MUNI	None
24120.21*A	TX	JAYTON	KENT COUNTY	None
24339.*A	TX	MEMPHIS	MEMPHIS MUNI	None
24503.6*A	TX	PINELAND	PINELAND MUNI	None
12274.1*A	MT	BOULDER	BOULDER	None
16862.23*A	NC	LIBERTY	HINSHAW (GREENACRES)	None
06464.01*A	KS	ARGONIA	ARGONIA MUNI	None
06692.*A	KS	JETMORE	JETMORE MUNI	None
10167.01*A	MI	NUNICA	HAT FLD	None
10139.02*A	MI	NAPOLEON	WOLF LAKE	None
16815.11*A	NC	JACKSONVILLE	SKY MANOR	None
14667.1*A	NM	MOUNTAINAIR	MOUNTAINAIR MUNI	None
12136.2*A	MO	SPRINGFIELD	FLYING BAR H RANCH	None
22673.*A	SD	EUREKA	EUREKA MUNI	None
16813.5*A	NC	HURDLE MILLS	WHITFIELD FARMS	None
24694.8*A	TX	SAN ANTONIO	TWIN-OAKS	None
20147.*A	PA	CORRY	CORRY-LAWRENCE	None
50585.14*A	AK	PALMER	BUTTE MUNI	None
19415.2*A	OR	CULVER	LAKE BILLY CHINOOK STATE	None
50221.5*A	AK	FALSE PASS	FALSE PASS	None
04329.*A	ID	SHEARER	SHEARER /USFS/	None
19559.*A	OR	OWYHEE	OWYHEE RESERVOIR STATE	None
04228.5*A	ID	KOOSKIA	KOOSKIA MUNI	None
09606.81*A	MI	BROOKLYN	BROOKLYN	None
05548.*A	IN	OAKTOWN	ED-AIR	None
05973.*A	IA	ELKADER	ELKADER	None
17329.*A	ND	FESSENDEN	FESSENDEN-STREIBEL MUNI	None
00756.78*A	AZ	PIMA	FLYING J RANCH	None
17517.*A	OH	ADA	ADA	None
17227.03*A	NC	YADKINVILLE	LONE HICKORY	None
18469.4*A	OH	SALEM	KOONS	None
27793.5*A	WY	GLENDO	THOMAS MEML	None
15049.*A	NY	CLAY	AIRLANE ENTERPRISES	None
07945.1*A	ME	DIXFIELD	SWANS FLD	None
50027.53*A	AK	ALEKNAGIK	ALEKNAGIK /NEW	None
50277.*A	AK	GOODNEWS	GOODNEWS	None
50498.1*A	AK	MINTO	MINTO AL WRIGHT	None
50615.2*A	AK	PORT LIONS	PORT LIONS	None
50721.*A	AK	STEVENS VILLAGE	STEVENS VILLAGE	None
00712.8*A	AZ	KAYENTA	KAYENTA	None
01286.1*A	CA	BAKER	BAKER	None
03025.1*A	FL	APALACHICOLA	ST GEORGE ISLAND	None
04262.1*A	ID	MOORE	ANTELOPE VALLEY	None

04142.3*A	ID	BERNARD	BERNARD USFS	None
04166.*A	ID	CAYUSE CREEK	CAYUSE CREEK USFS	None
04244.5*A	ID	MAHONEY CREEK	MAHONEY CREEK USFS	None
04167.1*A	ID	CHALLIS	UPPER LOON CREEK USFS	None
12494.*A	MT	SCHAFFER	SCHAFFER /USFS/	None
14734.02*A	NM	SHIPROCK	SHIPROCK AIRSTRIP	None
19413.*A	OR	CRESCENT LAKE	CRESCENT LAKE STATE	None
19447.4*A	OR	GATES	DAVIS	None
24275.1*A	TX	MC LEAN	MC LEAN/GRAY COUNTY	None
09990.*A	MI	KENT CITY	WILDERNESS AIRPARK	None
24489.2*A	TX	PEARLAND	SKYWAY MANOR	None
06065.2*A	IA	IDA GROVE	IDA GROVE MUNI	None
06219.*A	IA	NEW HAMPTON	NEW HAMPTON MUNI	None
06181.01*A	IA	MONTEZUMA	SIG FLD	None
06428.*A	IA	WOODBINE	WOODBINE MUNI	None
09787.3*A	MI	EMPIRE	EMPIRE	None
10437.01*A	MI	WEIDMAN	OJIBWA AIRPARK	None
09780.11*A	MI	EATON RAPIDS	SKYWAY ESTATES	None
10166.*A	MI	NORTHPORT	WOOLSEY MEML	None
02581.*A	CO	DOVE CREEK	DOVE CREEK	None
07867.*A	ME	BOWDOINHAM	MERRYMEETING FLD	None
09563.*A	MI	BELLEVILLE	BELLEVILLE	None
10287.*A	MI	ROSCOMMON	ROSCOMMON CONSERVATION	None
02531.75*A	CO	CALHAN	CALHAN	None
14741.6*A	NM	TATUM	TATUM	None
13241.*A	NH	ERROL	ERROL	None
26030.5*A	VA	TANGIER	TANGIER ISLAND	None
19076.11*A	OK	LINDSAY	LINDSAY MUNI	None
06799.5*A	KS	NORWICH	NORWICH	None
24340.*A	TX	MENARD	MENARD COUNTY	None
18305.3*A	OH	NEWTON FALLS	BRACEVILLE	None
05805.*A	IA	ACKLEY	ACKLEY MUNI	None
04194.9*A	ID	FISH LAKE	FISH LAKE /USFS/	None
19254.*A	OK	TALIHINA	TALIHINA MUNI	None
19476.21*A	OR	IMNAHA	MEMALOOSE USFS	None
50121.5*A	AK	COOPER LANDING	QUARTZ CREEK	None
09682.9*A	MI	CLINTON	HONEY ACRES	None
09657.02*A	MI	CHARLOTTE	WEND VALLEY	None
18843.01*A	OK	BURNEYVILLE	FALCONHEAD	None
18897.*A	OK	CORDELL	CORDELL MUNI	None
17521.1*A	OH	AKRON	MAYFIELD	None
12182.81*A	MO	VAN BUREN	BOLLINGER-CRASS MEML	None
50324.*A	AK	HOPE	HOPE	None
07870.*A	ME	BREWER	BREWER	None
17158.1*A	NC	TAYLORSVILLE	TAYLORSVILLE	None
00103.*A	AL	ABBEVILLE	ABBEVILLE MUNI	None
01979.*A	CA	OCOTILLO WELLS	OCOTILLO	None
12511.*A	MT	SPOTTED BEAR	SPOTTED BEAR /USFS/	None
50032.*A	AK	ANAKTUVUK PASS	ANAKTUVUK PASS	None
50828.*A	AK	VENETIE	VENETIE	None

04141.311*A	ID	ATLANTA	ATLANTA	None
04141.7*A	ID	ATOMIC CITY	COXS WELL	None
12443.*A	MT	MEADOW CREEK	MEADOW CREEK USFS	None
19501.7*A	OR	MC KENZIE BRIDGE	MC KENZIE BRIDGE STATE	None
19573.5*A	OR	POWERS	POWERS	None
23779.*A	TX	DRYDEN	TERRELL COUNTY	None
12534.*A	MT	TROY	TROY	None
22748.1*A	SD	MURDO	MURDO MUNI	None
26388.8*A	WA	ROCHESTER	R & K SKYRANCH	None
09955.*A	MI	INTERLOCHEN	GREEN LAKE	None
09938.*A	MI	HOUGHTON LAKE HEIGHTS	HOUGHTON LAKE STATE	None
09547.8*A	MI	BATH	UNIVERSITY AIRPARK	None
10277.1*A	MI	ROCKFORD	WELLS	None
10448.65*A	MI	WINN	WOODRUFF LAKE	None
10560.*A	MN	BIG FALLS	BIG FALLS MUNI	None
10728.*A	MN	GRYGLA	GRYGLA MUNI - MEL WILKENS FLD	None
16251.*A	NY	STORMVILLE	STORMVILLE	None
23577.*A	TX	CELINA	FOUR WINDS	None
24171.*A	TX	KIRBYVILLE	KIRBYVILLE	None
23636.9*A	TX	COLLINSVILLE	SUDDEN STOP	None
27056.*A	WI	BOULDER JUNCTION	BOULDER JUNCTION PAYZER	None
12403.05*A	MT	HOGELAND	HOGELAND	None
16171.*A	NY	SHARON SPRINGS	SHARON	None
10573.*A	MN	BOWSTRING	BOWSTRING	None
12759.1*A	NE	HAY SPRINGS	HAY SPRINGS MUNI	None
24812.5*A	TX	SLIDELL	AKROVILLE	None
23726.13*A	TX	DECATUR	BISHOP	None
26899.*A	WV	SPENCER	SLATE RUN	None
18372.1*A	OH	PAINESVILLE	CONCORD AIRPARK	None
15857.*A	NY	OLEAN	GIERMEK EXEC	None
13047.3*A	NV	DYER	DYER	None
25447.*A	VT	ISLAND POND	JOHN H BOYLAN STATE (ISLAND POND)	None
24387.5*A	TX	MOUNT SELMAN	TARRANT FLD	None
50328.*A	AK	HUGHES	HUGHES	None
02082.*A	CA	RAVENDALE	RAVENDALE	None
13047.01*A	NV	DUCKWATER	DUCKWATER	None
22674.5*A	SD	FAIRBURN	CUSTER STATE PARK	None
13100.21*A	NV	NORTH FORK	STEVENS-CROSBY	None
19403.5*A	OR	CLEARWATER	TOKETEE STATE	None
12256.6*A	MT	AUGUSTA	BENCHMARK	None
26282.*A	WA	MANSFIELD	MANSFIELD	None
09536.*A	MI	BALDWIN	BALDWIN MUNI	None
09829.7*A	MI	FRUITPORT	FLYING-A-RANCH	None
20016.2*A	PA	CENTRE HALL	PENNS CAVE	None
17527.1*A	OH	ALLIANCE	MILLER	None
27801.1*A	WY	GREEN RIVER	GTR GREEN RIVER INTERGALACTIC SPACEPORT	None
05848.*A	IA	BELMOND	BELMOND MUNI	None
17567.2*A	OH	BALTIMORE	MILLER FARM LANDING STRIP	None

22729.2*A	SD	MARTIN	MARTIN MUNI	None
00810.*A	AZ	TOMBSTONE	TOMBSTONE MUNI	None
17067.5*A	NC	ROWLAND	ADAMS	None
16826.1*A	NC	JULIAN	KECKS	None
12049.*A	MO	RICHLAND	RICHLAND MUNI	None
12056.11*A	MO	ROLLA	ROLLA DOWNTOWN	None
24263.*A	TX	MC CAMEY	UPTON COUNTY	None
10362.1*A	MI	SUNFIELD	HIRAM CURE	None
02659.*A	CO	LA VETA	CUCHARA VALLEY AT LA VETA	None
06551.7*A	KS	COUNCIL GROVE	COUNCIL GROVE MUNI	None
02139.*A	CA	SALTON CITY	SALTON SEA	None
24299.2*A	TX	MARLIN	MARLIN	None
50414.1*A	AK	KING COVE	KING COVE	None
50750.*A	AK	TATITNA	TATITNA	None
50855.2*A	AK	WAINWRIGHT	WAINWRIGHT	None
00728.5*A	AZ	MARBLE CANYON	MARBLE CANYON	None
04256.5*A	ID	MINIDOKA	BEAR TRAP	None
04142.51*A	ID	BIG CREEK RANGER STATION	CABIN CREEK USFS	None
17390.1*A	ND	LIDGERWOOD	LIDGERWOOD MUNI	None
19052.1*A	OK	KINGSTON	LAKE TEXOMA STATE PARK	None
19561.1*A	OR	PAISLEY	PAISLEY	None
23359.4*A	TX	ASPERMONT	STONEWALL COUNTY	None
26104.*A	WA	BANDERA	BANDERA STATE	None
26189.*A	WA	EASTON	EASTON STATE	None
26424.5*A	WA	STARBUCK	LITTLE GOOSE LOCK AND DAM	None
26162.1*A	WA	COLFAX	LOWER GRANITE STATE	None
26243.5*A	WA	KAHLOTUS	LOWER MONUMENTAL STATE	None
26409.*A	WA	SKYKOMISH	SKYKOMISH STATE	None
26300.*A	WA	METALINE FALLS	SULLIVAN LAKE STATE	None
26386.6*A	WA	RIMROCK	TIETON STATE	None
10438.8*A	MI	WESTPHALIA	FOREST HILL	None
17399.55*A	ND	MC CLUSKY	MC CLUSKY MUNI	None
25016.1*A	TX	WHARTON	GAV AIR	None
09662.*A	MI	CHEBOYGAN	HOFFMAN'S BLACK MOUNTAIN AERODROME	None
10109.1*A	MI	MOORESTOWN	MOORESTOWN AIRPARK	None
10310.*A	MI	ST HELEN	ST HELEN	None
26888.*A	WV	SHINNSTON	WADE F MALEY FLD	None
18603.11*A	OH	URBANA	WELLER	None
50057.4*A	AK	BEAR LAKE	JOHNSONS LANDING	None
06888.1*A	KS	SEDAN	SEDAN CITY	None
06892.1*A	KS	SENECA	SENECA MUNI	None
06737.9*A	KS	LYNDON	VERSAAIR SERVICES	None
10378.5*A	MI	TOPINABEE	PBEAAYE	None
19096.4*A	OK	MENO	DECKER FLD	None
19320.1*A	OK	WILBURTON	WILBURTON MUNI	None
24726.15*A	TX	SANGER	FLYING C	None
25019.*A	TX	WHEELER	WHEELER MUNI	None
08385.9*A	ME	WALES	WALES	None

50423.*A	AK	KODIAK	KODIAK MUNI	None
18888.*A	OK	COALGATE	CITY OF COALGATE	None
22239.*A	SC	DILLON	DILLON COUNTY	None
12323.4*A	MT	DENTON	DENTON	None
12552.1*A	MT	WHITEFISH	WHITEFISH	None
12492.41*A	MT	SAND SPRINGS	SAND SPRINGS STRIP	None
10447.8*A	MI	WILLIAMSTON	MAIDENS	None
07216.*A	KY	JACKSON	JULIAN CARROLL	None
13062.*A	NV	GABBS	GABBS	None
02644.*A	CO	JULESBURG	JULESBURG MUNI	None
24856.*A	TX	STRATFORD	STRATFORD FLD	None
14462.91*A	NJ	WILLIAMSTOWN	SOUTHERN CROSS	None
50776.*A	AK	TWIN HILLS	TWIN HILLS	None
00811.12*A	AZ	TUBA CITY	TUBA CITY	None
01866.4*A	CA	MARKLEEVILLE	ALPINE COUNTY	None
06288.*A	IA	RINGSTED	PELTZ FLD	None
17270.1*A	ND	BOWBELLS	BOWBELLS MUNI	None
19985.*A	PA	CANADENSIS	FLYING DOLLAR	None
22306.*A	SC	GREEN SEA	GREEN SEA	None
26425.*A	WA	STEHEKIN	STEHEKIN STATE	None
01674.*A	CA	HOOPA	HOOPA	None
09914.*A	MI	HESEL	ALBERT J LINDBERG	None
26291.6*A	WA	MAZAMA	LOST RIVER	None
15349.*A	NY	GREENVILLE	GREENVILLE-RAINBOW	None
06028.1*A	IA	GRUNDY CENTER	GRUNDY CENTER MUNI	None
13434.1*A	NH	TWIN MOUNTAIN	TWIN MOUNTAIN	None
10318.121*A	MI	ST JOHNS	TRIPP CREEK	None
14712.1*A	NM	RESERVE	RESERVE	None
12119.*A	MO	SHELBYVILLE	SHELBY COUNTY	None
22693.8*A	SD	HERREID	HERREID MUNI	None
12571.*A	MT	WISDOM	WISDOM	None
50097.54*A	AK	CHIGNIK LAKE	CHIGNIK LAKE	None
50620.2*A	AK	PROSPECT CREEK	PROSPECT CREEK	None
05470.*A	IN	MENTONE	MENTONE	None
16239.51*A	NY	SPENCERPORT	SPENCERPORT AIRPARK	None
22410.*A	SC	MC CORMICK	MC CORMICK COUNTY	None
22666.*A	SD	EDGEMONT	EDGEMONT MUNI	None
26230.*A	WA	GREENWATER	RANGER CREEK	None
00793.*A	AZ	SELLS	SELLS	None
19597.*A	OR	SANTIAM JUNCTION	SANTIAM JUNCTION STATE	None
50033.5*A	AK	ANCHORAGE	BOLD	None
50114.35*A	AK	COLDFOOT	COLDFOOT	None
50482.*A	AK	MAY CREEK	MAY CREEK	None
50588.61*A	AK	PERRYVILLE	PERRYVILLE	None
50594.7*A	AK	PILOT STATION	PILOT STATION	None
50614.*A	AK	PORT GRAHAM	PORT GRAHAM	None
50714.45*A	AK	SOUTH NAKNEK	SOUTH NAKNEK NR 2	None
00326.*A	AL	FORT DEPOSIT	FORT DEPOSIT-LOWNDES COUNTY	None
00802.*A	AZ	SUPERIOR	SUPERIOR MUNI	None
04163.6*A	ID	CAREY	HOLLOW TOP	None



04236.1*A	ID	MC CALL	KRASSEL USFS	None
04232.6*A	ID	LEADORE	LEADORE	None
04167.11*A	ID	CHALLIS	LOWER LOON CREEK	None
04251.*A	ID	MAY	MAY	None
04360.1*A	ID	YELLOW PINE	REED RANCH	None
04338.*A	ID	SOLDIER BAR	SOLDIER BAR USFS	None
04179.01*A	ID	DIXIE	WILSON BAR USFS	None
06814.*A	KS	ONAGA	CHARLES E GRUTZMACHER MUNI	None
12283.1*A	MT	BROWNING	STARR-BROWNING AIRSTRIP	None
17452.6*A	ND	RIVERDALE	GARRISON DAM RECREATIONAL AIRPARK	None
14585.01*A	NM	CROWNPOINT	CROWNPOINT	None
14679.*A	NM	NAVAJO DAM	NAVAJO LAKE	None
14705.1*A	NM	QUESTA	QUESTA MUNI NR 2	None
15279.5*A	NY	GALLUPVILLE	BLUE HERON	None
25022.65*A	TX	WHITESBORO	FLYING H RANCH	None
26170.*A	WA	COPALIS	COPALIS STATE	None
50031.*A	AK	AMERICAN CREEK	AMERICAN CREEK	None
02886.1*A	CT	PUTNAM	TOUTANT	None
50094.3*A	AK	CHANDALAR LAKE	CHANDALAR LAKE	None
50399.*A	AK	KANTISHNA	KANTISHNA	None
50439.*A	AK	LAKE LOUISE	LAKE LOUISE	None
01168.71*A	AR	SHERRILL	SMITH'S INTL	None
03230.1*A	FL	HIGH SPRINGS	OAK TREE LANDING	None
07929.*A	ME	CUTLER	CUTLER RGNL	None
09699.02*A	MI	CROSWELL	ARNOLD FLD	None
10357.5*A	MI	STANWOOD	CAIN FLD	None
10022.5*A	MI	LEXINGTON	FLUGPLATZ	None
10124.*A	MI	MUNISING	HANLEY FLD	None
12402.6*A	MT	HINSDALE	HINSDALE	None
12464.2*A	MT	OPHEIM	OPHEIM	None
12306.1*A	MT	CONNER	WEST FORK LODGE	None
16177.*A	NY	SHERMAN	PRATT'S EASTERN DIVIDE	None
18841.1*A	OK	BUFFALO	BUFFALO MUNI	None
23347.1*A	TX	ARCHER CITY	ARCHER CITY MUNI	None
24137.68*A	TX	JUSTIN	PROSE FLD	None
26867.*A	WV	RICHWOOD	RICHWOOD MUNI	None
16246.*A	NY	STAATSBURG	AIRHAVEN	None
02861.9*A	CT	NEW MILFORD	CANDLELIGHT FARMS	None
19912.50*A	PA	BREEZEWOOD	GREATER BREEZEWOOD RGNL	None
27132.2*A	WI	CRIVITZ	CRIVITZ MUNI	None
50178.1*A	AK	EGEGIK	EGEGIK	None
50426.25*A	AK	KOKHANOK	KOKHANOK	None
50476.*A	AK	MANOKOTAK	MANOKOTAK	None
06278.*A	IA	RADCLIFFE	DRAKE	None
50642.1*A	AK	RAINY PASS	RAINY PASS LODGE	None
50918.1*A	AK	YAKUTAT	DRY BAY	None
13044.2*A	NV	CRESCENT VALLEY	CRESCENT VALLEY	None
10379.03*A	MI	TRAVERSE CITY	LAKE ANN AIRWAY ESTATES	None
21788.*A	PA	WILLIAMSBURG	COVE VALLEY	None

50754.*A	AK	TAZLINA	TAZLINA	None
12393.*A	MT	HARLOWTON	WHEATLAND COUNTY AT HARLOWTON	None
23690.*A	TX	CUERO	CUERO MUNI	None
21231.*A	PA	PHILIPSBURG	ALBERT	None
50039.8*A	AK	ARCTIC VILLAGE	ARCTIC VILLAGE	None
50072.*A	AK	BOUNDARY	BOUNDARY	None
50092.*A	AK	CHALKYITSIK	CHALKYITSIK	None
50888.*A	AK	WISEMAN	WISEMAN	None
01645.*A	CA	HAPPY CAMP	HAPPY CAMP	None
04141.6*A	ID	ATOMIC CITY	BIG SOUTHERN BUTTE	None
04204.3*A	ID	GRASMERE	GRASMERE	None
04141.5*A	ID	ATOMIC CITY	MIDWAY	None
09896.*A	MI	HARRISVILLE	HARRISVILLE	None
10337.*A	MI	SIDNAW	PRICKETT-GROOMS FLD	None
14609.*A	NM	FORT SUMNER	FORT SUMNER MUNI	None
19365.*A	OR	BEAVER MARSH	BEAVER MARSH	None
12423.1*A	MT	LAVINA	LAVINA	None
06852.8*A	KS	PRAIRIE VIEW	VAN PAK	None
09530.91*A	MI	AVOCA	AVOCA	None
10035.*A	MI	LUZERNE	LOST CREEK	None
12306.*A	MT	CONDON	CONDON USFS	None
23767.11*A	TX	DILLEY	DILLEY AIRPARK	None
10305.*A	MI	ST CLAIR	DAVID'S LANDING	None
09785.*A	MI	ELWELL	HAMP	None
09701.1*A	MI	CRYSTAL FALLS	IRON COUNTY	None
10332.2*A	MI	SCHOOLCRAFT	PRAIRIE RONDE	None
14638.51*A	NM	LINDRITH	LINDRITH AIRPARK	None
50257.5*A	AK	GALBRAITH LAKE	GALBRAITH LAKE	None
12565.9*A	MT	WINIFRED	HELLER FARM	None
24988.15*A	TX	WEATHERFORD	HORSESHOE BEND	None
24121.01*A	TX	JEFFERSON	MANNING FLD	None
10204.3*A	MI	PARCHMENT	TRIPLE H	None
15317.*A	NY	GORHAM	MIDLAKES	None
11537.11*A	MO	BETHANY	BETHANY MEML	None
26471.5*A	WA	WILSON CREEK	WILSON CREEK	None
17319.71*A	ND	ELGIN	ELGIN MUNI	None
22830.1*A	SD	WHITE RIVER	WHITE RIVER MUNI	None
19524.4*A	OR	MONUMENT	MONUMENT MUNI	None
12567.*A	MT	WINNETT	WINNETT	None
22714.8*A	SD	KIMBALL	KIMBALL MUNI	None
09532.01*A	MI	BAD AXE	ENGLER FLD	None
12298.6*A	MT	CLINTON	ROCK CREEK	None
14816.*A	NY	ARCADE	ARCADE TRI-COUNTY	None
22370.*A	SC	LANDRUM	FAIRVIEW	None
12363.2*A	MT	FORT SMITH	FORT SMITH LANDING STRIP	None
15512.*A	NY	KEENE	MARCY FLD	None
06977.1*A	KS	WICHITA	WESTPORT AUXILIARY	None
06739.01*A	KS	LYONS	MAXWELL AVIATION	None
00749.*A	AZ	PEACH SPRINGS	GRAND CANYON WEST	None
25063.2*A	TX	WOLFFORTH	SOUTHWEST LUBBOCK	None

02634.4*A	CO	HAXTUN	HAXTUN MUNI	None
50548.8*A	AK	NUIQSUT	NUIQSUT	None
14766.01*A	NM	ZUNI	ANDREW OTHOLE MEML	None
17450.2*A	ND	PLAZA	TRULSON FLD	None
50016.1*A	AK	AKHIOK	AKHIOK	None
50920.31*A	AK	YAKUTAT	ALSEK RIVER	None
50057.2*A	AK	BEAR CREEK	BEAR CREEK 3	None
50099.*A	AK	CHISANA	CHISANA	None
50109.01*A	AK	CLEAR	CLEAR	None
50990.*A	AK	YUKON CHARLEY RIVERS	COAL CREEK	None
50519.8*A	AK	NANWALEK	NANWALEK	None
50620.5*A	AK	PURKEYPILE	PURKEYPILE	None
50698.*A	AK	SHEEP MOUNTAIN	SHEEP MOUNTAIN	None
50795.*A	AK	UMIAT	UMIAT	None
01182.*A	AR	STEPHENS	WILSON	None
00728.8*A	AZ	MEADVIEW	PEARCE FERRY	None
01217.*A	CA	ADIN	ADIN	None
02717.*A	CO	SAGUACHE	SAGUACHE MUNI	None
04226.*A	ID	KIMAMA	LAIDLAW CORRALS	None
04278.5*A	ID	OROGRANDE	OROGRANDE	None
06975.*A	KS	WICHITA	CESSNA ACFT FLD	None
06669.*A	KS	HORTON	HORTON MUNI	None
08344.*A	ME	SWANS ISLAND	BANKS	None
09898.5*A	MI	HARSENS ISLAND	HARSENS ISLAND	None
10023.31*A	MI	LINCOLN	MILWRICK FLYING M	None
09839.01*A	MI	GLADWIN	SUGAR SPRINGS AIRPARK	None
10459.*A	MI	YALE	YALE	None
12490.7*A	MT	RYEGATE	RYEGATE	None
17287.2*A	ND	COLUMBUS	COLUMBUS MUNI	None
17333.2*A	ND	FORT YATES	STANDING ROCK	None
14585.505*A	NM	CUBA	CUBA LANDING STRIP	None
17759.*A	OH	CLYDE	BANDIT FLD AIRDROME	None
18962.71*A	OK	EUFAULA	FOUNTAINHEAD LODGE AIRPARK	None
19153.2*A	OK	PAWNEE	PAWNEE MUNI	None
19588.*A	OR	ROME	ROME STATE	None
23907.*A	TX	FREER	DUVAL-FREER	None
24349.1*A	TX	MIAMI	MIAMI-ROBERTS COUNTY	None
24712.71*A	TX	SAN AUGUSTINE	SAN AUGUSTINE COUNTY	None
26098.6*A	WA	ANATONE	ROGERSBURG	None
27316.12*A	WI	LAKE GENEVA	GRAND GENEVA RESORT	None
27155.1*A	WI	DRUMMOND	EAU CLAIRE LAKES	None
50543.71*A	AK	NORTH POLE	BRADLEY SKY-RANCH	None
09560.*A	MI	BELDING	BOULDER CANYON	None
09754.6*A	MI	DEXTER	CACKLEBERRY	None
09993.91*A	MI	LAINGSBURG	DENNIS FARMS	None
10459.01*A	MI	YALE	GAVAGAN FLD	None
10318.12*A	MI	ST JOHNS	GLOWACKI	None
10045.*A	MI	MANCELONA	MANCELONA MUNI	None
10078.*A	MI	MECOSTA	MECOSTA MORTON	None
09695.*A	MI	CORUNNA	MILLSTREAM AIRPARK	None

10318.20*A	MI	ST JOHNS	SHADY LANE	None
09786.*A	MI	EMMETT	SHARPE'S STRIP	None
12333.*A	MT	DRUMMOND	DRUMMOND	None
17228.*A	NC	YANCEYVILLE	YANCEYVILLE MUNI	None
19288.3*A	OK	VICI	VICI MUNI	None
23873.15*A	TX	FOLLETT	FOLLETT/LIPSCOMB COUNTY	None
09849.*A	MI	GRAND MARAIS	GRAND MARAIS	None
12565.3*A	MT	WILLSALL	WILLSALL	None
50437.*A	AK	KULIK LAKE	KULIK LAKE	None
05045.*A	IL	WATSON	PERCIVAL SPRINGS	None
07935.*A	ME	DEBLOIS	DEBLOIS FLIGHT STRIP	None
14752.*A	NM	VAUGHN	VAUGHN MUNI	None
19038.01*A	OK	INOLA	DOBIE'S	None
22715.11*A	SD	LAKE ANDES	LAKE ANDES MUNI	None
27885.1*A	WY	SHOSHONI	SHOSHONI MUNI	None
24566.12*A	TX	PRESIDIO	BIG BEND RANCH STATE PARK	None
19118.*A	OK	NINNEKAH	SKYROADS	None
20602.*A	PA	IRWIN	INTER COUNTY	None
11532.6*A	MO	BATES CITY	HARRY S TRUMAN RGNL	None
22691.*A	SD	GROTON	GROTON MUNI	None
12565.83*A	MT	WINIFRED	COW CREEK	None
22714.3*A	SD	KADOKA	KADOKA MUNI	None
13070.*A	NV	GOLDFIELD	LIDA JUNCTION	None
24921.*A	TX	THROCKMORTON	THROCKMORTON MUNI	None
12479.*A	MT	PORT OF DEL BONITA	WHETSTONE INTL	None
17452.*A	ND	RICHARDTON	RICHARDTON	None
10323.01*A	MI	SANDUSKY	COWLEY FLD	None
22711.3*A	SD	ISABEL	ISABEL MUNI	None
50070.*A	AK	BLACK RAPIDS	BLACK RAPIDS	None
10022.1*A	MI	LEWISTON	EAGLE II	None
50920.32*A	AK	YAKUTAT	EAST ALSEK RIVER	None
50920.01*A	AK	YAKUTAT	HARLEQUIN LAKE	None
50465.*A	AK	MCCARTHY	JAKES BAR	None
50492.*A	AK	MIDDLETON ISLAND	MIDDLETON ISLAND	None
50920.1*A	AK	YAKUTAT	SITUK	None
50920.11*A	AK	YAKUTAT	TANIS MESA	None
05297.*A	IN	GALVESTON	GALVESTON	None
09683.*A	MI	CLIO	ALKAY	None
10233.*A	MI	PORT AUSTIN	GRINDSTONE AIR HARBOR	None
10459.12*A	MI	YALE	PARA FLD	None
09943.1*A	MI	HOWELL	RAETHER	None
51533.*A	MP	SHOMU-SHON	PAGAN AIRSTRIP	None
12490.*A	MT	RUSSIAN FLAT	RUSSIAN FLAT	None
17335.66*A	ND	GACKLE	GACKLE MUNI	None
19038.*A	OK	INOLA	BUZZARDS ROOST	None
19346.75*A	OR	ALKALI LAKE	ALKALI LAKE STATE	None
19605.1*A	OR	SILVER LAKE	SILVER LAKE F S STRIP	None
23704.1*A	TX	DAINGERFIELD	GREATER MORRIS COUNTY	None
24048.*A	TX	HIGGINS	HIGGINS/LIPSCOMB COUNTY	None
24959.4*A	TX	VALLEY MILLS	VALLEY MILLS MUNI	None

08100.*A	ME	LUBEC	LUBEC MUNI	None
12403.5*A	MT	HOT SPRINGS	HOT SPRINGS	None
12572.*A	MT	WISE RIVER	WISE RIVER	None
12565.85*A	MT	WINIFRED	BLACK BUTTE NORTH	None
23652.5*A	TX	CONWAY	EAGLES AERODROME	None
50095.12*A	AK	CHEFORNAK	CHEFORNAK	None
50216.32*A	AK	FAIRBANKS	GOLD KING CREEK	None
09674.2*A	MI	CLARE	DENTON FARMS	None
09879.*A	MI	HALE	FIELD OF DREAMS	None
10274.1*A	MI	ROCK	VAN EFFEN FLD	None
24726.14*A	TX	SANGER	VULTURES ROW	None
50759.3*A	AK	VALDEZ	THOMPSON PASS	None
12247.2*A	MT	AUGUSTA	AUGUSTA	None
23306.22*A	TX	ALPINE	TERLINGUA RANCH	None
12565.84*A	MT	WINIFRED	BULLWHACKER	None
12565.82*A	MT	WINIFRED	LEFT COULEE	None
12565.81*A	MT	WINIFRED	KNOX RIDGE	None
12565.86*A	MT	WINIFRED	WOODHAWK	None
01578.9*A	CA	FORT BIDWELL	FORT BIDWELL	None
26843.*A	WV	PHILIPPI	SIMPSON	None
14613.71*A	NM	GLENWOOD	GLENWOOD	None
27766.*A	WY	COKEVILLE	COKEVILLE MUNI	None
50044.5*A	AK	ATQASUK	ATQASUK EDWARD BURNELL SR MEML	None
14538.61*A	NM	APACHE CREEK	JEWETT MESA	None
18972.51*A	OK	FREEDOM	FREEDOM MUNI	None
12114.*A	MO	SEYMOUR	OWEN FLD	None
27846.*A	WY	MEDICINE BOW	MEDICINE BOW	None
50127.*A	AK	COUNCIL	COUNCIL	None
50056.5*A	AK	BASIN CREEK	ENGSTROM FLD	None
50622.5*A	AK	QUAIL CREEK	QUAIL CREEK	None
26498.*A	WV	ARTHURDALE	TITUS FLD	None
50875.*A	AK	WHITTIER	WHITTIER	None
00749.02*A	AZ	PEACH SPRINGS	GRAND CANYON CAVERNS	None
14605.21*A	NM	ESTANCIA	ESTANCIA MUNI	None
12303.1*A	MT	COLSTRIP	COLSTRIP	None
12484.01*A	MT	RICHEY	RICHEY	None
14524.02*A	NM	ALAMOGORDO	TIMBERON	None
14740.21*A	NM	SPRINGER	SPRINGER MUNI	None
00761.*A	AZ	POLACCA	POLACCA	None
12529.4*A	MT	TIBER DAM	TIBER DAM	None
19212.4*A	OK	SEILING	SEILING	None
06584.19*A	KS	ERIE	SQUADRON FLD	None
50575.*A	AK	OPHIR	OPHIR	None
08251.01*A	ME	SACO	GREATON AIRFIELD	None
23973.61*A	TX	GRANITE SHOALS	GRANITE SHOALS/ BOB SYLVESTER AIRPARK	None
50272.*A	AK	GLACIER CREEK	GLACIER CREEK	None
50399.1*A	AK	KANTISHNA	STAMPEDE	None
00655.*A	AZ	CIBECUE	CIBECUE	None
02969.*A	DE	FELTON	ALBANNA AVIATION	None

12518.*A	MT	SWEETGRASS	ROSS INTL	None
12495.1*A	MT	SCOBAY	SCOBAY BORDER STATION/EAST POPLAR INTL	None
12245.7*A	MT	ASHLAND	ST LABRE MISSION	None
18951.*A	OK	EL RENO	EL RENO	None
06777.*A	KS	MOLINE	ELK COUNTY	None
18874.32*A	OK	CLAREMORE	SAM RIGGS AIRPARK	None
24595.1*A	TX	RANKIN	RANKIN	None
52653.*A	QM	MIDWAY ATOLL	HENDERSON FLD	None
10257.1*A	MI	REED CITY	NARTRON FLD	None

# Exhibit G

# Exhibit G.1



**PERMIT FOR STORAGE, SALE OR DISTRIBUTION  
OF FUEL AND LUBRICANTS FOR  
JMM AVIATION, LLC  
AT REID-HILLVIEW AIRPORT**

This is a Permit for the storage, sale or distribution of fuel and other lubricants (“Fueling Permit”), effective January 1, 2022, issued by the County of Santa Clara, hereinafter referred to as “County,” to JMM Aviation, LLC hereinafter referred to as “Permittee.”

Whereas, Permittee desires to engage in the storage, sale, or distribution of fuel and lubricants at Reid-Hillview Airport, hereinafter referred to as “Airport.”

IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

**1. Non-Exclusive Permit:**

County hereby grants Permittee a non-exclusive permit to engage in the storage, sale and distribution of aircraft fuel and lubricants at the Airport.

**2. Method of Operation:**

Storage, sale or distribution of fuel and lubricants by Permittee shall be confined solely to Permittee’s leased premises described in the lease agreement between the County of Santa Clara and JMM Aviation, LLC and all public areas of the Airport, effective January 1, 2022. Permittee shall be permitted to fuel aircraft only upon demand by Permittee’s customers, and the dispensing and delivery of fuel into aircraft shall be conducted in accordance with all applicable federal, state and local laws, rules, regulations, minimum standards, and ordinances.

Permittee shall not be permitted to use fuel trucks or any other vehicles to meet or detain aircraft for the purpose of soliciting the sale of Permittee’s products. Permittee shall charge fair, reasonable, and non-discriminatory prices for each unit of sale of service provided by Permittee. County reserves the right to review and approve such charges.

**3. Equipment and Facilities:**

- A. Storage tanks, dispensing facilities, fixed and/or mobile fuel equipment, or other facilities constructed or used in connection with the conduct of Permittee’s sale or distribution of fuel and lubricants shall meet all applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances.

Permit for storage, sale or distribution of fuel and lubricants for JMM Aviation, LLC at  
Reid-Hillview Airport

- B. Permittee shall provide fuel pumping and aircraft support equipment, whether fixed or mobile, meeting all applicable safety requirements, including certified metering devices. Such equipment shall include adequate fire extinguishers and may include aircraft tugs, ground power starters, auxiliary power units, aircraft tow bars and heads, oxygen cart, nitrogen cart, aircraft securing equipment (ropes, chains, wheel chocks, etc.), and marshalling wands. All equipment shall be subject to inspection by the County.
- C. Permittee shall provide aircraft fueling services conforming to the hours of operation as specified by the FBO master lease agreement.
- D. Permittee must ensure that the current fuel price for fuel carried in a fuel truck is clearly marked on the containing fuel trucks or advertised on AirNav.com.
- E. The Permittee is only authorized to distribute Unleaded Aviation Fuel and Jet fuel.
- F. Permittee staff must wear company approved uniforms clearly identifying them as Permittee staff during all aircraft fueling and flight line servicing operations.
- G. Permittee shall notify the County any time that Permittee is not able to provide fueling services for greater than 24 hours and again when fueling services are restored. Depending upon the circumstances, the County may elect to issue a NOTAM regarding available fuel. Notice to County may be via telephone call, email or both.

**4. Safety Requirements:**

- A. All work performed under this Permit shall be carried out in such a manner as to ensure the public's safety and to meet or exceed the safety standards outlined by all applicable federal, state, and local laws, rules, regulations, minimum standards, and/or ordinances. County reserves the right to immediately prohibit or limit Permittee's fueling operation when reasonably necessary to protect the public safety.
- B. All fuel delivered to Permittee by its fuel suppliers shall be placed directly into County approved storage facilities, the location and design of which shall have been approved by the County and which shall be in full compliance with all applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.
- C. Fuel delivered, stored, or dispensed by Permittee shall comply with the quality specifications outlined in American Society for Testing and Materials (ASTM) for the specific fuel. Ensuring the quality of the fuel is the sole responsibility of Permittee.

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- D. At least one Fuel Truck with a minimum capacity of 500 gallons of Unleaded Aviation Gasoline and one Fuel Truck with a minimum capacity of 2,000 gallons of Jet A are required to be operative at all times for products offered by permittee. All Fuel Trucks shall be equipped with reliable metering equipment, filters, and grounding or bonding equipment.
- E. All Fuel Trucks shall meet all applicable Federal, State of California, and Santa Clara County standards for each type of fuel dispensed. Each Refueling Vehicle and all fueling Equipment shall be equipped and maintained to comply with all applicable Regulatory Measures including, without limitation, those prescribed by: State of California & County of Santa Clara; NFPA Codes; 14 CFR Part 139, Airport Certification, Section 139.321 "Handling/Storing of Hazardous Substances and Materials"; and Applicable ACs (Advisory Circulars) including AC 00-34 "Aircraft Ground Handling and Servicing" and AC 150/5210-5 "Painting, Marking and Lighting of Vehicles Used on an Airport".
- F. No mobile fueling equipment shall be placed on Permittee's leasehold property without first receiving prior written consent from the Director of County Airports. Permittee shall, at its own expense, maintain and keep his/her fuel dispensing equipment in a safe operating condition. Permittee's equipment shall be subject to inspection by the County. Use of equipment not inspected by the County and not owned or exclusively leased by Permittee is prohibited.
- G. There shall be at least one fire extinguisher having a minimum rating of 20-B:C accessible within 50 feet during fueling operations. Fuel trucks shall have a minimum of two fire extinguishers of a type and in a location, which conform to N.F.P.A. 407 standards.
- H. Fueling is permitted into approved aircraft, containers and ground service equipment only.
- I. Prior to making any fueling connection to the aircraft, the fueling equipment shall be bonded to the aircraft by use of a cable, thus providing a conductive path to equalize the electrical potential between the fueling equipment and the aircraft. The bond shall be maintained until fueling connections have been removed. All hoses, funnels and appurtenances used in fueling and defueling operations shall be equipped with a grounding device to prevent ignition of volatile liquids.
- J. No electrical devices such as cell phones, radios, transmitters, receivers, or any other electrical appliances shall be switched on or off during fueling operations.
- K. During the fueling or defueling of an aircraft, no person shall, within 100 feet of that aircraft, use any material that is likely to cause a spark or be a source of

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ignition. Smoking in the vicinity of aircraft fueling or defueling operations is strictly prohibited.

- L. Aircraft shall not be fueled while any aircraft engine is running. Hot fueling of helicopters is prohibited, except as provided under National Fire Protection Association (N.F.P.A.) regulations.
- M. No aircraft shall be either fueled or defueled while any person is on board the aircraft.
- N. Anybody engaged in the fueling and defueling of aircraft shall exercise care to prevent overflow of fuel. The person in charge shall take proper measures to remove volatile liquid when it is spilled during transfer.
- O. Permittee shall have a Fuel Spill Control Plan approved by the County, and Permittee shall maintain a current copy on file with the Director of County Airports.
- P. Permittee shall have sufficient fuel spill material on all mobile fueling equipment to dike, control, and clean-up a fuel spill of at least twenty-five (25) gallons.
- Q. All mobile fueling equipment shall be parked/staged at least fifty (50) feet from all buildings, except when actually performing a refueling function.
- R. Such mobile fueling equipment shall be operated only by people qualified and trained in aircraft fueling. Permittee shall ensure that all employees providing aircraft fueling functions have been fully trained on all airport rules, regulations, minimum standards, and all applicable County Ordinances. Permittee shall provide the County with their employee aircraft fueling training manual, and shall ensure that an updated copy of the employee aircraft fueling training manual is kept on file at the Premises and available for inspection.
- S. FBO shall have adequate storage for waste fuel or test samples or the capability to recycle same.

Permit for storage, sale or distribution of fuel and lubricants for JMM Aviation, LLC at  
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**5. Fixed Fuel Tank:**

- A. The County owns or intends to own:
  - i. A 10,000-gallon Above Ground Fuel Tank (AST) located on the Airport at 2555A Robert Fowler Way;
  - ii. A 12,000-gallon Underground Fuel Storage Tank (UST) located on the Airport at 2635 Cunningham Avenue;
  - iii. A 10,000-gallon UST located on the Airport at 2650 Robert Fowler Way;
  - iv. A 15,000-gallon UST located on the Airport at 2655 Robert Fowler Way.
- B. Permittee shall have access to the 15,000-gallon UST located at 2655 Robert Fowler Way for storage and distribution of Unleaded Aviation Fuel.
- C. Permittee is responsible for any sumping of the UST. The disposal of fuel removed during sumping operations is the responsibility of the Permittee and shall be handled in accordance with state and local laws, rules, regulations.
- D. Permittee shall maintain the UST in good working order.
- E. Permittee shall immediately report to County in writing any equipment failures, maintenance issues, or fuel leaks and spills associated with the UST.
- F. Permittee is responsible for all routine UST maintenance, including filters and gaskets. Additional repairs and parts will be agreed upon in writing in a Repair Agreement between Permittee and County prior to any work commencement. The Repair Agreement will include who is responsible for completing the repair and, if necessary, a pro-rata schedule for County reimbursement to Permittee upon termination of this Fueling Permit. Permittee is required to perform all daily, weekly, monthly, and annual inspections per applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.
- H. As part of this permit, permittee shall perform monthly and annual inspections and record keeping, and maintain annual employee training logs.

**6. Supplier Agreement:**

Permittee shall enter into a written agreement with its fuel supplier(s) which recognizes the existence of the provisions of this Permit. Copies of such agreements shall be provided to the Director of County Airports prior to the commencement of fuel delivery. All such agreements shall provide that either Permittee's supplier

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shall indemnify, defend, and hold harmless the County, and provide the County with records of its fuel delivery transactions.

Permittee shall secure County's written approval to engage a fuel supplier and sell brand name products. Permittee shall obtain County's written approval prior to making any changes to supplier and/or brand name.

**7. Products Liability Insurance:**

Permittee shall verify with its fuel supplier that a minimum of \$25,000,000 (twenty-five million dollars) insurance policy is carried by supplier for products liability purposes at all times. A copy of this policy shall be sent to the Director of County Airports.

**8. Term:**

The Term of this Fueling Permit shall be concurrent with the terms of the Fixed Base Operator Lease between Permittee and the County authorizing the Permittee to conduct fueling operations at either of the County Airports.

The County or Permittee may terminate this Permit with or without cause on thirty (30) days notice.

Upon Termination of the permit, the County will purchase from Permittee any remaining usable unleaded aviation fuel in the UST. The value of the fuel will be determined by multiplying the number of gallons in the tank by the most recent per-gallon invoice price for fuel purchased by Permittee. Any prepaid fuel-flowage fee for the unsold fuel shall be refunded.

To the extent that Jet Fuel can be transferred from the Permittee's fuel tank to a County managed fuel tank, the County will purchase from Permittee any remaining usable Jet fuel. The value of the fuel will be determined by multiplying the number of gallons transferred from Permittees tank to County's tank by the most recent per-gallon invoice price for fuel purchased by Permittee. Any prepaid fuel-flowage fee for the unsold fuel shall be refunded.

**9. Rental:**

- A. Permittee shall pay County fuel flowage fees in the amount set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.
- B. Fuel flowage fee payments shall be based on total number of gallons delivered to Permittee.
- C. Payment of fuel flowage fees shall be submitted by Permittee to County by the tenth of each month for the previous month. Upon expiration or termination

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of this Permit, payment of any outstanding fuel flowage fees due under this section shall be made within ten (10) days of the expiration or termination date.

- D. Permittee acknowledges and agrees that fuel flowage payments received ten days or more after the first of each month must include an additional late payment fee of 10% of the total due, or the amount set forth in the current *Schedule of Fee and Charges for Santa Clara County Airports*, whichever is greater.
- E. A processing fee shall be assessed for any checks returned by Permittee's bank due to insufficient funds. The processing fee amount is set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.

**10. Reporting, Payments and Statements:**

- A. By the tenth of each month, Permittee shall submit a Fuel Flowage Report on the previous month's fuel purchases.
- B. Submitted with the Fuel Flowage Report shall be a supplier invoice, fuel delivery statement, or any other supplier record showing the date of fuel delivery, suppliers' name, and total gallons of each type of fuel Permittee purchased.
- C. Permittee shall keep daily log sheets for each Fuel Truck and the UST. The daily log shall include the date, time, fuel meter reading, and total quantity delivered for each individual fuel transaction.
- D. County shall have the right to audit books, records, and accounts of Permittee as said records and accounts pertain to the storage, sale, or other distribution of fuel at the Airport. Permittee shall keep all pertinent records and evidence of the storage, sale or other distribution of fuel at the airport within Santa Clara County at all times.
- E. Upon request by County, Permittee shall have twenty (20) days to provide all requested books, records, and accounts to County for audit.
- F. In the event that an audit of Permittee's books, records, and accounts discloses a discrepancy of \$1,500.00 or more owing to the County in any given calendar year, Permittee shall bear all audit expenses. Upon written notice by County, Permittee shall have thirty (30) days to submit payment of any audit expenses required under this paragraph.

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**11. Environmental Requirements:**

Permittee shall comply with all applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances.

**12. Incorporation of Lease Agreement:**

The terms, covenants and conditions of the aforementioned Fixed Base Operations Master Lease Agreement effective January 1, 2022 by and between County and Permittee are hereby incorporated by reference. In the event of any inconsistency between the terms and conditions of this Permit and those contained in the Fixed Base Operations Master Lease Agreement, the latter shall prevail. This Permit shall be of no further force and effect if the Fixed Based Operations Master Lease Agreement is terminated.

**13. Headings, Reference, Law and Joint and Several Liability:**

The titles and headings of the various sections of the Permit are intended solely for convenience of reference and are intended to explain, modify or place any construction on any of the provisions of the Permit. Masculine and feminine, or neutral gender and the singular and the plural number shall each be considered to include the other whenever the context so requires. This Permit shall be governed and construed in accordance with the law of the state of California. If either party consists of more than one person, each such person shall be jointly and severally liable.

**14. Severability:**

Any provisions of this Permit, which shall prove to be invalid, void or illegal, shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

**15. No Waiver:**

No waiver by a party of any provision of this Permit shall be considered a waiver of any other provision or any subsequent breach of the same or any other provision, including the time for performance of any such provision. The exercise by a party of any remedy provided in this Permit or at law shall not prevent the exercise by that party of any other remedy provided in this Permit or at law.

**16. Attorney's Fees:**

In any dispute between the County and Permittee, the prevailing party shall be entitled to recover from the other party all reasonable costs, including without limitation, reasonable attorney's fees. "Prevailing party" shall include without limitation, a party who dismisses an action for specific performance or for damages



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in exchange for sums allegedly due, performance for covenants allegedly breached or consideration substantially equal to the relief sought in the action, or which receives from the other party, in connection with any dispute, performance substantially equivalent to any of these.

**17. Assignment:**

This Permit is not transferable or assignable by Permittee, action of law, or otherwise.

**18. Permittee not an Agent of County:**

By virtue of this Permit, Permittee shall not be considered an agent, contractor, licensee, or employee of County.

**19. Insurance and Indemnification:**

Permittee shall comply with and provide insurance as set forth in Exhibit B-8 attached hereto.

**20. Penalty for Non-payment or Late Payment:**

- A. Failure to pay any required fees, or three late payments of any fees within a calendar year, shall constitute intentional abandonment of the Permit by Permittee, and all rights and privileges given by said Permit may be declared forfeited at the discretion of County.
- B. A Permit terminated for non-payment of fees may not be reinstated when delinquent fees are subsequently paid. A new Permit shall be issued.

**21. Notices:**

All written notices given in connection with this Permit shall be effective upon personal service or by deposit in the mails, postage prepaid, to the applicable address:

County of Santa Clara:            Director of County Airports  
   2500 Cunningham Avenue  
   San Jose, CA 95148  
   (408) 918-7700

or to such other place as County may designate by written notice.

Permittee:                                JMM Aviation LLC  
   2655 Robert Fowler Way  
   San Jose, CA 95148

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Or to such other place as Permittee may designate by written notice.

**22. Entire Agreement:**

This Permit constitutes the entire agreement of the parties with respect to Permittee's use of the Airport. Any prior or contemporaneous oral or written agreements by and between the parties with respect to such use of the Airport are revoked and extinguished.

**23. Electronic Signature:**

Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of a signed contract, or an electronically signed contract, has the same force and legal effect as a contract executed with an original ink signature. The term "electronic copy of a signed contract" refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of an original signed contract in a portable document format. The term "electronically signed contract" means a contract that is executed by applying an electronic signature.

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**IN WITNESS WHEREOF**, the parties hereto have approved and accepted this Fuel  
Permit as follows:

**COUNTY:**

**PERMITEE:**  
**JMM Aviation, LLC**

DocuSigned by:

*Harry Freitas*

6DC28984CB2D46D...

**HARRY FREITAS**  
Director of Roads and Airports

*Jeff Marconet*  
Jeff Marconet  
Manager

Date: 1/11/2022

Date: 1-10-22

**APPROVED AS TO FORM AND  
LEGALITY:**

DocuSigned by:

*Chris Cheleden*

B179ECE83EEF431...

**Christopher R. Cheleden**  
Lead Deputy County Counsel

EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

EXHIBIT B-8

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and

EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County

EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.



# Exhibit G.2

**PERMIT FOR STORAGE, SALE OR DISTRIBUTION  
OF FUEL AND LUBRICANTS FOR  
AMELIA REID AVIATION DBA AERODYNAMIC AVIATION  
AT REID-HILLVIEW AIRPORT**

This is a Permit for the storage, sale or distribution of fuel and other lubricants (“Fueling Permit”), effective January 1, 2022, issued by the County of Santa Clara, hereinafter referred to as “County,” to Amelia Reid Aviation DBA Aerodynamic Aviation hereinafter referred to as “Permittee.”

Whereas, Permittee desires to engage in the storage, sale, or distribution of fuel and lubricants at Reid-Hillview Airport, hereinafter referred to as “Airport.”

IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

**1. Non-Exclusive Permit:**

County hereby grants Permittee a non-exclusive permit to engage in the storage, sale and distribution of aircraft fuel and lubricants at the Airport.

**2. Method of Operation:**

Storage, sale or distribution of fuel and lubricants by Permittee shall be confined solely to Permittee’s leased premises described in the lease agreement between the County of Santa Clara and Amelia Reid Aviation and all public areas of the Airport, effective January 1, 2022. Permittee shall be permitted to fuel aircraft only upon demand by Permittee’s customers, and the dispensing and delivery of fuel into aircraft shall be conducted in accordance with all applicable federal, state and local laws, rules, regulations, minimum standards, and ordinances.

Permittee shall not be permitted to use fuel trucks or any other vehicles to meet or detain aircraft for the purpose of soliciting the sale of Permittee’s products. Permittee shall charge fair, reasonable, and non-discriminatory prices for each unit of sale of service provided by Permittee. County reserves the right to review and approve such charges.

**3. Equipment and Facilities:**

- A. Storage tanks, dispensing facilities, fixed and/or mobile fuel equipment, or other facilities constructed or used in connection with the conduct of Permittee’s sale or distribution of fuel and lubricants shall meet all applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances.

Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

- B. Permittee shall provide fuel pumping and aircraft support equipment, whether fixed or mobile, meeting all applicable safety requirements, including certified metering devices. Such equipment shall include adequate fire extinguishers and may include aircraft tugs, ground power starters, auxiliary power units, aircraft tow bars and heads, oxygen cart, nitrogen cart, aircraft securing equipment (ropes, chains, wheel chocks, etc.), and marshalling wands. All equipment shall be subject to inspection by the County.
- C. Permittee shall provide aircraft fueling services conforming to the hours of operation as specified by the FBO master lease agreement.
- D. When engaged in retail sale of fuel, Permittee must ensure that the current fuel price for fuel carried in a fuel truck is clearly marked on the containing fuel trucks or advertised on AirNav.com..
- E. The Permittee is only authorized to distribute Unleaded Aviation Fuel.
- F. When engaged in retail sale of fuel, Permittee staff must wear company approved uniforms clearly identifying them as Permittee staff during all aircraft fueling and flight line servicing operations.
- G. When engaged in the retail sale of fuel, Permittee shall notify the County any time that Permittee is not able to provide fueling services for greater than 24 hours and again when fueling services are restored. Depending upon the circumstances, the County may elect to issue a NOTAM regarding available fuel. Notice to County may be via telephone call, email or both.

**4. Safety Requirements:**

- A. All work performed under this Permit shall be carried out in such a manner as to ensure the public's safety and to meet or exceed the safety standards outlined by all applicable federal, state, and local laws, rules, regulations, minimum standards, and/or ordinances. County reserves the right to immediately prohibit or limit Permittee's fueling operation when reasonably necessary to protect the public safety.
- B. All fuel delivered to Permittee by its fuel suppliers shall be placed directly into County approved storage facilities, the location and design of which shall have been approved by the County and which shall be in full compliance with all applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.
- C. Fuel delivered, stored, or dispensed by Permittee shall comply with the quality specifications outlined in American Society for Testing and Materials (ASTM) for the specific fuel. Ensuring the quality of the fuel is the sole responsibility of Permittee.

Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

- D. At least one Fuel Truck with a minimum capacity of 500 gallons of Unleaded Aviation Gasoline is required to be operative at all times. All Fuel Trucks shall be equipped with reliable metering equipment, filters, and grounding or bonding equipment.
- E. All Fuel Trucks shall meet all applicable Federal, State of California, and Santa Clara County standards for each type of fuel dispensed. Each Refueling Vehicle and all fueling Equipment shall be equipped and maintained to comply with all applicable Regulatory Measures including, without limitation, those prescribed by: State of California & County of Santa Clara; NFPA Codes; 14 CFR Part 139, Airport Certification, Section 139.321 "Handling/Storing of Hazardous Substances and Materials"; and Applicable ACs (Advisory Circulars) including AC 00-34 "Aircraft Ground Handling and Servicing" and AC 150/5210-5 "Painting, Marking and Lighting of Vehicles Used on an Airport".
- F. No mobile fueling equipment shall be placed on Permittee's leasehold property without first receiving prior written consent from the Director of County Airports. Permittee shall, at its own expense, maintain and keep his/her fuel dispensing equipment in a safe operating condition. Permittee's equipment shall be subject to inspection by the County. Use of equipment not inspected by the County and not owned or exclusively leased by Permittee is prohibited.
- G. There shall be at least one fire extinguisher having a minimum rating of 20-B:C accessible within 50 feet during fueling operations. Fuel trucks shall have a minimum of two fire extinguishers of a type and in a location, which conform to N.F.P.A. 407 standards.
- H. Fueling is permitted into approved aircraft, containers and ground service equipment only.
- I. Prior to making any fueling connection to the aircraft, the fueling equipment shall be bonded to the aircraft by use of a cable, thus providing a conductive path to equalize the electrical potential between the fueling equipment and the aircraft. The bond shall be maintained until fueling connections have been removed. All hoses, funnels and appurtenances used in fueling and defueling operations shall be equipped with a grounding device to prevent ignition of volatile liquids.
- J. No electrical devices such as cell phones, radios, transmitters, receivers, or any other electrical appliances shall be switched on or off during fueling operations.
- K. During the fueling or defueling of an aircraft, no person shall, within 100 feet of that aircraft, use any material that is likely to cause a spark or be a source of

Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

ignition. Smoking in the vicinity of aircraft fueling or defueling operations is strictly prohibited.

- L. Aircraft shall not be fueled while any aircraft engine is running. Hot fueling of helicopters is prohibited, except as provided under National Fire Protection Association (N.F.P.A.) regulations.
- M. No aircraft shall be either fueled or defueled while any person is on board the aircraft.
- N. Anybody engaged in the fueling and defueling of aircraft shall exercise care to prevent overflow of fuel. The person in charge shall take proper measures to remove volatile liquid when it is spilled during transfer.
- O. Permittee shall have a Fuel Spill Control Plan approved by the County, and Permittee shall maintain a current copy on file with the Director of County Airports.
- P. Permittee shall have sufficient fuel spill material on all mobile fueling equipment to dike, control, and clean-up a fuel spill of at least twenty-five (25) gallons.
- Q. All mobile fueling equipment shall be parked/staged at least fifty (50) feet from all buildings, except when actually performing a refueling function.
- R. Such mobile fueling equipment shall be operated only by people qualified and trained in aircraft fueling. Permittee shall ensure that all employees providing aircraft fueling functions have been fully trained on all airport rules, regulations, minimum standards, and all applicable County Ordinances. Permittee shall provide the County with their employee aircraft fueling training manual, and shall ensure that an updated copy of the employee aircraft fueling training manual is kept on file at the Premises and available for inspection.
- S. FBO shall have adequate storage for waste fuel or test samples or the capability to recycle same.

Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

**5. Fixed Fuel Tank:**

- A. The County owns or intends to own:
  - i. A 10,000-gallon Above Ground Fuel Tank (AST) located on the Airport at 2555A Robert Fowler Way;
  - ii. A 12,000-gallon Underground Fuel Storage Tank (UST) located on the Airport at 2635 Cunningham Avenue;
  - iii. A 10,000-gallon UST located on the Airport at 2650 Robert Fowler Way;
  - iv. A 15,000-gallon UST located on the Airport at 2655 Robert Fowler Way.
- B. Permittee shall have access to the 10,000-gallon UST located at 2650 Robert Fowler Way for storage and distribution of Unleaded Aviation Fuel.
- C. Permittee is responsible for any sumping of the UST. The disposal of fuel removed during sumping operations is the responsibility of the Permittee and shall be handled in accordance with state and local laws, rules, regulations.
- D. Permittee shall maintain the UST in good working order.
- E. Permittee shall immediately report to County in writing any equipment failures, maintenance issues, or fuel leaks and spills associated with the UST.
- F. Permittee is responsible for all UST maintenance, including filters and gaskets. Additional repairs and parts will be agreed upon in writing in a Repair Agreement between Permittee and County prior to any work commencement. The Repair Agreement will include who is responsible for completing the repair and, if necessary, a pro-rata schedule for County reimbursement to Permittee upon termination of this Fueling Permit.
- G. Permittee is required to perform all daily, weekly, monthly, and annual inspections per applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.
- H. As part of this permit, permittee shall perform monthly and annual inspections and record keeping, and maintain annual employee training logs.

**6. Supplier Agreement:**

Permittee shall enter into a written agreement with its fuel supplier(s) which recognizes the existence of the provisions of this Permit. Copies of such agreements shall be provided to the Director of County Airports prior to the commencement of

Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

fuel delivery. All such agreements shall provide that either Permittee's supplier shall indemnify, defend, and hold harmless the County, and provide the County with records of its fuel delivery transactions.

Permittee shall secure County's written approval to engage a fuel supplier and sell brand name products. Permittee shall obtain County's written approval prior to making any changes to supplier and/or brand name.

**7. Products Liability Insurance:**

Permittee shall verify with its fuel supplier that a minimum of \$25,000,000 (twenty-five million dollars) insurance policy is carried by supplier for products liability purposes at all times. A copy of this policy shall be sent to the Director of County Airports.

**8. Term:**

The Term of this Fueling Permit shall be concurrent with the terms of the Fixed Base Operator Lease between Permittee and the County authorizing the Permittee to conduct fueling operations at either of the County Airports.

The County or Permittee may terminate this Permit with or without cause on thirty (30) days notice.

Upon Termination of the permit, the County will purchase from Permittee any remaining usable Unleaded Aviation Fuel in the UST. The value of the fuel will be determined by multiplying the number of usable gallons in the tank by the most recent per-gallon invoice price for fuel purchased by Permittee. Any prepaid fuel-flowage fee for the unsold fuel shall be refunded.

**9. Rental:**

- A. Permittee shall pay County fuel flowage fees in the amount set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.
- B. Fuel flowage fee payments shall be based on total number of gallons delivered by Permittee.
- C. Payment of fuel flowage fees shall be submitted by Permittee to County by the tenth of each month for the previous month. Upon expiration or termination of this Permit, payment of any outstanding fuel flowage fees due under this section shall be made within ten (10) days of the expiration or termination date.
- D. Permittee acknowledges and agrees that fuel flowage payments received ten days or more after the first of each month must include an additional late

Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

payment fee of 10% of the total due, or the amount set forth in the current *Schedule of Fee and Charges for Santa Clara County Airports*, whichever is greater.

- E. A processing fee shall be assessed for any checks returned by Permittee's bank due to insufficient funds. The processing fee amount is set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.

**10. Reporting, Payments and Statements:**

- A. By the tenth of each month, Permittee shall submit a Fuel Flowage Report on the previous month's fuel purchases.
- B. Submitted with the Fuel Flowage Report shall be a supplier invoice, fuel delivery statement, or any other supplier record showing the date of fuel delivery, suppliers' name, and total gallons of each type of fuel Permittee purchased.
- C. Permittee shall keep daily log sheets for each Fuel Truck and the UST. The daily log shall include the date, time, fuel meter reading, and total quantity delivered for each individual fuel transaction.
- D. County shall have the right to audit books, records, and accounts of Permittee as said records and accounts pertain to the storage, sale, or other distribution of fuel at the Airport. Permittee shall keep all pertinent records and evidence of the storage, sale or other distribution of fuel at the airport within Santa Clara County at all times.
- E. Upon request by County, Permittee shall have twenty (20) days to provide all requested books, records, and accounts to County for audit.
- F. In the event that an audit of Permittee's books, records, and accounts discloses a discrepancy of \$1,500.00 or more owing to the County in any given calendar year, Permittee shall bear all audit expenses. Upon written notice by County, Permittee shall have thirty (30) days to submit payment of any audit expenses required under this paragraph.

**11. Environmental Requirements:**

Permittee shall comply with all applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances; including, but not limited to, requirements for above-ground storage tanks, disposal of waste oil and other potentially hazardous substances, air quality and vehicle emissions standards, and the refueling of all aircraft and vehicles.



Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

**12. Incorporation of Lease Agreement:**

The terms, covenants and conditions of the aforementioned Fixed Base Operations Master Lease Agreement effective January 1, 2022 by and between County and Permittee are hereby incorporated by reference. In the event of any inconsistency between the terms and conditions of this Permit and those contained in the Fixed Base Operations Master Lease Agreement, the latter shall prevail. This Permit shall be of no further force and effect if the Fixed Based Operations Master Lease Agreement is terminated.

**13. Headings, Reference, Law and Joint and Several Liability:**

The titles and headings of the various sections of the Permit are intended solely for convenience of reference and are intended to explain, modify or place any construction on any of the provisions of the Permit. Masculine and feminine, or neutral gender and the singular and the plural number shall each be considered to include the other whenever the context so requires. This Permit shall be governed and construed in accordance with the law of the state of California. If either party consists of more than one person, each such person shall be jointly and severally liable.

**14. Severability:**

Any provisions of this Permit, which shall prove to be invalid, void or illegal, shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

**15. No Waiver:**

No waiver by a party of any provision of this Permit shall be considered a waiver of any other provision or any subsequent breach of the same or any other provision, including the time for performance of any such provision. The exercise by a party of any remedy provided in this Permit or at law shall not prevent the exercise by that party of any other remedy provided in this Permit or at law.

**16. Attorney's Fees:**

In any dispute between the County and Permittee, the prevailing party shall be entitled to recover from the other party all reasonable costs, including without limitation, reasonable attorney's fees. "Prevailing party" shall include without limitation, a party who dismisses an action for specific performance or for damages in exchange for sums allegedly due, performance for covenants allegedly breached or consideration substantially equal to the relief sought in the action, or which receives from the other party, in connection with any dispute, performance substantially equivalent to any of these.



Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

**22. Entire Agreement:**

This Permit constitutes the entire agreement of the parties with respect to Permittee's use of the Airport. Any prior or contemporaneous oral or written agreements by and between the parties with respect to such use of the Airport are revoked and extinguished.

**23. Electronic Signature:**

Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of a signed contract, or an electronically signed contract, has the same force and legal effect as a contract executed with an original ink signature. The term "electronic copy of a signed contract" refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of an original signed contract in a portable document format. The term "electronically signed contract" means a contract that is executed by applying an electronic signature.

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Permit for storage, sale or distribution of fuel and lubricants for Amelia Reid Aviation  
DBA Aerodynamic Aviation at Reid-Hillview Airport

**IN WITNESS WHEREOF**, the parties hereto have approved and accepted this Fuel Permit as follows:

**COUNTY:**

**PERMITEE:**

**Amelia Reid Aviation DBA Aerodynamic Aviation**

DocuSigned by:  
  
6DC28984CB2D46D...  
**HARRY FREITAS**  
Director of Roads and Airports

DocuSigned by:  
  
4593CCE8608B471...  
**Josh Watson**  
**Title:** CEO

Date: 1/11/2022

Date: 1/10/2022

**APPROVED AS TO FORM AND LEGALITY:**


DocuSigned by:  
  
B179ECE83EEF431...  
**Christopher R. Cheleden**  
Lead Deputy County Counsel

EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

EXHIBIT B-8

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and

## EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

### 10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

### 11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

### E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

### F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County



EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit G.3

**PERMIT FOR STORAGE, SALE OR DISTRIBUTION  
OF FUEL AND LUBRICANTS FOR  
CALIFORNIA IN NICE DBA NICE AIR  
AT REID-HILLVIEW AIRPORT**

This is a Permit for the storage, sale or distribution of fuel and other lubricants (“Fueling Permit”), effective January 1, 2022, issued by the County of Santa Clara, hereinafter referred to as “County,” to California in Nice, DBA Nice Air hereinafter referred to as “Permittee.”

Whereas, Permittee desires to engage in the storage, sale, or distribution of fuel and lubricants at Reid-Hillview Airport, hereinafter referred to as “Airport.”

IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

**1. Non-Exclusive Permit:**

County hereby grants Permittee a non-exclusive permit to engage in the storage, sale and distribution of aircraft fuel and lubricants at the Airport.

**2. Method of Operation:**

Storage, sale or distribution of fuel and lubricants by Permittee shall be confined solely to Permittee’s leased premises described in the lease agreement between the County of Santa Clara and Nice Air and all public areas of the Airport, effective January 1, 2022. Permittee shall be permitted to fuel aircraft only upon demand by Permittee’s customers, and the dispensing and delivery of fuel into aircraft shall be conducted in accordance with all applicable federal, state and local laws, rules, regulations, minimum standards, and ordinances. Permittee is strictly prohibited from storing, selling, or distribute leaded fuel at all County Airports.

Permittee shall not be permitted to use fuel trucks or any other vehicles to meet or detain aircraft for the purpose of soliciting the sale of Permittee’s products. Permittee shall charge fair, reasonable, and non-discriminatory prices for each unit of sale of service provided by Permittee. County reserves the right to review and approve such charges.

**3. Equipment and Facilities:**

- A. Storage tanks, dispensing facilities, fixed and/or mobile fuel equipment, or other facilities constructed or used in connection with the conduct of Permittee’s sale or distribution of fuel and lubricants shall meet all applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances.

Permit for storage, sale or distribution of fuel and lubricants for California In Nice DBA  
Nice Air at Reid-Hillview Airport

- B. Permittee shall provide fuel pumping and aircraft support equipment, whether fixed or mobile, meeting all applicable safety requirements, including certified metering devices. Such equipment shall include adequate fire extinguishers and may include aircraft tugs, ground power starters, auxiliary power units, aircraft tow bars and heads, oxygen cart, nitrogen cart, aircraft securing equipment (ropes, chains, wheel chocks, etc.), and marshalling wands. All equipment shall be subject to inspection by the County.
- C. Permittee shall provide aircraft fueling services conforming to the hours of operation as specified by the FBO master lease agreement. Permittee shall provide twenty-four (24) hour Unleaded Aviation Fuel self-fueling services seven days per week at the County's Above Ground Storage Tank (AST).
- D. Permittee must ensure that all current fuel prices are clearly marked on all Fuel Trucks and the AST.
- E. The Permittee is only authorized to sell or distribute Unleaded Aviation Fuel and Jet fuel.
- F. Permittee staff must wear company approved uniforms clearly identifying them as Permittee staff during all aircraft fueling and flight line servicing operations.
- G. In the event the Permittee's fueling equipment is inoperative, or Permittee runs out of any aircraft fuel intended for retail sale, the permittee must notify the County. Upon receipt of notification, the County may issue a Notice to Airmen (NOTAM) specifying the condition of the fueling equipment or supply. When the fueling equipment is repaired or additional fuel is delivered, Permittee shall notify the Airport Operations Office at which time such NOTAM shall be cancelled. Notification to the County in writing shall occur within two hours of the time Permittee is made aware of the situation and may be via telephone call, email or both.

**4. Safety Requirements:**

- A. All work performed under this Permit shall be carried out in such a manner as to ensure the public's safety and to meet or exceed the safety standards outlined by all applicable federal, state, and local laws, rules, regulations, minimum standards, and/or ordinances. County reserves the right to immediately prohibit or limit Permittee's fueling operation when reasonably necessary to protect the public safety.
- B. All fuel delivered to Permittee by its fuel suppliers shall be placed directly into County approved storage facilities, the location and design of which shall have been approved by the County and which shall be in full compliance with all

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applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.

- C. Fuel delivered, stored, or dispensed by Permittee shall comply with the quality specifications outlined in American Society for Testing and Materials (ASTM) for the specific fuel. Ensuring the quality of the fuel is the sole responsibility of Permittee.
- D. At least one Fuel Truck with a minimum capacity of 500 gallons of Unleaded Aviation Gasoline is required to be operative at all times. All Fuel Trucks shall be equipped with reliable metering equipment, filters, and grounding or bonding equipment.
- E. All Fuel Trucks shall meet all applicable Federal, State of California, and Santa Clara County standards for each type of fuel dispensed. Each Refueling Vehicle and all fueling Equipment shall be equipped and maintained to comply with all applicable Regulatory Measures including, without limitation, those prescribed by: State of California & County of Santa Clara; NFPA Codes; 14 CFR Part 139, Airport Certification, Section 139.321 "Handling/Storing of Hazardous Substances and Materials"; and Applicable ACs (Advisory Circulars) including AC 00-34 "Aircraft Ground Handling and Servicing" and AC 150/5210-5 "Painting, Marking and Lighting of Vehicles Used on an Airport".
- F. No mobile fueling equipment shall be placed on Permittee's leasehold property without first receiving prior written consent from the Director of County Airports. Permittee shall, at its own expense, maintain and keep his/her fuel dispensing equipment in a safe operating condition. Permittee's equipment shall be subject to inspection by the County. Use of equipment not inspected by the County and not owned or exclusively leased by Permittee is prohibited.
- G. There shall be at least one fire extinguisher having a minimum rating of 20-B:C accessible within 50 feet during fueling operations. Fuel trucks shall have a minimum of two fire extinguishers of a type and in a location, which conform to N.F.P.A. 407 standards.
- H. Fueling is permitted into approved aircraft and ground service equipment only.
- I. Prior to making any fueling connection to the aircraft, the fueling equipment shall be bonded to the aircraft by use of a cable, thus providing a conductive path to equalize the electrical potential between the fueling equipment and the aircraft. The bond shall be maintained until fueling connections have been removed. All hoses, funnels and appurtenances used in fueling and defueling operations shall be equipped with a grounding device to prevent ignition of volatile liquids.

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- J. No electrical devices such as cell phones, radios, transmitters, receivers, or any other electrical appliances shall be switched on or off during fueling operations.
- K. During the fueling or defueling of an aircraft, no person shall, within 100 feet of that aircraft, use any material that is likely to cause a spark or be a source of ignition. Smoking in the vicinity of aircraft fueling or defueling operations is strictly prohibited.
- L. Aircraft shall not be fueled while any aircraft engine is running. Hot fueling of helicopters is prohibited, except as provided under National Fire Protection Association (N.F.P.A.) regulations.
- M. No person shall start the engine of any aircraft when there is any fuel on the ground under such aircraft.
- N. No aircraft shall be either fueled or defueled while any person is on board the aircraft.
- O. Anybody engaged in the fueling and defueling of aircraft shall exercise care to prevent overflow of fuel. The person in charge shall take proper measures to remove volatile liquid when it is spilled during transfer.
- P. Permittee shall have a Fuel Spill Control Plan approved by the County, and Permittee shall maintain a current copy on file with the Director of County Airports.
- Q. Permittee shall have sufficient fuel spill material on all mobile fueling equipment to dike, control, and clean-up a fuel spill of at least twenty-five (25) gallons.
- R. All mobile fueling equipment shall be parked/staged at least fifty (50) feet from all buildings, except when actually performing a refueling function.
- S. Such mobile fueling equipment shall be operated only by people qualified and trained in aircraft fueling. Permittee shall ensure that all employees providing aircraft fueling functions have been fully trained on all airport rules, regulations, minimum standards, and all applicable County Ordinances. Permittee shall provide the County with their employee aircraft fueling training manual, and shall ensure that an updated copy of the employee aircraft fueling training manual is kept on file with the Director of County airports.
- T. FBO shall have adequate storage for waste fuel or test samples or the capability to recycle same.

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**5. Fixed Fuel Tank:**

- A. The County owns or intends to own:
  - i. A 10,000-gallon Above Ground Fuel Tank (AST) located on the Airport at 2555A Robert Fowler Way;
  - ii. A 12,000-gallon Underground Fuel Storage Tank (UST) located on the Airport at 2635 Cunningham Avenue;
  - iii. A 10,000-gallon UST located on the Airport at 2650 Robert Fowler Way;
  - iv. A 15,000-gallon UST located on the Airport at 2655 Robert Fowler Way.
- B. Permittee shall have access to the 10,000-gallon AST located at 2555A Robert Fowler Way for storage and distribution of Unleaded Aviation Fuel.
- C. Permittee is responsible for daily sumping of the AST. The disposal of fuel removed during sumping operations is the responsibility of the Permittee and shall be handled in accordance with state and local laws, rules, regulations.
- D. Permittee shall maintain the AST in good working order.
- E. Permittee shall immediately report to County in writing any equipment failures, maintenance issues, or fuel leaks and spills associated with the AST.
- F. Permittee is responsible for all AST maintenance, including replacement parts, equipment and labor costs.
- G. Permittee is required to perform all daily, weekly, monthly, and annual inspections per applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.
- H. Permittee shall obtain an Aboveground Petroleum Storage Act (APSA) permit for the AST. The permittee shall include the APSA permit in their existing California Environmental Reporting System (CERS) account. Permittee shall be responsible for the annual CERS submittal.
- I. As part of this permit, permittee shall perform monthly and annual AST inspections and record keeping, and maintain annual employee training logs. Permittee must have in place a Professional Engineer (PE) certified Spill Prevention Control and Countermeasures Plan (SPCC). A copy of the permittee's SPCC shall be provided to the Director of County Airports.

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**6. Supplier Agreement:**

Permittee shall enter into a written agreement with its fuel supplier(s) which recognizes the existence of the provisions of this Permit. Copies of such agreements shall be provided to the Director of County Airports prior to the commencement of fuel delivery. All such agreements shall provide that either Permittee's supplier shall indemnify, defend, and hold harmless the County, and provide the County with records of its fuel delivery transactions.

Permittee shall secure County's written approval to engage a fuel supplier and sell brand name products. Permittee shall obtain County's written approval prior to making any changes to supplier and/or brand name.

**7. Products Liability Insurance:**

Permittee shall verify with its fuel supplier that a minimum of \$25,000,000 (twenty-five million dollars) insurance policy is carried by supplier for products liability purposes at all times. A copy of this policy shall be sent to the Director of County Airports.

**8. Term:**

The Term of this Fueling Permit shall be concurrent with the terms of the Fixed Base Operator Lease between Permittee and the County authorizing the Permittee to conduct fueling operations at either of the County Airports.

The County may terminate this Permit with or without cause on thirty (30) days notice.

Upon Termination of the permit, the County will purchase from Permittee any remaining usable unleaded aviation fuel in the AST. The value of the fuel will be determined by multiplying the number of usable gallons in the tank by the most recent per-gallon invoice price for fuel purchased by Permittee. Any prepaid fuel-flowage fee for the unsold fuel shall be refunded.

To the extent that Jet Fuel can be transferred from the Permittee's fuel tank to a County managed fuel tank, the County will purchase from Permittee any remaining usable Jet fuel. The value of the fuel will be determined by multiplying the number of gallons transferred from Permittees tank to County's tank by the most recent per-gallon invoice price for fuel purchased by Permittee. Any prepaid fuel-flowage fee for the unsold fuel shall be refunded.

**9. Rental:**

- A. Permittee shall pay County fuel flowage fees in the amount set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.



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- B. Fuel flowage fee payments shall be based on total number of gallons delivered by Permittee.
- C. Payment of fuel flowage fees shall be submitted by Permittee to County by the tenth of each month for the previous month. Upon expiration or termination of this Permit, payment of any outstanding fuel flowage fees due under this section shall be made within ten (10) days of the expiration or termination date.
- D. Permittee acknowledges and agrees that fuel flowage payments received ten days or more after the first of each month must include an additional late payment fee of 10% of the total due, or the amount set forth in the current *Schedule of Fee and Charges for Santa Clara County Airports*, whichever is greater.
- E. In exchange for free use of the AST, Permittee is responsible for all AST maintenance and inspection costs, including replacement parts, equipment and labor costs. In the event that and at the time that the County terminates this Fueling Permit to begin operating its own fuel concession, the County will entertain reimbursing the Permittee on a pro-rata share of any maintenance and inspections costs associated with the tank, provided the Permittee submits a written request with detailed receipts within 30-days of permit cancellation. The amount of any reimbursement will be solely at the County's discretion.
- F. A processing fee shall be assessed for any checks returned by Permittee's bank due to insufficient funds. The processing fee amount is set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.

**10. Reporting, Payments and Statements:**

- A. With each payment of Fuel Flowage Fees, Permittee shall submit:
  - i. Completed Fuel Delivery Statement, available on the County Airports Website (countyairports.org). The Fuel Delivery Statement will include the date of fuel delivery, suppliers' name, total gallons of each type of fuel delivered.
  - ii. A supplier invoice, fuel delivery statement, or any other supplier record showing the amount of each type of fuel Permittee purchased from the supplier.
- B. On the tenth of each month, Permittee shall submit a Fuel Flowage Report of the previous month's fuel sales. The report shall include the number of gallons of each type of fuel sold during the previous month, and the delivery method

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of said fuel (truck or self-service). The report shall be available on the County Airports website.

- C. Permittee shall keep daily log sheets for each Fuel Truck and the AST. The daily log shall include the date, time, fuel meter reading, and total quantity delivered for each individual fuel transaction.
- D. County shall have the right to audit books, records, and accounts of Permittee as said records and accounts pertain to the storage, sale, or other distribution of fuel at the Airport. Permittee shall keep all pertinent records and evidence of the storage, sale or other distribution of fuel at the airport within Santa Clara County at all times.
- E. Upon request by County, Permittee shall have twenty (20) days to provide all requested books, records, and accounts to County for audit.
- F. In the event that an audit of Permittee's books, records, and accounts discloses a discrepancy of \$500.00 or more owing to the County in any given calendar year, Permittee shall bear all audit expenses. Upon written notice by County, Permittee shall have thirty (30) days to submit payment of any audit expenses required under this paragraph.

**11. Environmental Requirements:**

Permittee shall comply with all applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances; including, but not limited to, requirements for above-ground storage tanks, disposal of waste oil and other potentially hazardous substances, air quality and vehicle emissions standards, and the refueling of all aircraft and vehicles.

**12. Incorporation of Lease Agreement:**

The terms, covenants and conditions of the aforementioned Fixed Base Operations Master Lease Agreement effective January 1, 2022 by and between County and Permittee are hereby incorporated by reference. In the event of any inconsistency between the terms and conditions of this Permit and those contained in the Fixed Base Operations Master Lease Agreement, the latter shall prevail. This Permit shall be of no further force and effect if the Fixed Based Operations Master Lease Agreement is terminated.

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**13. Headings, Reference, Law and Joint and Several Liability:**

The titles and headings of the various sections of the Permit are intended solely for convenience of reference and are intended to explain, modify or place any construction on any of the provisions of the Permit. Masculine and feminine, or neutral gender and the singular and the plural number shall each be considered to include the other whenever the context so requires. This Permit shall be governed and construed in accordance with the law of the state of California. If either party consists of more than one person, each such person shall be jointly and severally liable.

**14. Severability:**

Any provisions of this Permit, which shall prove to be invalid, void or illegal, shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

**15. No Waiver:**

No waiver by a party of any provision of this Permit shall be considered a waiver of any other provision or any subsequent breach of the same or any other provision, including the time for performance of any such provision. The exercise by a party of any remedy provided in this Permit or at law shall not prevent the exercise by that party of any other remedy provided in this Permit or at law.

**16. Attorney's Fees:**

In any dispute between the County and Permittee, the prevailing party shall be entitled to recover from the other party all reasonable costs, including without limitation, reasonable attorney's fees. "Prevailing party" shall include without limitation, a party who dismisses an action for specific performance or for damages in exchange for sums allegedly due, performance for covenants allegedly breached or consideration substantially equal to the relief sought in the action, or which receives from the other party, in connection with any dispute, performance substantially equivalent to any of these.

**17. Assignment:**

This Permit is not transferable or assignable by Permittee, action of law, or otherwise.

**18. Permittee not an Agent of County:**

By virtue of this Permit, Permittee shall not be considered an agent, contractor, licensee, or employee of County.

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**19. Insurance and Indemnity:**

Lessee shall comply with and provide insurance as set forth in Exhibit B-8 attached hereto.

**20. Penalty for Non-payment or Late Payment:**

A. Failure to pay any required fees, or three late payments of any fees within a calendar year, shall constitute intentional abandonment of the Permit by Permittee, and all rights and privileges given by said Permit may be declared forfeited at the discretion of County.

B. A Permit terminated for non-payment of fees may not be reinstated when delinquent fees are subsequently paid. A new Permit shall be issued.

**21. Notices:**

All written notices given in connection with this Permit shall be effective upon personal service or by deposit in the mails, postage prepaid, to the applicable address:

County of Santa Clara:            Director of County Airports  
   2500 Cunningham Avenue  
   San Jose, CA 95148  
   (408) 918-7700

or to such other place as County may designate by written notice.

Permittee:                            California in Nice DBA Nice Air  
   2575 Robert Fowler Way  
   San Jose, CA 95148

Or to such other place as Permittee may designate by written notice.

**22. Entire Agreement:**

This Permit constitutes the entire agreement of the parties with respect to Permittee's use of the Airport. Any prior or contemporaneous oral or written agreements by and between the parties with respect to such use of the Airport are revoked and extinguished.

**23. Electronic Signature:**

Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of a signed contract, or an electronically signed contract, has the

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same force and legal effect as a contract executed with an original ink signature. The term "electronic copy of a signed contract" refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of an original signed contract in a portable document format. The term "electronically signed contract" means a contract that is executed by applying an electronic signature.

**IN WITNESS WHEREOF**, the parties hereto have approved and accepted this Fuel Permit as follows:

**COUNTY:**

**PERMITEE:**

**California in Nice DBA Nice Air**

DocuSigned by:

*Harry Freitas*

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**HARRY FREITAS**

Director of Roads and Airports

Date: 1/3/2022



**HIROYASU TAKAI**

**Title:** *president*

Date: 12/31/2021

**APPROVED AS TO FORM AND LEGALITY:**

DocuSigned by:

*Chris Cheleden*

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**Christopher R. Cheleden**

Lead Deputy County Counsel

EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

EXHIBIT B-8

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and



EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County

EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit H

**PERMIT FOR STORAGE, SALE OR DISTRIBUTION  
OF FUEL AND LUBRICANTS FOR  
SAN MARTIN AVIATION  
AT SAN MARTIN AIRPORT**

This is a Permit for the storage, sale or distribution of fuel and other lubricants, issued by the County of Santa Clara, hereinafter referred to as "County," to San Martin Aviation hereinafter referred to as "Permittee."

Whereas, Permittee desires to engage in the storage, sale, or distribution of fuel and lubricants at San Martin Airport, hereinafter referred to as "Airport," and

Whereas Aircraft Fuel is defined as all flammable liquids composed of a mixture of selected hydrocarbons and non-hydrocarbons, expressly manufactured and blended for the purpose of effectively and efficiently operating piston or turbine aircraft engines,

IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

**1. Non-Exclusive Permit:**

County hereby grants Permittee a non-exclusive permit to engage in the storage, sale and distribution of aircraft fuel and lubricants at the Airport.

**2. Method of Operation:**

Storage, sale or distribution of fuel and lubricants by Permittee shall be confined solely to Permittee's leased premises described in the master lease agreement between the County of Santa Clara and San Martin Aviation and all public areas of the Airport, effective December 12, 2020, and as subsequently amended. Permittee shall be permitted to fuel aircraft only upon demand by Permittee's customers, and the dispensing and delivery of fuel into aircraft shall be conducted in accordance with all applicable federal, state and local laws, rules, regulations, minimum standards, and ordinances.

Permittee shall not be permitted to use fuel trucks or any other vehicles to meet or detain aircraft for the purpose of soliciting the sale of Permittee's products. Permittee shall charge fair, reasonable, and non-discriminatory prices for each unit of sale of service provided by Permittee. County reserves the right to review and approve such charges.

**3. Equipment and Facilities:**

- A. Storage tanks, dispensing facilities, fixed and/or mobile fuel equipment, or other facilities constructed or used in connection with the conduct of Permittee's sale or distribution of fuel and lubricants shall meet all

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances.

- B. Permittee shall provide fuel pumping and aircraft support equipment, whether fixed or mobile, meeting all applicable safety requirements, including certified metering devices. Such equipment shall include adequate fire extinguishers, aircraft tugs, ground power starters, auxiliary power units, aircraft tow bars and heads, oxygen cart, nitrogen cart, aircraft securing equipment (ropes, chains, wheel chocks, etc.), and marshalling wands. All equipment shall be subject to inspection by the County.
- C. Permittee shall provide aircraft fueling services conforming to the hours of operation as specified by the FBO master lease agreement. Permittee shall provide twenty-four (24) hour 100LL Aviation Fuel (Avgas) self-fueling services seven days per week at the County's Above Ground Storage Tank (AST).
- D. Permittee must ensure that all current fuel prices for Avgas and Jet-A are clearly marked on all Fuel Trucks and the AST.
- E. The County reserves the right to require the Permittee to buy, store, distribute and sell an FAA approved unleaded aviation fuel should such fuel become available as a replacement for 100LL.
- F. Permittee staff must wear company approved uniforms clearly identifying them as Permittee staff during all aircraft fueling and flight line servicing operations.
- G. In the event the Permittee's fueling equipment is inoperative, or Permittee runs out of any aircraft fuel intended for retail sale, the permittee must notify the County. Upon receipt of notification, the County may issue a Notice to Airmen (NOTAM) specifying the condition of the fueling equipment or supply. When the fueling equipment is repaired or additional fuel is delivered, Permittee shall notify the Airport Operations Office at which time such NOTAM shall be cancelled. Notification to the County in writing shall occur within two hours of the time Permittee is made aware of the situation and may be via telephone call, email or both.

**4. Safety Requirements:**

- A. All work performed under this Permit shall be carried out in such a manner as to ensure the public's safety and to meet or exceed the safety standards outlined by all applicable federal, state, and local laws, rules, regulations, minimum standards, and/or ordinances. County reserves the

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

right to immediately prohibit or limit Permittee's fueling operation when reasonably necessary to protect the public safety.

- B. All fuel delivered to Permittee by its fuel suppliers shall be placed directly into County approved storage facilities, the location and design of which shall have been approved by the County and which shall be in full compliance with all applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.
- C. Fuel delivered, stored, or dispensed by Permittee shall comply with the quality specifications outlined in American Society for Testing and Materials (ASTM) D 1655 (Jet Fuel), ASTM D 910 (100LL Avgas), and ASTM D7547 (Unleaded Avgas). Ensuring the quality of the fuel is the sole responsibility of Permittee.
- D. At least one Fuel Truck with a minimum capacity of 750 gallons of aviation gasoline (Avgas) and one Fuel Truck with a minimum capacity of 2,000 gallons of Jet A are required to be operative at all times. All Fuel Trucks shall be equipped with reliable metering equipment, filters, and grounding or bonding equipment.
- E. All Fuel Trucks shall meet all applicable Federal, State of California, and Santa Clara County standards for each type of fuel dispensed. Each Refueling Vehicle and all fueling Equipment shall be equipped and maintained to comply with all applicable Regulatory Measures including, without limitation, those prescribed by: State of California & County of Santa Clara; NFPA Codes; 14 CFR Part 139, Airport Certification, Section 139.321 "Handling/Storing of Hazardous Substances and Materials"; and Applicable ACs (Advisory Circulars) including AC 00-34 "Aircraft Ground Handling and Servicing" and AC 150/5210-5 "Painting, Marking and Lighting of Vehicles Used on an Airport".
- F. No mobile fueling equipment shall be placed on Permittee's leasehold property without first receiving prior written consent from the Director of County Airports. Permittee shall, at its own expense, maintain and keep his/her fuel dispensing equipment in a safe operating condition. Permittee's equipment shall be subject to inspection by the County. Use of equipment not inspected by the County and not owned or exclusively leased by Permittee is prohibited.
- G. There shall be at least one fire extinguisher having a minimum rating of 20-B:C accessible within 50 feet during fueling operations. Fuel trucks shall have a minimum of two fire extinguishers of a type and in a location which conform to N.F.P.A. 407 standards.
- H. Fueling is permitted into approved aircraft and ground service equipment only.

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

- I. Prior to making any fueling connection to the aircraft, the fueling equipment shall be bonded to the aircraft by use of a cable, thus providing a conductive path to equalize the electrical potential between the fueling equipment and the aircraft. The bond shall be maintained until fueling connections have been removed. All hoses, funnels and appurtenances used in fueling and defueling operations shall be equipped with a grounding device to prevent ignition of volatile liquids.
- J. No electrical devices such as cell phones, radios, transmitters, receivers, or any other electrical appliances shall be switched on or off during fueling operations.
- K. During the fueling or defueling of an aircraft, no person shall, within 100 feet of that aircraft, use any material that is likely to cause a spark or be a source of ignition. Smoking in the vicinity of aircraft fueling or defueling operations is strictly prohibited.
- L. Aircraft shall not be fueled while any aircraft engine is running. Hot fueling of helicopters is prohibited, except as provided under National Fire Protection Association (N.F.P.A.) regulations.
- M. No person shall start the engine of any aircraft when there is any fuel on the ground under such aircraft.
- N. No aircraft shall be either fueled or defueled while persons are on board the aircraft.
- O. Persons engaged in the fueling and defueling of aircraft shall exercise care to prevent overflow of fuel. Persons in charge shall take proper measures to remove volatile liquid when it is spilled during transfer.
- P. Permittee shall have a Fuel Spill Control Plan approved by the County, and Permittee shall maintain a current copy on file with the Director of County Airports.
- Q. Permittee shall have sufficient fuel spill material on all mobile fueling equipment to dike, control, and clean-up a fuel spill of at least twenty-five (25) gallons.
- R. All mobile fueling equipment shall be parked/staged at least fifty (50) feet from all buildings, except when actually performing a refueling function.
- S. Such mobile fueling equipment shall be operated only by persons qualified and trained in aircraft fueling. Permittee shall ensure that all employees

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

providing aircraft fueling functions have been fully trained on all airport rules, regulations, minimum standards, and all applicable County Ordinances. Permittee shall provide the County with their employee aircraft fueling training manual, and shall ensure that an updated copy of the employee aircraft fueling training manual is kept on file with the Director of County airports.

- T. FBO shall have adequate storage for waste fuel or test samples or the capability to recycle same.

**5. Fixed Fuel Tank**

- A. The County owns or intends to own a 10,000-gallon Above Ground Fuel Tank (AST) located on the Airport.
- B. Permittee shall have access to the 10,000-gallon AST for storage and distribution of Avgas or Unleaded Aviation Fuel.
- C. Permittee is responsible for daily sumping of the AST. The disposal of fuel removed during sumping operations is the responsibility of the Permittee and shall be handled in accordance with state and local laws, rules, regulations.
- D. Permittee shall maintain the AST in good working order.
- E. Permittee shall immediately report to County in writing any equipment failures, maintenance issues, or fuel leaks and spills associated with the AST.
- F. Permittee is responsible for all AST maintenance, including replacement parts, equipment and labor costs.
- G. Permittee is required to perform all daily, weekly, monthly, and annual inspections per applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances.
- H. Permittee shall obtain an Aboveground Petroleum Storage Act (APSA) permit for the AST. The permittee shall include the APSA permit in their existing California Environmental Reporting System (CERS) account. Permittee shall be responsible for the annual CERS submittal.
- I. As part of their APSA permit, permittee shall perform monthly and annual AST inspections and record keeping and maintain annual employee training logs. Permittee must have in place a Professional Engineer (PE) certified Spill Prevention Control and Countermeasures Plan (SPCC). A



Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

copy of the permittee's SPCC shall be provided to the Director of County Airports.

**6. Supplier Agreement:**

Permittee shall enter into a written agreement with its fuel supplier(s) which recognizes the existence of the provisions of this Permit. Copies of such agreements shall be provided to the Director of County Airports prior to the commencement of fuel delivery. All such agreements shall provide that either Permittee's supplier shall indemnify, defend, and hold harmless the County, and provide the County with records of its fuel delivery transactions.

Permittee shall secure County's written approval to engage a fuel supplier and sell brand name products. Permittee shall obtain County's written approval prior to making any changes to supplier and/or brand name.

**7. Products Liability Insurance:**

Permittee shall verify with its fuel supplier that a minimum of \$25,000,000 (twenty-five million dollars) insurance policy is carried by supplier for products liability purposes at all times. A copy of this policy shall be sent to the Director of County Airports.

**8. Term:**

The term of this Permit shall be concurrent with the Fixed Base Operation Lease Agreement between Permittee and County, effective December 12, 2020 and as amended thereafter. The County may terminate this Permit with thirty (30) days' notice for non-compliance with the terms and conditions of this permit, non-compliance with any applicable federal, state, and local laws, rules, regulations, minimum standards, or ordinances, notwithstanding Permittee's continuing to operate airport business under the Fixed Base Operation Master Lease Agreement, effective December 12, 2020.

**9. Rental:**

- A. Permittee shall pay County fuel flowage fees in the amount set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.
- B. Fuel flowage fee payments shall be based on total number of gallons of fuel delivered to Permittee by their supplier(s).
- C. Payment of fuel flowage fees shall be submitted by Permittee to County within five business days of the date Permittee takes delivery of fuel from supplier. Upon expiration or termination of this Permit, payment of any outstanding fuel flowage fees due under this section shall be made within ten (10) days of the expiration or termination date.

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
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- D. Permittee acknowledges and agrees that fuel flowage payments received ten days or more after fuel deliveries are made to the Permittee must include an additional late payment fee of 10% of the total due, or the amount set forth in the current *Schedule of Fee and Charges for Santa Clara County Airports*, whichever is greater.
- E. In exchange for free use of the AST, Permittee is responsible for all AST maintenance and inspection costs, including replacement parts, equipment and labor costs.
- F. A processing fee shall be assessed for any checks returned by Permittee's bank due to insufficient funds. The processing fee amount is set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*, which amount is subject to change based on future revisions to the *Schedule of Fees and Charges for Santa Clara County Airports*.

**10. Reporting, Payments and Statements**

- A. With each payment of Fuel Flowage Fees, Permittee shall submit:
  - i. Completed Fuel Delivery Statement, available on the County Airports Website ([countyairports.org](http://countyairports.org)). The Fuel Delivery Statement will include the date of fuel delivery, suppliers' name, total gallons of each type of fuel delivered.
  - ii. A supplier invoice, fuel delivery statement, or any other supplier record showing the amount of each type of fuel Permittee purchased from the supplier.
- B. On the tenth of each month, Permittee shall submit a Fuel Flowage Report of the previous month's fuel sales. The report shall include the number of gallons of each type of fuel sold during the previous month, and the delivery method of said fuel (truck or self-service). The report shall be available on the County Airports website.
- C. Permittee shall keep daily log sheets for each Fuel Truck and the AST. The daily log shall include the date, time, fuel meter reading, and total quantity delivered for each individual fuel transaction.
- D. County shall have the right to audit books, records, and accounts of Permittee as said records and accounts pertain to the storage, sale, or other distribution of fuel at the Airport. Permittee shall keep all pertinent records

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

and evidence of the storage, sale or other distribution of fuel at the airport within Santa Clara County at all times.

- E. Upon request by County, Permittee shall have twenty (20) days to provide all requested books, records, and accounts to County for audit.
- F. In the event that an audit of Permittee's books, records, and accounts discloses a discrepancy of \$500.00 or more owing to the County in any given calendar year, Permittee shall bear all audit expenses. Upon written notice by County, Permittee shall have thirty (30) days to submit payment of any audit expenses required under this paragraph.

**11. Environmental Requirements:**

Permittee shall comply with all applicable federal, state, and local laws, rules, regulations, minimum standards, and ordinances; including, but not limited to, requirements for above-ground storage tanks, disposal of waste oil and other potentially hazardous substances, air quality and vehicle emissions standards, and the refueling of all aircraft and vehicles.

**12. Incorporation of Lease Agreement:**

The terms, covenants and conditions of the aforementioned Fixed Base Operations Master Lease Agreement, effective December 12, 2020 by and between County and Permittee are hereby incorporated by reference. In the event of any inconsistency between the terms and conditions of this Permit and those contained in the Fixed Base Operations Master Lease Agreement, the latter shall prevail.

**13. Headings, Reference, Law and Joint and Several Liability:**

The titles and headings of the various sections of the Permit are intended solely for convenience of reference and are intended to explain, modify or place any construction on any of the provisions of the Permit. Masculine and feminine, or neutral gender and the singular and the plural number shall each be considered to include the other whenever the context so requires. This Permit shall be governed and construed in accordance with the law of the state of California. If either party consists of more than one person, each such person shall be jointly and severally liable.

**14. Severability:**

Any provisions of this Permit, which shall prove to be invalid, void or illegal, shall in no way affect, impair or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

**15. Indemnification**

Permittee shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of activities of this Permit by Permittee and/or its agents, employees or subcontractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. Applicant shall reimburse the County for all costs, attorneys' fees; expenses and liabilities incurred with respect to any litigation in which the Applicant contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

**16. No Waiver:**

No waiver by a party of any provision of this Permit shall be considered a waiver of any other provision or any subsequent breach of the same or any other provision, including the time for performance of any such provision. The exercise by a party of any remedy provided in this Permit or at law shall not prevent the exercise by that party of any other remedy provided in this Permit or at law.

**17. Attorney's Fees:**

In any dispute between the County and Permittee, the prevailing party shall be entitled to recover from the other party all reasonable costs, including without limitation, reasonable attorney's fees. "Prevailing party" shall include without limitation, a party who dismisses an action for specific performance or for damages in exchange for sums allegedly due, performance for covenants allegedly breached or consideration substantially equal to the relief sought in the action, or which receives from the other party, in connection with any dispute, performance substantially equivalent to any of these.

**18. Assignment:**

This Permit is not transferable or assignable by Permittee, action of law, or otherwise.

**19. Permittee not an Agent of County:**

By virtue of this Permit, Permittee shall not be considered an agent, contractor, licensee, or employee of County.

**20. Insurance:**

In addition to insurance the permittee is carrying under the FBO lease, the following insurance requirements must also be maintained.

A. Evidence of Coverage:

Prior to commencement of this Agreement, the Permittee shall provide a Certificate of Insurance certifying that coverage as required has been

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

obtained. In addition, a certified copy of the policy or policies shall be provided by the Permittee upon request. This verification of coverage shall be sent to the Director of County Airports, unless otherwise directed.

B. Qualifying Insurers

All coverages, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less that A V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance/Risk Manager.

C. Insurance Endorsements:

All coverages shall have the follow endorsements:

- i. Additional insured endorsement. – Insurance afforded by this policy shall also apply to the County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds. Such insurance shall also apply to any municipality in which the work occurs and they shall be named on the policy as additional insured (if applicable).
- ii. Notice of cancellation or change of coverage endorsement. – Insurance afforded by this policy shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days prior written notice of such cancellation or change being delivered to the County of Santa Clara.

D. Pollution Legal Liability Insurance

Permittee shall carry Pollution Legal Liability Insurance with a limit not less than one million (\$1,000,000) dollars per occurrence and not less than one million (\$1,000,000) dollars annual aggregate in accordance with applicable Environmental Protection Agency (EPA) regulations

..

**21. Penalty for Non-payment or Late Payment:**

- A. Failure to pay any required fees, or three late payments of any fees within a calendar year, shall constitute intentional abandonment of the Permit by Permittee, and all rights and privileges given by said Permit may be declared forfeited at the discretion of County.
- B. A Permit terminated for non-payment of fees may not be reinstated when delinquent fees are subsequently paid. A new Permit shall be issued..

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

**22. Notices:**

All written notices given in connection with this Permit shall be effective upon personal service or by deposit in the mails, postage prepaid, to the applicable address:

County of Santa Clara:            Director of County Airports  
   2500 Cunningham Avenue  
   San Jose, CA 95148  
   (408) 918-7700

or to such other place as County may designate by written notice.

Permittee:                            San Martin Aviation  
   13025 Murphy Avenue  
   San Martin, CA 95046

Or to such other place as Permittee may designate by written notice.

**23. Entire Agreement:**

This Permit constitutes the entire agreement of the parties with respect to Permittee's use of the Airport. Any prior or contemporaneous oral or written agreements by and between the parties with respect to such use of the Airport are revoked and extinguished.

**24. Electronic Signature**

Unless otherwise prohibited by law or County policy, the parties agree that an electronic copy of a signed contract, or an electronically signed contract, has the same force and legal effect as a contract executed with an original ink signature. The term "electronic copy of a signed contract" refers to a transmission by facsimile, electronic mail, or other electronic means of a copy of an original signed contract in a portable document format. The term "electronically signed contract" means a contract that is executed by applying an electronic

Permit for storage, sale or distribution of fuel and lubricants for San Martin Aviation at  
San Martin Airport

**IN WITNESS WHEREOF**, the parties hereto have approved and accepted this Fuel  
Permit as follows:

**COUNTY:**

**PERMITEE:**

**San Martin Aviation**

DocuSigned by:  
*Harry Freitas*  
6DC28984CB2D46D...  
HARRY FREITAS  
Director of Roads and Airports

DocuSigned by:  
*Daniel L Neal*  
AD3B83BA135741F...  
DAN NEAL  
**Title:**

Date: 12/14/2020

Date: 12/16/2020

APPROVED AS TO FORM AND  
LEGALITY:

DocuSigned by:  
*Christopher Cheleden*  
B179ECE83EEF431...  
Christopher R. Cheleden  
Lead Deputy County Counsel

# Exhibit I



**SANTA CLARA COUNTY AIRPORTS  
GENERAL AVIATION  
SELF-FUELING PERMIT**

DEFINITION

Self-Fueling: Fueling of an aircraft on airport property performed by the aircraft owner or operator in accordance with the Airport's reasonable standards or requirements and using fuel obtained by the aircraft owner or operator from the source of his/her preference.

1. SELF-FUELING AUTHORIZATION

Execution of this Permit by Director of County Airports and permittee shall duly authorize permittee to conduct self-fueling aeronautical activity operations at \_\_\_\_\_ Airport in accordance with the terms and conditions specified in this permit. No self-fueling shall take place without a valid self-fueling permit

2. AUTHORIZED SELF-FUELING ACTIVITIES

Permittee may conduct self-fueling operations, for non-commercial purposes, only on aircraft owned or operated by Permittee at Permittee's assigned aircraft storage space on airport. Permittee shall not sell to, or dispense fuel into, any other aircraft.

3. RESTRICTION ON SELF-FUELING ACTIVITIES

The self-fueling activities authorized above shall be subject to the following restrictions:

- A. Permittee shall be permitted to self-fuel only at Permittee's assigned aircraft storage space or such non-exclusive public area as the Director may designate.
- B. The dispensing of fuel into aircraft shall be in strict accordance with all Airport Rules and Regulations, as well as all applicable Federal, State, County and City laws, rules and regulations. It shall be the responsibility of Permittee to keep informed of and comply with such laws, rules and regulations at all times.
- C. Permittee's fueling equipment may be parked or positioned on Airport premises only when actually dispensing fuel to Permittee's aircraft.

**SANTA CLARA COUNTY AIRPORTS  
GENERAL AVIATION  
SELF-FUELING PERMIT**

- D. Permittee's fuel transport vehicle and fueling equipment shall not be parked, staged or stored in a Hangar at any time.
- E. Permittee shall have the sole responsibility to obtain all necessary permits for the use and transport of hazardous materials.
- F. Permittee shall only use the entrance, exit, and haul route designated by Director during the transportation of fuel onto and off the airport.
- G. During self-fueling, the fueling vehicle shall not obstruct other aircraft or vehicular movements.
- H. Hangared aircraft shall be positioned outside of Hangar during self-fueling operations. **Aircraft shall not be refueled inside of the hangar.**
- I. During the fueling of an aircraft, the fuel dispensing apparatus and the aircraft must be bonded in accordance with local, state, federal codes, and uniform fire code standards.
- J. Fuel may not be transferred from one vessel to another, except in a location approved by the Airport Authority.
- K. Permittee shall ensure that there are no potential sources of fuel ignition within fifty (50) feet of the self-fueling operation.
- L. Fuel transport vehicle is prohibited from parking (staging) on County Airport property including ramp/aircraft storage space or within 50 feet of a building.
- M. Permittee shall exercise care to prevent the overflow of fuel, and must have immediately accessible at the fueling site a 20 lb. B:C rated fire extinguishers.
- N. DIRECTOR, in his/her sole discretion may immediately suspend any self-fueling operations for violation of any term or condition of the permit, or if such self-fueling poses a threat to health and safety.

**SANTA CLARA COUNTY AIRPORTS  
GENERAL AVIATION  
SELF-FUELING PERMIT**

- O. Permittee shall not fuel or de-fuel an aircraft on the airport while the aircraft is in a closed hangar or enclosed space.

Permittee shall ensure:

- (1) Fueling activities cease when lightning discharge occurs within five miles of the airport.
- (2) The aircraft engine is not in operation during re-fueling.
- (3) All aircraft electrical systems, to include magnetos and master switch, are in the "off" position.
- (4) The aircraft's parking brake is set, or at least one aircraft wheel is chocked, or the aircraft is secured to the ground by the two wing tie-down points.

4. MINIMUM EQUIPMENT REQUIREMENTS

- A. Fuel transport and dispensing tanks or containers and associated equipment shall comply with all applicable Federal, State, County and City laws and regulations regarding the transportation and storage of flammable liquids.
- B. Fuel transport and dispensing containers shall not be less than twenty (20) gallon capacity each. Fuel transport containers shall be painted red and clearly marked in accordance with FAA• AC 150/5230-4 or current edition with the type of fuel, i.e. MOGAS, and with "Flammable" and "No Smoking" placards placed on the exterior.
- C. All fuel transport containers shall be firmly and mechanically secured to the transport vehicle.
- D. All fuel dispensing or containers shall have a valve mechanism such that water can be drained from the lowest portion of the tank, unless equipped with a glass bowl filter.

**SANTA CLARA COUNTY AIRPORTS  
GENERAL AVIATION  
SELF-FUELING PERMIT**

- E. Fuel uplift standpipes shall be constructed such that 5% to 10% of the total capacity of each dispensing container cannot be delivered through the dispensing system (5% to 10% unusable sump).
- F. An in-line filtration system utilizing a 5 micron or less gasoline filter element shall be included in the fuel dispensing system.
- G. Cables for bonding the fuel dispensing system, and the aircraft to zero electrical potential shall be provided.
- H. A 20- lb. B:C rated fire extinguisher shall be readily available and accessible during self-fueling operations.
- I. Fuel dispensing nozzle shall be "over-the-wing" hand held type in which fuel is only delivered through the over wing nozzle by squeezing the handle and trigger. The nozzle must continually be held open by hand through the course of refueling. Once the handle is released, the fuel flow will stop. The fuel nozzle shall not be blocked open or left unattended during self-fueling operations.
- J. Permittee shall maintain an adequate supply of fuel absorbent material readily available to contain a medium-size fuel spill (25 gallons or less) as prescribed by the Airport Authority.
- K. All self-fueling equipment shall be maintained in a clean, non-leaking condition while on Airport and is subject to inspection at any time by the Director of County Airport or Designee.

5. FUEL FLOWAGE FEES

- A. Permittee shall pay to County an annual self-fueling flowage fee, as set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*.
- B. Permittee acknowledges and agrees that payments are made annually, due in advance and the annual payment must be received by the first day of the month in which payment is due. Payment received after that date is subject to an additional late payment fee, in the amount set forth in the current *Schedule of Rates and Charges for Santa Clara County Airports*.

**SANTA CLARA COUNTY AIRPORTS  
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- C. A process fee shall be assessed for any checks returned by Permittee's bank due to insufficient funds. The processing fee amount is set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*.
  - D. All fees and charges are subject to change based on future changes to the *Schedule of Fees and Charges for Santa Clara County Airports*.
6. USE OF ASSIGNED SPACE AND AIRPORT  
In utilizing the Assigned Space and Airport, Permittee shall abide by the following requirements:
- A. Permittee shall not contaminate Airport, the assigned aircraft storage space, or the sub-surface of either, with any Hazardous Material.
  - B. Permittee shall immediately notify the 911 Fire Services of any release of Hazardous Materials on Airport or the assigned aircraft storage space, whether or not the release is in quantities that would be reportable to a public agency.
  - C. Permittee shall be solely and fully responsible and liable in the event Permittee's self-fueling operations cause or permit Hazardous Materials to be released at Airport or the Assigned Aircraft Storage Space. If any release of Hazardous Materials occurs on the Assigned Aircraft Storage Space or Airport as a result of Permittee's self-fueling operations, Permittee, at Permittee's sole cost and expense, shall remove such Hazardous Materials in accordance with all applicable government regulations. In addition to all other rights and remedies of County, if Permittee does not immediately clean up and remove any such Hazardous Materials release, County may pay to have Hazardous Materials removed and Permittee shall reimburse County any costs incurred by County together with interest at maximum rate allowed by law.
  - D. Permittee shall indemnify and hold County harmless against all loss, damage, liability and expense which County may sustain as a result of the presence or clean-up of Hazardous Materials on the assigned aircraft storage space or Airport caused directly or indirectly by Permittee's self-fueling operations.

**SANTA CLARA COUNTY AIRPORTS  
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E. Permittee's obligations under this Permit, for clean up and removal of Hazardous Materials releases attributable to Permittee, shall survive the expiration or termination of this agreement.

7. INSURANCE REQUIREMENT

Permittee, at its sole cost and expense and for the full term of this permit or any renewal thereof, shall obtain and maintain at least the minimum insurance requirements set forth as follows for vehicles used to transport fuels for aviation uses.

A. A Comprehensive Automobile policy, with a minimum limit of not less than \$500,000 combined single limit for bodily injury and property damage, providing at least all of the following coverage (without deductibles):

(1) Coverage shall be applicable to any and all leased, owned, hired, or non-owned vehicles used in the pursuit of any of the activities associated with this permit.

B. The said policy or policies described above shall name the County of Santa Clara its officers, agents, volunteers, and employees as additional named insurers and shall insure against all claims or demands of any and all persons for damage and injuries, including death, sustained by an person or persons occurring from the negligence or the act or omission of Permittee, its officers, agents, volunteers, and employees, or resulting from its, noncompliance with any law, ordinance, order, or regulation respecting the condition, use, occupation or safety of the premises hereunder or any part thereof, or resulting from Permittee's or its agents' or employees' failure to do anything required by this permit agreement or resulting from or arising out of the Permittee's activities under this agreement and any lease or document governing Permittee's use of the airport and/or any structure thereon.

C. Endorsements: All of the following endorsements are required to be made part of each of the above required policy, unless already included in the policy as stipulated below:

(1) "The County of Santa Clara, its employees, officers, agents, and volunteers are hereby added as additional insurers."

**SANTA CLARA COUNTY AIRPORTS  
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- (2) "This policy shall be considered primary insurance as respects any other valid and collectible insurance the County of Santa Clara may possess, if any, shall be considered excess insurance only."
  
- (3) "This insurance shall act for each insured, and additional insured as though a separate policy had been written for each. This, however, will not act to increase the limit of liability of the insuring company."
  
- (4) "Thirty (30) days prior written notice of cancellation shall be given to the County of Santa Clara in the event of cancellation and/or reduction in coverage of any nature."

D. Proof of Coverage

Copies of all the required ENDORSEMENTS an evidence of coverage and a CERTIFICATE OF INSURANCE shall be provided to the Airport Authority prior to the execution of this permit.

- E. Permittee shall also during the term of this permit subscribe and comply with the Workers' Compensation Laws of California, if applicable, and save the County of Santa Clara harmless from any and all liability arising from or under said use of this permit.

8. INDEMNITY AND WAIVER OF CLAIM

By acceptance of this permit, Permittee hereby agrees to defend, indemnify, and hold harmless County of Santa Clara its officers, agents, volunteers, and employees from any and all claims, demands, damages, obligations, suits, judgments, penalties, causes of action, losses, liabilities or costs at any time received, incurred, or accrued by County, its officers, agents, volunteers, and employees, as a result of or arising out of the existence of or exercise of the rights or obligations of Permittee under this permit, except as may arise from the sole active negligence or sole willful misconduct of County, its officers, agents, or employees. County's right to full indemnity hereunder shall arise notwithstanding that principles of comparative negligence might otherwise impose liability on County pursuant to statutes, ordinances, regulations, or other

**SANTA CLARA COUNTY AIRPORTS  
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laws. The indemnity shall be an endorsement on any insurance policy of Permittee and so noted on all certificates of insurance submitted to the County.

Permittee, as a material part of the consideration to be rendered to County under this permit, hereby waives all claims or causes of action against County, its officers, agents, volunteers, or employees which it may now or hereafter have for damages to goods, wares, merchandise or property in, about or upon the Airport, and for injuries or death to persons in or about said Airport, from any or causes arising at any time, except as may arise from the sole active negligence or sole willful act of misconduct of County, its officers, agents or employees, and notwithstanding that joint, several, or concurrent liability, or principles of comparative negligence, might otherwise impose liability on County.

By way of example and not limitation, save and except as arises out of the sole active negligence or sole willful act of misconduct of County, its officers, agents, or employees.

Permittee hereby waives any and all claims or causes of action which it may now or hereafter have against County, its officers, agents or employees (a) for loss, injury or damage sustained by reason of any deficiency, impairment and interruption of any water, electrical, gas, plumbing, air conditioning or sewer service or system serving any portion of said Airport, (b) for any loss, injury or damage arising or resulting from any act or neglect or omission of any other tenant, subtenant, contractor, Permittee, concessionaire or occupant of said Airport, or any person who uses said Airport with authorization or permission of County, and (c) for any loss or damage to the property of or injury or damage to Permittee, its officers, agents, employees, contractors or any other person whomsoever, from any cause or causes arising at any time because of Permittee's uses or occupancy of such building or of said Airport, or its operations thereon.

The term "active negligence", as used herein, for all the purposes hereof, shall be construed to only mean either one of the following two situations: When County, its officers, agents or employees, has or have directly participated in an affirmative action of negligence in connection with the maintenance and operations of the Airport facilities: or when County, its officers, agents, or employees has or have failed to perform the obligations expressly required of County under the terms of this permit.



**SANTA CLARA COUNTY AIRPORTS  
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9. GRANT AGREEMENT CONVENANTS

Permittee acknowledges that the County is subject to Federal Grant Assurance obligations as a condition precedent to granting of funds for improvement of the Airport, and, accordingly, agrees to, and agrees to be bound by, the covenants provided by the Federal Aviation Administration, as they may apply to Permittee.

10. AMENDMENTS

County reserves the right to make amendments to this permit. Upon amendment, Permittee has the option of signing the amended permit or terminating the permit. The County reserves the right to terminate the permit if Permittee fails to agree to the amendment (s) within 10 days notification.

Authorization to conduct self-fueling is issued this \_\_\_\_\_ of \_\_\_\_\_ Day \_\_\_\_\_, \_\_\_\_\_ Year.

Witness the execution of this Permit as of the dates set forth below:

COUNTY:

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**SANTA CLARA COUNTY AIRPORTS  
GENERAL AVIATION  
SELF-FUELING PERMIT**

**ACCEPTANCE**

The undersigned as PERMITTEE hereby agrees, in consideration of this PERMITTEE, to perform and abide by the terms, conditions, restrictions, and obligations of this PERMIT.

'PERMITTEE' \_\_\_\_\_

Permittee Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Signature: \_\_\_\_\_

Date of Acceptance: \_\_\_\_\_

APPROVED AS TO FORM AND LEGALITY:

  
\_\_\_\_\_

David Kahn, Deputy County Counsel

Approved by County Fire Marshall

  
\_\_\_\_\_

Jean Hardwicke, Sr. Fire Marshall

# Exhibit J

**SANTA CLARA COUNTY AIRPORTS  
GENERAL AVIATION  
COMMERICAL SELF-FUELING  
PERMIT**



Definition of Commercial Self-Fueling: Fueling of aircraft used in the day-to-day operations of an authorized business on County airport property performed by the business operator in accordance with the Airport's Rules and Regulations, and using fuel obtained by the authorized business from the County

Businesses engaged in Commercial Self-Fueling (“Permittees”) shall be required to obtain a Commercial Self-Fueling Permit from the County in order to conduct Commercial Self-Fueling operations.

**1. COMMERICAL SELF-FUELING AUTHORIZATION**

Execution of this Permit by the Director of County Airports and Permittee shall duly authorize Permittee to conduct commercial self-fueling relating to aeronautical activity operations at Reid-Hillview Airport in accordance with the terms and conditions specified in this permit. No commercial self-fueling shall take place without a valid commercial self-fueling permit.

**2. AUTHORIZED COMMERICAL SELF-FUELING ACTIVITIES**

Permittee may conduct commercial self-fueling operations only on aircraft owned or operated by Permittee at Permittee's assigned aircraft storage space on airport. Permittee shall not sell to, or dispense fuel into, any other aircraft.

**3. RESTRICTION ON COMMERICAL SELF-FUELING ACTIVITIES**

The commercial self-fueling activities authorized above shall be subject to the following restrictions:

- A. Permittee shall be permitted to self-fuel only on Permittee's leased property or such non-exclusive public area as the Director may designate.
  
- B. The dispensing of fuel into aircraft shall be in strict accordance with all Airport Rules and Regulations, as well as all applicable Federal, State, County and City laws, rules and regulations. It shall be the responsibility of Permittee to keep informed of and comply with such laws, rules and regulations at all times.

- C. Permittee's fueling equipment must be parked or positioned on Permittee's leased property.
- D. Permittee's fuel transport vehicle and fueling equipment shall not be parked, staged or stored in a Hangar at any time.
- E. Permittee shall have the sole responsibility to obtain all necessary permits for the use and transport of hazardous materials.
- F. Permittee shall only use the entrance, exit, and haul route designated by the Director during the transportation of fuel onto and off the airport.
- G. During commercial self-fueling, the fueling vehicle shall not obstruct other aircraft or vehicular movements.
- H. Hangared aircraft shall always be positioned outside of hangar during any fueling operation.
- I. During the fueling of an aircraft, the fuel dispensing apparatus and the aircraft must be bonded in accordance with local, state, federal codes, and uniform fire code standards.
- J. Fuel may not be transferred from one vessel to another, except in a location approved by the Airport Director.
- K. Permittee shall ensure that there are no potential sources of fuel ignition within fifty (50) feet of the self-fueling operation.
- L. Fuel transport vehicle is prohibited from parking (staging) within 50 feet of any building.
- M. Permittee shall exercise care to prevent the overflow of fuel, and must have immediately accessible at the fueling site a 20 lb. B:C rated fire extinguisher.
- N. DIRECTOR, in his/her sole discretion may immediately suspend any self-fueling operations for violation of any term or condition of the permit, or if such self-fueling poses a threat to health and safety.
- O. Permittee shall not fuel or de-fuel an aircraft on the airport while the aircraft is in a closed hangar or enclosed space.

Permittee shall ensure:

- (1) Fueling activities cease when lightning discharge occurs within five miles of the airport.
- (2) The aircraft engine is not in operation during re-fueling.
- (3) All aircraft electrical systems, to include magnetos and master switch, are in the "off" position.
- (4) The aircraft's parking brake is set, or at least one aircraft wheel is chocked, or the aircraft is secured to the ground by the two wing tie-down points.

#### **4. MINIMUM EQUIPMENT REQUIREMENTS**

- A. Fuel transport and dispensing tanks or containers and associated equipment shall comply with all applicable Federal, State, County and City laws and regulations regarding the transportation and storage of flammable liquids.
- B. Fuel transport and dispensing containers shall not be less than twenty (20) gallon capacity each. Fuel transport containers shall be painted red and clearly marked in accordance with FAA• AC 150/5230-4 or current edition with the type of fuel, i.e. Jet A, and with "Flammable" and "No Smoking" placards placed on the exterior.
- C. All fuel transport containers shall be firmly and mechanically secured to the transport vehicle.
- D. All fuel dispensing or containers shall have a valve mechanism such that water can be drained from the lowest portion of the tank, unless equipped with a glass bowl filter.
- E. Fuel uplift standpipes shall be constructed such that 5% to 10% of the total capacity of each dispensing container cannot be delivered through the dispensing system (5% to 10% unusable sump).
- F. An in-line filtration system utilizing a 5 micron or less gasoline filter element shall be included in the fuel dispensing system.
- G. Cables for bonding the fuel dispensing system, and the aircraft to zero electrical potential shall be provided.
- H. A 20- lb. B:C rated fire extinguisher shall be readily available and

accessible during self-fueling operations.

- I. Fuel dispensing nozzle shall be "over-the-wing" handheld type in which fuel is only delivered through the over wing nozzle by squeezing the handle and trigger. The nozzle must continually be held open by hand through the course of refueling. Once the handle is released, the fuel flow will stop. The fuel nozzle shall not be blocked open or left unattended during self-fueling operations.
- J. Permittee shall maintain an adequate supply of fuel absorbent material readily available to contain a medium-size fuel spill (25 gallons or less) as prescribed by the Airport Authority.
- K. All fueling equipment shall be maintained in a clean, non-leaking condition while on Airport and is subject to inspection at any time by the Director of County Airports or Designee.

**5. FUEL PURCHASE**

- A. This permit is restricted to fuel Permittee purchases from County.
- B. Permittee shall pay to County a per-gallon fee for each gallon of fuel received.
- C. Permittee acknowledges and agrees that payments are made monthly, and must be received by the first day of the month in which payment is due. Payment received after that date is subject to an additional late payment fee, in the amount set forth in the current *Schedule of Rates and Charges for Santa Clara County Airports*.
- D. Permittee acknowledges that failure to timely pay an amount due by the first of the month may result in loss of fuel access until amount due is paid in full.
- E. All payments shall be made payable to the "County of Santa Clara", in the form of a company check, certified check, money order or wire transfer. Payments made by credit card are subject to a 5% convenience fee. Payments are due and payable on the first day of each month without exception, and delivered by hand delivery, by courier or by U.S. mail (first class postage prepaid) to the following address, or such other address as designated by County in writing:

County of Santa Clara  
2500 Cunningham Ave  
San Jose, CA 95148

- F. A process fee shall be assessed for any checks returned by Permittee's bank due to insufficient funds. The processing fee amount is set forth in the current *Schedule of Fees and Charges for Santa Clara County Airports*.
- G. All fees and charges are subject to change based on future changes to the *Schedule of Fees and Charges for Santa Clara County Airports*.

## **6. USE OF ASSIGNED SPACE AND AIRPORT**

In utilizing the Assigned Space and Airport, Permittee shall abide by the following requirements:

- A. Permittee shall not contaminate Airport, the assigned aircraft storage space, or the sub-surface of either, with any Hazardous Material.
- B. Permittee shall immediately notify the 911 Fire Services of any release of Hazardous Materials on Airport or the assigned aircraft storage space, whether or not the release is in quantities that would be reportable to a public agency.
- C. Permittee shall be solely and fully responsible and liable in the event Permittee's commercial self-fueling operations cause or permit Hazardous Materials to be released at Airport or the Assigned Aircraft Storage Space. If any release of Hazardous Materials occurs on the Assigned Aircraft Storage Space or Airport as a result of Permittee's commercial self-fueling operations, Permittee, at Permittee's sole cost and expense, shall remove such Hazardous Materials in accordance with all applicable government regulations. In addition to all other rights and remedies of County, if Permittee does not immediately clean up and remove any such Hazardous Materials release, County may pay to have Hazardous Materials removed and Permittee shall reimburse County any costs incurred by County together with interest at maximum rate allowed by law.
- D. Permittee shall indemnify, defend, and hold County harmless against all loss, damage, liability and expense which County may sustain as a result of the presence or clean-up of Hazardous Materials on the assigned aircraft storage space or Airport caused directly or indirectly by Permittee's commercial self- fueling operations.
- E. Permittee's obligations under this Permit, for clean up and removal of Hazardous Materials releases attributable to Permittee, shall survive the expiration or termination of this agreement.



**7. INSURANCE REQUIREMENT**

Permittee, at its sole cost and expense and for the full term of this permit or any renewal thereof, shall obtain and maintain at least the minimum insurance requirements as set forth in Attachment "A" attached hereto.

**8. INDEMNITY AND WAIVER OF CLAIM**

Permittee shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with this Permit excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. Permittee shall reimburse the County for all costs, attorneys' fees, expenses and liabilities incurred with respect to any litigation in which the User contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Permittee, as a material part of the consideration to be rendered to County under this permit, hereby waives all claims or causes of action against County, its officers, agents, volunteers, or employees which it may now or hereafter have for damages to goods, wares, merchandise or property in, about or upon the Airport, and for injuries or death to persons in or about said Airport, from any or causes arising at any time, except as may arise from the sole active negligence or sole willful act of misconduct of County, its officers, agents or employees, and notwithstanding that joint, several, or concurrent liability, or principles of comparative negligence, might otherwise impose liability on County.

**9. GRANT AGREEMENT CONVENANTS**

Permittee acknowledges that the County is subject to Federal Grant Assurance obligations as a condition precedent to granting of funds for improvement of the Airport, and, accordingly, agrees to, and agrees to be bound by, the covenants provided by the Federal Aviation Administration, as they may apply to Permittee.

**10. TERMINATION AND AMENDMENTS**

County may terminate this permit without cause upon 30 days written notice to Permittee. County reserves the right to make amendments to this permit. Upon amendment, Permittee has the option of signing the amended permit or terminating the permit. The County reserves the right to terminate the permit if Permittee fails to agree to the amendment(s) within 10 days notification.

Authorization to conduct commercial self-fueling is issued this 12/30/2021 of

\_\_\_\_\_, \_\_\_\_\_  
Month Year

Witness the execution of this Permit as of the dates set forth below:

COUNTY:

DocuSigned by:  
*Harry Freitas*  
6DC28984CB2D46D...

Title: Director

By: Harry Freitas

Date: 12/30/2021

**ACCEPTANCE**

The undersigned as PERMITTEE hereby agrees, in consideration of this PERMIT, to perform and abide by the terms, conditions, restrictions, and obligations of this PERMIT.

'PERMITTEE' Skyworks Aviation DBA Tradewinds Aviation

Mailing Address 2505 Cunningham Avenue  
San Jose, CA 95148  
(408) 729-5100  
Walt@TradewindsAviation.com

Signature:  \_\_\_\_\_  
DocuSigned by:  
4DEAF9EF4F32432...

Date of Acceptance: 12/30/2021

APPROVED AS TO FORM AND LEGALITY

DocuSigned by:  
*Chris Cheleden*  
B179ECE83EEF431...

Christopher R. Cheleden  
Lead Deputy County Counsel

Attachments:  
Insurance Exhibit

EXHIBIT B-8

INSURANCE REQUIREMENTS FOR  
AIRCRAFT / AIRPORT OPERATION CONTRACTS

Indemnity

The Contractor shall indemnify, defend, and hold harmless the County of Santa Clara (hereinafter "County"), its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by Contractor and/or its agents, employees or sub-contractors, excepting only loss, injury or damage caused by the sole negligence or willful misconduct of personnel employed by the County. It is the intent of the parties to this Agreement to provide the broadest possible coverage for the County. The Contractor shall reimburse the County for all costs, attorneys' fees, expenses, and liabilities incurred with respect to any litigation in which the Contractor contests its obligation to indemnify, defend and/or hold harmless the County under this Agreement and does not prevail in that contest.

Insurance

Without limiting the Contractor's indemnification of the County, the Contractor shall provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

A. Evidence of Coverage

Prior to commencement of this Agreement, the Contractor shall provide a Certificate of Insurance certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, a certified copy of the policy or policies shall be provided by the Contractor upon request.

This verification of coverage shall be sent to the requesting County department, unless otherwise directed. The Contractor shall not receive a Notice to Proceed with the work under the Agreement until it has obtained all insurance required and such insurance has been approved by the County. This approval of insurance shall neither relieve nor decrease the liability of the Contractor.

B. Qualifying Insurers

All coverages, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Insurance Manager.

EXHIBIT B-8

C. Notice of Cancellation

All coverage as required herein shall not be canceled or changed so as to no longer meet the specified County insurance requirements without 30 days' prior written notice of such cancellation or change being delivered to the County of Santa Clara or their designated agent.

D. Insurance Required

1. For non-aeronautical business located at an airport:

Commercial General Liability insurance - for bodily injury (including death) and property damage which provides limits as follows:

- a. Each occurrence - \$1,000,000
- b. General aggregate - \$2,000,000
- c. Products/Completed Operations aggregate - \$2,000,000
- d. Personal Injury - \$1,000,000

2. For fixed-base operators, flight schools and flying clubs located at an airport:

Airport Liability insurance – for bodily injury (including death) and property damage which provides limits of not less than one million dollars (\$1,000,000) per occurrence, including owned and non-owned aircraft coverage.

3. General Liability or Airport Liability coverage shall include:

- a. Premises and Operations
- b. Products/Completed
- c. Personal Injury liability
- f. Severability of interest

4. General Liability or Airport Liability coverage shall include the following endorsement, a copy of which shall be provided to the County:

**Additional Insured Endorsement**, which shall read:

EXHIBIT B-8

“County of Santa Clara, and members of the Board of Supervisors of the County of Santa Clara, and the officers, agents, and employees of the County of Santa Clara, individually and collectively, as additional insureds.”

Insurance afforded by the additional insured endorsement shall apply as primary insurance, and other insurance maintained by the County of Santa Clara, its officers, agents, and employees shall be excess only and not contributing with insurance provided under this policy. Public Entities may also be added to the additional insured endorsement as applicable, and the contractor shall be notified by the contracting department of these requirements.

5. Automobile Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired vehicles.

6. Aircraft Liability Insurance

For bodily injury (including death) and property damage which provides total limits of not less than one million dollars (\$1,000,000) combined single limit per occurrence applicable to all owned, non-owned and hired aircraft.

7. Workers' Compensation and Employer's Liability Insurance

- a. Statutory California Workers' Compensation coverage including broad form all-states coverage.
- b. Employer's Liability coverage for not less than one million dollars (\$1,000,000) per occurrence.

8. Hangarkeepers Liability

Hangarkeepers Liability with a limit of not less than seven hundred fifty thousand dollars (\$750,000) combined single limit (CSL) per occurrence and one million dollars (\$1,000,000) aggregate.

9. Pollution Liability

Pollution Liability coverage including bodily injury, personal injury, and property damage with limits not less than \$1,000,000 per claim or per occurrence and

## EXHIBIT B-8

\$1,000,000 aggregate limits, including claim expenses and defense, written on a claims made or occurrence basis.

### 10. Stand-Alone Pollution Legal Liability Insurance

If lessee chooses to install underground petroleum storage tanks, lessee must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of underground tanks, in the amount of one million (\$1,000,000) dollars per occurrence and one million (\$1,000,000) dollars annual aggregate, in accordance with applicable EPA regulations.

### 11. Property Insurance

Tenant/Lessee shall maintain not less than fifty thousand dollars (\$50,000) Fire Legal Liability on all real property being leased, including improvements and betterments owned by County, and shall name County as a loss payee. Tenant/Lessee shall also provide fire insurance on all personal property contained within or on the leased premises. The policy shall be written on a standard "all risk" contract, excluding earthquake and flood. The contract shall insure for not less than ninety (90) percent of the actual cash value of the personal property, and Tenant/Lessee shall name County as an additional insured.

### E. Waiver of Subrogation

Except as may be specifically provided for elsewhere in this lease, County, and the Tenant/Lessee hereby each mutually waive any and all rights of recovery from the other in event of damage to the premises or property of either caused by acts of God, perils of fire, lightning, and all other all-risk perils as defined in insurance policies and forms approved for use in the state of California. Each party shall obtain any special endorsements, if required by their insurer, to evidence compliance with the aforementioned waiver.

### F. Special Provisions

The following provisions shall apply to this Agreement:

1. The foregoing requirements as to the types and limits of insurance coverage to be maintained by the Contractor and any approval of said insurance by the County or its insurance consultant(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by the Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.
2. The County acknowledges that some insurance requirements contained in this Agreement may be fulfilled by self-insurance on the part of the Contractor. However, this shall not in any way limit liabilities assumed by the Contractor under this Agreement. Any self-insurance shall be approved in writing by the County

EXHIBIT B-8

upon satisfactory evidence of financial capacity. Contractors obligation hereunder may be satisfied in whole or in part by adequately funded self-insurance programs or self-insurance retentions.

3. Should any of the work under this Agreement be sublet, the Contractor shall require each of its subcontractors of any tier to carry the aforementioned coverages, or Contractor may insure subcontractors under its own policies.
4. If this agreement applies to a flying Club the Contractor shall require each of its club members to provide aircraft liability insurance with limits of \$1,000,000 and shall provide certificates of their insurance to the County.
5. Additional insurance requirements as may be required in association with construction activity, including, but not limited to, Builder's Risk Course of Construction, Workers' Compensation, All-Risk Property Insurance, Professional Liability Insurance, and Business Risk Insurance as outlined in Exhibit "B-1."
6. The County reserves the right to withhold payments to the Contractor in the event of material noncompliance with the insurance requirements outlined above.

G. Fidelity Bonds (Required only if contractor will be receiving advanced funds or payments)

Before receiving compensation under this Agreement, Contractor will furnish County with evidence that all officials, employees, and agents handling or having access to funds received or disbursed under this Agreement, or authorized to sign or countersign checks, are covered by a BLANKET FIDELITY BOND in an amount of AT LEAST fifteen percent (15%) of the maximum financial obligation of the County cited herein. If such bond is canceled or reduced, Contractor will notify County immediately, and County may withhold further payment to Contractor until proper coverage has been obtained. Failure to give such notice may be cause for termination of this Agreement, at the option of County.

# Exhibit K





December 13, 2021

The Hon. Stephen Dickson  
Administrator  
Federal Aviation Administration  
800 Independence Avenue, SW  
Washington, DC 20591

Re: Safe transition to unleaded fuels in general aviation

Dear Administrator Dickson:

We are committed to working with the FAA and industry stakeholders to effect a smart, managed nationwide transition to unleaded fuels in general aviation aircraft, one with safety at its core. Recent developments are threatening an organized, safe transition as airports in some of the most densely populated geographic areas are announcing they will stop providing 100LL *within weeks* and solely provide fuels that are not approved for use in the entire piston GA fleet.

We are deeply concerned about rushed timing and an increased risk of misfuelling in an airport network with fragmenting fuel supply. **Please use the FAA's aviation safety mandate to prohibit individual airports from interrupting the availability of 100LL and stifling the cooperative industry-government effort to safely transition the entire general aviation fleet to unleaded fuels.** It is vital to public safety to mitigate risks for pilots and passengers and for the people and property on the ground during this transition.

Misfuelling risks are already high where visually similar airframes require different types of fuel (i.e. a twin Cessna 421 uses 100LL and a twin Cessna 441 uses JetA and, in the past 7 years, there have been 4 fatalities and 3 injuries due to Cessna 421 misfuellings). Risks and complexities around misfuelling are suddenly skyrocketing. For example, some popular piston aircraft models (i.e. Beechcraft Bonanzas) are fleets in which some aircraft have engines that can use unleaded fuel and other aircraft do not. Furthermore, aircraft that do have engines capable at this time of using unleaded fuel require an STC before doing so and there is much outreach and education needed for the owners of these aircraft.

Piston aircraft with high performance, high compression engines consume 75% of the 100LL sold in the U.S. Many of these engines are not approved to use unleaded fuels currently available in the marketplace. Misfuelling renders aircraft unairworthy from both safety and regulatory standpoints. Engine failures from misfuellings often occur at critical phases of flight, such as on takeoff and climb out, and NTSB accident reports document the grim outcomes. Unlike automobiles, if an aircraft has engine trouble, it cannot simply pull over to the side of the road. The automobile industry took time to safely transition to unleaded fuels and was successful, and the aviation industry must do the same.

We are committed to continued work with the FAA to see the fleetwide transition to unleaded fuels succeed in a safe and expeditious manner.

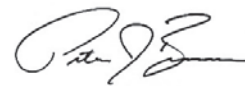
Sincerely,



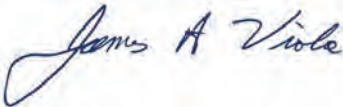
Mark Baker  
President & CEO  
AOPA



Jack J. Pelton  
CEO & Chairman of the Board  
EAA



Peter J. Bunce  
President & CEO  
GAMA



James Viola  
President & CEO  
HAI



Timothy Obitts  
President and CEO  
NATA



Ed Bolen  
President and CEO  
NBAA

# Exhibit L

# County of Santa Clara

Roads & Airports Department

Airports Division  
Reid-Hillview & San Martin Airports  
2500 Cunningham Avenue  
San Jose, California 95148  
(408) 918-7700 FAX (408) 929-8617  
[www.countyairports.org](http://www.countyairports.org)



December 19, 2022

Glynn P. Falcon  
900 E. Hamilton Ave., Ste. 100  
Campbell, CA 95008

Mr. Falcon,

This letter responds to your request dated December 13, 2021, on behalf of Aperture Aviation, Inc. for a short-term exemption to the “prohibition against fueling aircraft at [Reid-Hillview Airport] with 100LL avgas.” The County of Santa Clara (“County”) has not prohibited fueling aircraft at Reid-Hillview Airport (“RHV”) with 100LL avgas. Accordingly, no exemption is necessary.

Leaded avgas is not available for purchase at RHV. If an aircraft owner would like to self-fuel their aircraft, a general aviation self-fueling permit is required pursuant to Section 6.4 of the County of Santa Clara Airport Rules and Regulations.

The County appreciates the commitment of your client to transitioning their fleet to the use of unleaded avgas as soon as it is commercially available. As you may be aware, on September 1, 2022 the FAA granted supplemental type certificates for the use of G100UL, a 100 octane unleaded avgas developed by General Aviation Modifications, Inc. (GAMI), for the entire U.S. piston engine fleet. The County is in negotiations with GAMI to be among the first airports in the country to secure a supply of G100UL in early 2023.

Please let me know if you would like to discuss this matter further.

Sincerely,

Eric Peterson  
Director of County Airports

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**CERTIFICATE OF SERVICE**

I hereby certify that I have this 29<sup>th</sup> day of December, 2022, served the foregoing document by email to the following persons:

Office of the Chief Counsel  
Attn: FAA Part 16 Airport Proceedings Docket, AGC-610  
Federal Aviation Administration  
800 Independence Avenue, SW  
Washington, D.C. 20591  
[9-AWA-AGC-Part-16@faa.gov](mailto:9-AWA-AGC-Part-16@faa.gov)

Justine Harrison  
General Counsel  
Aircraft Owners and Pilots Association  
421 Aviation Way  
Frederick, MD 21701  
(301) 695-2000  
[Justine.Harrison@aopa.org](mailto:Justine.Harrison@aopa.org)

Dated this 29<sup>th</sup> day of December, 2022.

DocuSigned by:  
*kimberly Ide*  
44E8AC6A215842E...

Kimberly Ide

2755578

# EXHIBIT M

**Memorandum of Understanding Between**  
**the Federal Aviation Administration and the County of Santa Clara**  
**Regarding Part 13 Investigation**

This Memorandum of Understanding (“MOU”) is entered into, effective February 8, 2023 (“Effective Date”) between the Federal Aviation Administration (“FAA”) and the County of Santa Clara, California (“County”), collectively the “Parties.”

WHEREAS, the mission of the FAA is to provide the safest and most efficient aerospace system in the world;

WHEREAS, the County is the owner and operator of Reid-Hillview Airport (“RHV”) and San Martin Airport (“E16”) (collectively “County Airports”);

WHEREAS, the FAA and the County are mutually committed to maintaining the operational safety and ensuring the economic sustainability of the County Airports;

WHEREAS, the FAA and the County are mutually committed to eliminating exposure to lead from leaded aviation gasoline (“leaded avgas”), including at the County Airports;

WHEREAS, pursuant to the direction of its Board of Supervisors, and in part based upon a statistical study of blood lead levels in the community surrounding RHV, the County has taken measures to mitigate the negative impacts of leaded avgas at the County Airports, including but not limited to, entering into leases and permits with fixed base operators that authorize the sale of only unleaded avgas at the County Airports, effective January 1, 2022;

WHEREAS, pursuant to the ongoing Eliminate Aviation Gasoline Lead Emissions (EAGLE) program, the FAA is working with government, industry, and community partners to develop alternatives to leaded avgas, to reduce lead exposure from usage of leaded avgas, and to diligently facilitate the transition to an unleaded replacement fuel;

WHEREAS, on December 22, 2021, January 4, 2022, and January 10, 2022, the FAA sent the County a Notice of Informal Investigation Under 49 CFR § 13.1, Additional Complainants to the FAA’s Notice of Informal Investigation, and Questions Concerning the Sale of Aviation Fuel at RHV and E16, respectively, copies of which are attached and incorporated as Exhibit A (collectively “Part 13 Notice”). The FAA initiated the investigation into allegations at the County Airports, including allegations involving the availability of leaded fuel and airport operational issues relating to safety and compliance with the FAA’s standards and grant assurances;

WHEREAS, on October 14, 2022, the Aircraft Owners and Pilots Association filed a complaint under 14 CFR Part 16, docketed as *Aircraft Owners and Pilots Association v. County of Santa Clara*, FAA-2022-1385-0001 (“AOPA Complaint”), which is now pending before the FAA, making allegations relating to the availability of leaded avgas for purchase at the County Airports substantially similar to those in the Part 13 Notice;

WHEREAS, the FAA and the County mutually desire to enter into this MOU to provide sufficient time to collaboratively meet, exchange information, and discuss informal resolution of certain issues raised in the Part 13 Notice regarding both RHV and E16 as set forth below;

WHEREAS, the FAA and the County recognize that obtaining input from stakeholders, including airport users, the aviation industry, and communities neighboring the County Airports, is essential to having informed and productive discussions about the safe operation of the County Airports.

NOW THEREFORE, the Parties hereby agree as follows:

1. **Scope:** The Parties will work in good faith to achieve the following objectives:
  - a. No later than sixty (60) days from the Effective Date, develop a mutually agreeable action plan to meet the Parties' common goal of operating the County Airports in a safe condition by addressing the concerns raised in Exhibit B.
  - b. Upon receipt of more details, the County will consider participation in a cooperative demonstration project contracted by the FAA and administered by the Airports Cooperative Research Program (ACRP) to facilitate the study of the implementation of the goal of reducing aircraft lead emissions nationally. The Parties agree to the following:
    - i. Participation in the cooperative demonstration project will be open to both RHV and E16.
    - ii. Participation in the cooperative demonstration project will not require the sale of leaded avgas at either airport.
    - iii. The County recognizes that under 14 CFR section 16.301, *ex parte* communications are generally prohibited such that the FAA has separated its management of the cooperative demonstration project from its adjudication of the AOPA Complaint.
    - iv. The FAA's invitation to the County to participate in the cooperative demonstration project and the County's potential participation in the cooperative demonstration project do not create an official FAA endorsement of the County's prohibition on the sale of leaded avgas at the County Airports.
2. **Pending Property Releases:** The FAA agrees to process and provide the County with a final decision on the County's requests for land releases, or changes in land use, listed in Exhibit C, attached hereto and incorporated by reference, (collectively "Releases") submitted pursuant to Chapter 22 "Releases from Federal Obligations" of Order 5190.6B "FAA Airport Compliance Manual."
  - a. The Parties acknowledge that the County intends to comply with the November 17, 2022 order for prejudgment possession granted by the Superior Court of California in *Santa Clara Valley Transportation Authority v. County of Santa Clara*, 22CV396039, filed March 14, 2022 concerning the property that is the subject of the February 28, 2020 release.




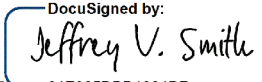
- b. The FAA will make its best efforts to expeditiously provide final decisions, where applicable, on the Releases, or Changes in Land Use, within nine months of the Effective Date, provided the County has submitted necessary documentation to support FAA's action to release or change the land use.
3. **Information Requests:** The County agrees to provide the FAA such information as is reasonably necessary to accomplish the goals of this memorandum, including a detailed explanation of the process and steps followed to negotiate with Fixed Based Operators with respect to lease terms. The FAA agrees to provide the County with at least 30 days to respond to any requests for information.
4. **Abeyance:** In the spirit of cooperation between the FAA and the County, and subject to Section 5, the FAA agrees to suspend and hold in abeyance the Part 13 Investigation for six (6) months from the Effective Date while the Parties work to meet the objectives provided above in Paragraph 1. Pursuant to this abeyance and subject to Section 5, the FAA agrees not to take action under Part 13 against the County regarding the County's prohibition of the sale of leaded avgas at the County Airports during this time period. This time period can be extended by the Parties pursuant to Section 7 below. Subject to the specific terms of this agreement in paragraph 1, all outstanding Part 13 Investigation deadlines are tolled while the Part 13 Investigation is suspended and held in abeyance, and the County will have 30 days from the date that the Part 13 Investigation is no longer held in abeyance to meet any such deadlines, including but not limited to responding to rebuttals submitted to the FAA by Part 13 Investigation Complainants. This Paragraph shall not hold in abeyance the AOPA Complaint and the FAA's adjudication of it, nor shall it hold a new Part 16 complaint in abeyance.
5. **Reservation of Rights of Parties:** The Parties continue to reserve all rights and defenses available to them, except as provided in this MOU. Notwithstanding any language to the contrary, nothing in this MOU limits the FAA's ability to process, investigate, and/or adjudicate any Part 16 complaint or investigation raising allegations substantially similar to those in the Part 13 Notice, including the AOPA Complaint, to correct any violations alleged therein, or to comply with any order issued by a court of competent jurisdiction relating to such allegations.
6. **Rights of Third Parties:** This MOU is between the FAA and the County only and does not affect any other parties' rights or obligations, including rights implicated in the AOPA Complaint. There are no third-party beneficiaries to this MOU.
7. **Amendments:** This MOU may be extended, modified, terminated, supplemented, or amended by written agreement signed by the Parties.
8. **Signatures:** Each signatory to this MOU represents that they are authorized to enter into this MOU on behalf of the entity for which s/he is signing. This MOU may be executed in counterparts. Facsimile and PDF signatures are acceptable.

IN WITNESS WHEREOF, the Parties have executed this MOU as of the dates written below.

**FEDERAL AVIATION  
ADMINISTRATION**

**COUNTY OF SANTA CLARA**

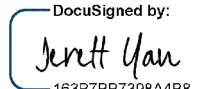
Signed:   
By: A. Bradley Mims,  
Deputy Administrator

Signed:   
By: Jeffrey V. Smith, J.D., M.D.,  
County Executive

Dated: 2/7/2023

Dated: 2/7/2023

**APPROVED AS TO FORM AND  
LEGALITY**

Signed:   
Jerett Yan

By: Deputy County Counsel

Dated: 2/7/2023

Exhibits:

Exhibit A: Part 13 Notice of Investigation

Exhibit B: List of FAA Safety and Compliance-Related Concerns

Exhibit C: List of County of Santa Clara Requested Land Releases and Changes of  
Aeronautical Land Use Status



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Western-Pacific Region  
Airports Division

777 S. Aviation Blvd., Suite #150  
El Segundo, CA 90245

December 22, 2021

County of Santa Clara  
County Airports Administration  
ATTN: Mr. Eric Peterson  
2500 Cunningham Ave  
San Jose, CA 95148

Subject: Notice of Informal Investigation Under 14 CFR § 13.1.

Dear Mr. Peterson,

This letter is to inform you that the Federal Aviation Administration (FAA) has received multiple complaints from airport tenants and users, along with a group representing industry stakeholders who allege violations of grant assurances at the Reid-Hillview Airport (RHV) and the San Martin Airport (E16). Under 14 CFR § 13.1, the FAA will review reports of potential violations of 49 U.S.C. subtitle VII or any rule, regulation, or order issued thereunder. As a result of these complaints the FAA is commencing an informal investigation under 14 CFR part 13.

As part of our investigation we request that the County of Santa Clara (County) respond to this notice within **20 days of from the date of service of this notice**. Although Santa Clara County would normally have 30 days to respond, the FAA may shorten this time period if it finds the circumstances require expedited handling of a particular case or controversy. The FAA finds that expedited handling of this matter is required because it appears the County will be banning the sale of leaded aviation fuel at both airports after December 31, 2021. Further, the County is apparently refusing to offer long-term leases for all tenants at Reid-Hillview airport whose leases will expire on December 31, 2021, including the fixed base operators (FBOs) who provide aviation fuel. Accordingly, the FAA has shortened the response period.

The FAA is committed to building a sustainable aviation system and a lead-free future, and the agency will work with the County to achieve this shared goal. However, in the interim, all parties must adhere to grant assurances. Therefore, the FAA strongly recommends that the County take action to suspend the effective date of its ban on leaded gas at the County-owned airports until this matter can be resolved. In such a case the FAA is amenable to an extension of time with regard to your response.

The complaints giving rise to this investigation are attached herein as Exhibit A. The complaints arise from a number of actions taken by the County that include but are not limited to:

- The failure to address a significant number of significant safety concerns which have been enumerated in detail to the County via letters from the FAA as discussed further below. The County is on notice with regard to these serious safety concerns and the issues remain unresolved;
- An August 17, 2021 ban on sales of leaded gas at both County airports after December 31, 2021;
- An August 17, 2021 County resolution to “take such actions as may be necessary to expeditiously eliminate lead exposure from operations at Reid-Hillview Airport . . . includ[ing], but [] not limited to, both prohibiting the sale or use of leaded fuel, and pursuing any and all available paths to early closure prior to 2031;”
- An alleged statement of Supervisor President Wasserman at an October 5, 2021 Board of Supervisors meeting that the County will be pursuing 30-day lease agreements with all tenants once existing leases expire on December 31, 2021;
- An alleged statement of Director of County Airports Eric Peterson at an October 5, 2021 County Airport Commission meeting that the County will only be offering lease agreements to four tenants of the Reid-Hillview airport, which will be on a month-to-month basis, and that the leases with five other tenants will expire and not be renewed at the end of the year; and
- Information received from users of Reid-Hillview airport and from users of the San Martin airport which indicate that the County is moving forward with a ban on the use of leaded aviation fuel, termination of leases, and associated conduct.

## **I. BACKGROUND**

The Reid-Hillview airport and the San Martin airport are public-use airports owned and operated by the County. Both are general aviation airports. The Reid-Hillview airport has approximately 124 based aircraft and averages 573 operations per day. The San Martin airport has approximately 34 based aircraft and averages 91 operations per day.

FAA records indicate that the planning and development of the Reid-Hillview airport and the San Martin airport have been financed, in part, with funds provided by the FAA under the Airport Improvement Program (AIP), authorized by the Airport and Airway Improvement Act of 1982 (AAIA), as amended, 49 U.S.C. § 47101, *et seq.* Between 1983 and 2011, the County received approximately \$6.8 million in Federal airport development assistance. Additionally, a majority of Reid-Hillview Airport was purchased using Federal Aid to Airports (FAAP) or Airport Development Aid Program (ADAP) funds.

The San Martin airport has also received Federal airport assistance. Between 1984 and 2021, the County received approximately \$4.6 million in Federal assistance for the San Martin airport. Both airports are federally obligated.

**a. Applicable Federal Law and Policy**

The Federal role in civil aviation is established by various laws, some of which authorize programs that provide Federal funds and other assistance to local communities for the development of airport facilities. In each such program, the airport sponsor assumes certain obligations, either by contract or by restrictive covenants in property deeds and conveyance instruments, to maintain and operate its airport facilities safely and efficiently and in accordance with specified conditions. Commitments assumed by airport sponsors in property conveyance or grant agreements are important factors in maintaining a high degree of safety and efficiency in airport design, construction, operation and maintenance, as well as ensuring the public fair and reasonable access to the airport.

**b. The Airport Improvement Program (AIP)**

Federal statutory law, 49 U.S.C. § 47101, *et seq.*, provides for Federal airport financial assistance for the development of public-use airports under the AIP established by the AAIA. As a condition precedent to providing airport development assistance under AIP, the FAA must receive certain assurances from the airport sponsor. These assurances are set forth in statute, 49 U.S.C. § 47101, along with additional assurances that are part of the grant agreement.

The FAA has statutory authority to enforce compliance with the sponsor assurances, including the power to seek judicial enforcement. 49 U.S.C. § 47111(f). FAA Order 5190.6, *FAA Airport Compliance Manual* (Order), provides the policies and procedures to be followed by the FAA in carrying out its functions related to compliance and enforcement.

Upon acceptance of an AIP grant, the assurances become a binding contractual obligation between the airport sponsor and the Federal Government. The assurances made by airport sponsors in AIP grant agreements are important factors in maintaining a viable national airport system and a safe and efficient national airspace system.

• **Grant Assurance 22**

FAA Grant Assurance 22 provides, in relevant part:

- a. [An airport sponsor] will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.  
\* \* \*
- d. Each air carrier using the airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.
- e. [The airport sponsor] will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees

[including, but not limited to maintenance, repair, and fueling] that it may choose to perform.

- f. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involves will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.
- g. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.
- h. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

- **Grant Assurance 23**

FAA Grant Assurance 23 provides, in relevant part:

[The airport sponsor] will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public.

The Order explains that “[t]he exclusive rights prohibition does not apply to services provided by the sponsor itself. The airport sponsor may elect to provide any or all of the aeronautical services at its airport, and to be the exclusive provider of those services. A sponsor may exercise –but not grant – the exclusive right to provide any aeronautical service. This exception is known as the airport’s ‘proprietary exclusive’ right.” Para. 8.5.

- **Grant Assurance 19**

FAA Grant Assurance 19 provides, in relevant part:

The airport and all facilities which are necessary to serve the aeronautical users of the airport .... Shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation.

## **II. FACTS AND ALLEGATIONS**

1. On August 17, 2021, the County Board of Supervisors held a meeting at which they unanimously voted to support two related resolutions<sup>1</sup>:

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<sup>1</sup> The County of Santa Clara commissioned a study of the impact of leaded aviation fuel on blood lead levels (BLLs) of children living in the vicinity of the Reid-Hillview airport. The study was completed on August 3, 2021 and concluded that it is statistically probable that the BLLs increased with proximity to the Reid-Hillview airport, particularly downwind from the airport. The Report made no similar findings with respect to San Martin airport. The report has not been peer-reviewed or independently verified, including with respect to other potential sources of the lead exposure.

the grant assurances. The County may work in cooperation with users to increase use of unleaded fuels. However, the ban on the use of leaded fuel constitutes a probable violation of Grant Assurance 22, which provides the County “will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities....”

6. At the Reid Hillview airport, the FBO lease terminations and failure to enter into long-term leases with the FBOs constitutes probable violations of Grant Assurance 22. Grant Assurance 22 requires the County to “make the airport available as an airport for public use on reasonable terms . . . to all types . . . of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.” An offer of month-to-month leases to tenants who previously had long-term leases may not comply with Grant Assurance 22.
7. With respect to the County’s desire to exercise its proprietary exclusive rights as an FBO, the County must be able to demonstrate that it is ready, willing, and able to provide the full range of services that the current FBOs are providing on or before the date that the leases for the private FBOs have been terminated. The County must demonstrate that there will be no break in FBO services at Reid-Hillview Airport. The County must provide assurance that once it involuntarily removes the private FBOs, it will continue to provide such services on similar terms. The County is not permitted to exercise its right to provide exclusive FBO services as a strategy to ban the sale of leaded fuel, close or materially restrict airport operations and access.
8. The County may exercise an exclusive right to operate FBO services, but it may not grant an exclusive right. In order to exercise an exclusive right, the County is required to use its own employees to provide the FBO services and may not use contractors. The use of third parties would constitute a violation of Grant Assurance 23 and the prohibition on exclusive rights contained in 49 U.S.C. § 40103(e).
9. The FAA has no knowledge that the County currently possesses any experience or expertise in operating a full-service FBO. The County must demonstrate such expertise.
10. The use of contractors by the County to provide FBO services on an exclusive basis may constitute a *de facto* grant of an exclusive right to those contractors.
11. On August 27, 2019, October 18, 2019, February 28, 2020, and February 19, 2021 the FAA provided letters to the County regarding a number of critical safety issues at the Reid Hillview Airport; issues that remain unresolved. In addition, in May 2020, FAA provided the County with a written Runway Safety Action Plan following a March 10, 2020 Local Runway Safety Action Team (LRSAT) meeting held at RHV. These letters and the March 2020 Runway Safety Action Plan are attached.

FAA's safety concerns are outlined in the referenced letters and the March 2020 Runway Safety Action Plan are summarized as follows:

- FAA raised concerns over weed abatement. This continues to be an ongoing concern due to overgrown vegetation obscuring key airfield signage.
- FAA raised concerns over non-standard airfield. Airfield signs, in good condition and disposition, are critical components in maintaining airfield safety and operational efficiency. However, numerous airport signs do not meet standards. Faded sign panels were found throughout the airfield. Delamination is occurring in some of the faded panels. FAA recommend that the County develop a Sign Replacement Program to ensure future compliance in the most efficient and cost effective manner.
- FAA noted Canada geese droppings were found at the approach end of Runway 13R. Canada geese represents a significant hazard to the flying public. FAA recommended that the County take immediate action to reduce the potential for airstrikes with Canada geese around RHV.
- FAA noted that three helicopter pads located near the self-service fuel pumps, marked on the airport as established heliports, do not meet the minimum FAA and State design standards for a designated heliport and must be removed or remarked.
- FAA noted that the Runway Safety Area (RSA) prior to the approach ends of Runways 31R and 31L do not meet the minimum design standards described in Advisory Circular 150/5300-13A, Airport Design. The RSA for Runway 31R is currently cleared out to 147 feet and 161 feet for Runway 31L.
- FAA noted that Visual Approach Slope Indicators (VASIs) for 31R are inoperative and were replaced with Precision Approach Path Indicators (PAPIs). Because the VASIs are no longer functional they should be removed as soon as possible.
- FAA noted that the segmented circle visual indicator system is missing traffic pattern indicators for Runway 31L/13R.



- FAA noted that gate access played a role in the vehicle deviations that occurred since last RSAT. Unauthorized access to the airfield by drivers has been an issue.
- During the March 2020 LRSAT, hot spots were discussed using data collected since 2015. Google map overlay with specific points of where the incidents occurred were used as references to highlight problematic areas. The collection of the data showed that events continue to occur at the three hotspot areas. Discussion followed with ways to reduce surface events at hotspot locations
- During the March 2020 LRSAT, non-standard airfield layout (geometry), pilot confusion over location and movement on airport pavements (signs and markings) and lack of visibility of signs and markings (airfield maintenance / weed abatement) were raised in FAA's letters and were extensively explored. Consensus on addressing many of these items was not reached because the County expressed concern over identifying improvements that would require substantial funding. *See March 10, 2020 Runway Safety Action Plan Section V-D, Surface Safety Issues for additional discussion.*

### **III. ISSUES UNDER INVESTIGATION**

The issues under investigation include, but are not limited to the following:

- Whether the County's ban on the sale and use of leaded fuel at both County airports violates Grant Assurance 22.
- Whether the County's ban on the sale and use of leaded fuel violates 49 U.S.C. § 47107(a).
- Whether the County's ban on the sale and use of leaded fuel violates the commerce clause to the U.S. Constitution.
- Whether the County's ban on the sale and use of leaded fuel is precluded under the Clean Air Act, 42 U.S.C. § 7573.
- Whether the County's actions to terminate leases with certain tenants of the Reid-Hillview airport and enter into month-to-month leases with other tenants of the Reid-Hillview airport violates Grant Assurance 22.
- Whether the County's plans to become the exclusive provider of fuel at the airports and only sell 94UL fuel violates Grant Assurance 22.
- Whether the County's failure to remedy multiple unsafe conditions as outlined in FAA letters referenced above violates Grant Assurance 19.
- Whether any of the actions taken by the County, as described herein, violate an assurance, pledge, commitment, promise or deed restriction resulting from or relating to the purchase of airport land with Federal grant funds.

#### IV. OPPORTUNITY TO RESPOND

The County is requested to reply to this Part 13 Notice no later than 10 days from its service. The FAA invites demonstrable good faith actions by the County to resolve informally the matters that are addressed in this Notice. Please review these complaints and provide your response to the allegations and the status of any efforts to resolve these complaints.

Additionally, FAA is requesting a copy of the following:

- The proposed Rental Agreement(s) that the County proposes to issue to tenants on both RHV and E16 once their current lease expires.
- One (1) year's-worth of fuel logs, for both RHV and E16, which includes aircraft identification and a copy of the County's fueling quality control plan.
- All property records related to land granted to the County from the United States or purchased or acquired by the County using funding from the United States (collectively "Land Grants"). Such records shall include copies of deeds, contracts for sale or purchase, any document related to restrictions, assurances or pledges made by or agreed to by the County in consideration of such Land Grants including, but not limited to, resolutions or ordinances passed by the County Commission as part of, or related to, their acceptance of such land transfers and/or funding. For purposes of this request the term "County Commission" shall include the Commission, any committee thereof or any County board or authority having jurisdiction with regard to the airport.

If you have any questions concerning this letter, please contact either Brian Armstrong, FAA Manager, Safety and Standards Branch, at 424-405-7303 or Laurie Suttmeier, Manager, FAA San Francisco Airports District Office, at (650) 827-7600.

Sincerely,

**MARK A MC  
CLARDY** Digitally signed by  
MARK A MC CLARDY  
Date: 2021.12.22  
15:06:50 -08'00'

Mark A. McClardy  
Director, Airports Division  
Western-Pacific Region

Attachments:

August 27, 2019, FAA RHV Site Visit Letter  
October 18, 2019, FAA letter to Board of Supervisors President Joe Simitian  
February 28, 2020, FAA letter to Board of Supervisors President Joe Simitian  
March 10, 2020, FAA Runway Safety Action Team Action Plan  
February 19, 2021, FAA letter to the Board of Supervisors  
October 8, 2021, RHV Complaint Letter (Gyger, Watson, McDonald)  
October 18, 2021, E16 Complaint Letter (Marshall, Neal, and Other E16 Pilots)  
December 13, 2021, Aviation Industry Groups Complaint Letter

CC (*Without Attachments*):

Laurie J. Suttmeier, Manager, FAA, San Francisco Airports District Office  
Kevin C. Willis, Director, FAA Office of Airport Compliance and Management Analysis  
Walt Gyger, Tradewinds Aviation [walt@tradewindsaviation.com](mailto:walt@tradewindsaviation.com)  
Josh Watson, AeroDynamic Aviation [josh.watson05@gmail.com](mailto:josh.watson05@gmail.com)  
Michael McDonald, Pilot ([Michael.mcdonald@ieee.org](mailto:Michael.mcdonald@ieee.org))  
Paul Marshall, South County Airport Pilots Association [pmarshall96037@gmail.com](mailto:pmarshall96037@gmail.com)  
Mark Baker, Aircraft Owners and Pilots Association [mark.baker@aopa.org](mailto:mark.baker@aopa.org)  
Jack J. Pelton, Experimental Aircraft Association [jpelton@eaa.org](mailto:jpelton@eaa.org)  
Peter J. Bunce, General Aviation Manufacturers Association [pbunce@gama.aero](mailto:pbunce@gama.aero)  
James Viola, Helicopter Association International [president@rotor.org](mailto:president@rotor.org)  
Timothy Obitts, National Air Transportation Association [tobitts@nata.aero](mailto:tobitts@nata.aero)  
Ed Bolen, National Business Aviation Association [ebolen@nbaa.org](mailto:ebolen@nbaa.org)

## **EXHIBIT B**

- 1. The County commits to work with the FAA to develop a mutually agreeable plan to consistently maintain all airfield markings in good condition at both San Martin (E16) and Reid Hillview (RHV) airports.** The last remarking of the runways and taxiways at RHV occurred in 2018. Some markings will need to be refreshed soon. All airfield markings must meet FAA design standards and requirements.
- 2. The County commits to work with the FAA to develop a mutually agreeable plan to update the existing airport Pavement Maintenance-Management Program at both E16 and RHV that includes the completion of pavement projects as needed to maintain all airfield pavements in good or better condition, including apron areas.** Of particular interest is the needed reconstruction of the northwest end of the apron edge taxiway at E16 and the damage caused by ground squirrel burrows at E16.
- 3. The County commits to work with the FAA to develop a mutually agreeable plan to consistently conduct weed abatement and maintenance at RHV to avoid weed encroachment onto runway and taxiway pavements and to avoid obscuring airfield lighting and airfield signs.**
- 4. The County commits to work with the FAA to develop a mutually agreeable plan to complete the airfield signage replacement and electrical upgrades project currently under design at RHV.** All airfield signage must meet FAA design standards and requirements.
- 5. The County commits to work with the FAA to develop a mutually agreeable plan to identify additional potentially feasible airfield changes, in addition to the ongoing airfield signage replacement and electrical upgrades project, that can effectively and economically address aircraft movements that may be a contributing factor to surface incidents at RHV and to address other non-standard conditions.** This may include actions such as painting islands, implementing signage or markings revisions, etc.
- 6. The County commits to work with the FAA to develop a mutually agreeable plan to establish procedures for its facilities and staff to ensure, to the extent possible, that aircraft are not misfueled with unleaded fuel.** The County recognizes that aircraft owners and/or pilots-in-command retain full authority to determine what aviation fuel types are appropriate for their aircraft and that the County retains responsibility for the signage and marking of the fuel tanks and identification of the specific tank/nozzle for a specific fuel. The County will solicit FAA input as needed (ADO and FSDO) to ensure safe fueling operations.
- 7. The County agrees to work with the FAA to develop a mutually agreeable plan to adequately address wildlife issues at both RHV and E16.** Given the number of ground squirrels (and burrows) observed at both RHV and E16, the presence of birds, and wildlife strike history at County airports, the FAA strongly recommends that a Wildlife Hazard Assessment be conducted and Wildlife Hazard mitigation program be developed for both

RHV and E16. Any mitigation program involving E16 will balance aviation safety concerns with the need to take into consideration the existing Santa Clara Valley Habitat Plan, while ensuring compliance with all applicable laws. Resources from the U.S. Department of Agriculture – Airport Wildlife Hazard Program may be available to assist the County in this effort.

- 8. The County commits to working in good faith with the FAA to identify potential concerns in the County's FBO leasing practices.** The County and the FAA's discussions will include the tenant lease issues raised in the Part 13 Complaint.

**EXHIBIT C**  
**PROPERTY RELEASES**

<b>Request</b>	<b>Date</b>	<b>Airports Involved</b>
Federal Aviation Administration Land Release Request for County of Santa Clara Solar PV Projects	October 26, 2015	Reid Hillview Airport San Martin Airport
County of Santa Clara Written Request for Release for "Tully" Parcel at Reid-Hillview Airport for Redesignation for Non-Aeronautical Uses and Long-Term Lease	September 19, 2019	Reid Hillview Airport

# **ATTACHMENT D**

select the home retention option that they thought would be best for them. Under what circumstances, if any, should veterans retain opportunities to select from VA loss-mitigation options? How would giving veterans the ability to select from VA loss-mitigation options impact servicers? If VA were to switch to a prescribed order of loss-mitigation options that servicers must follow, what limitations, if any, should be placed on veterans' ability to select from them?

4. During the COVID-19 pandemic, certain loss-mitigation options were offered without the requirement of collecting financial information. Moving beyond the pandemic, under what circumstances should VA require servicers to collect financial information before a loss-mitigation option is selected? Under what circumstances might a trial payment plan serve as a substitute for the collection of financial information?

**Questions Related to Loan Deferment, VAPCP, and COVID-19 Refund Modifications**

5. How should VA develop a loan deferment option that would assist veterans without placing undue burden on servicers? For example, if VA were to incentivize a hybrid loan deferment/repayment plan in which servicers would defer the missed principal and interest and establish a loan repayment plan for missed taxes and insurance, would that address potential concerns related to short-term lost income from deferring missed mortgage payments? For veterans, what consumer protection concerns should VA be aware of in considering a loan deferment loss-mitigation option?

6. In what way(s), if any, should VA use the VAPCP and/or COVID-19 Refund Modification after the COVID-19 national emergency? VA is particularly interested in data and evidence showing whether the VAPCP and/or COVID-19 Refund Modification programs have assisted veterans, servicers, and taxpayers.

7. What challenges would exist for veterans, servicers, holders, and VA, if VA were to develop a loss-mitigation option similar to the VAPCP, but with a requirement for repayment at a low interest rate (rather than the zero percent interest rate under the VAPCP)? What hurdles might servicers face in executing such loan documents on behalf of VA? What if VA required servicers to service such loans on VA's behalf?

8. Would a low-interest second loan option similar to the VAPCP be more helpful to veterans and/or servicers than

a loan deferment loss-mitigation option, and what data and evidence exist to support your response? What sort of financial evaluation would be appropriate to determine whether a low-interest second loan would be an appropriate loss-mitigation option for a veteran, as opposed to VA's existing loss-mitigation options at 38 CFR 36.4319?

9. What, if any, limitations should VA place on a deferment-style loss-mitigation option, including minimum/maximum deferment amounts, lifetime uses, etc.?

**Questions Related to Incentive Payments**

10. What kind of incentive payment might be appropriate to make loan deferment a more viable option for servicers and VA? What kind of incentive payment might be appropriate for a loss-mitigation option similar to the VAPCP or COVID-19 Refund Modification?

11. How could VA structure an incentive payment that does not encourage servicers to use one of these loss-mitigation options if more financially feasible options are available to assist the veteran?

**Questions Related to Investor Requirements**

12. What, if any, Government National Mortgage Association (Ginnie Mae) specific investor requirements should VA consider when evaluating changes to VA loss-mitigation options, including the introduction of a deferment-style loss-mitigation option?

**Executive Orders 12866 and 13563**

Executive Orders 12866 and 13563 direct agencies to assess the costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, and other advantages; distributive impacts; and equity). Executive Order 13563 (Improving Regulation and Regulatory Review) emphasizes the importance of quantifying both costs and benefits, reducing costs, harmonizing rules, and promoting flexibility. The Office of Information and Regulatory Affairs has determined that this rule is a significant regulatory action under Executive Order 12866. The Regulatory Impact Analysis associated with this rulemaking can be found as a supporting document at [www.regulations.gov](http://www.regulations.gov).

**Signing Authority**

Denis McDonough, Secretary of Veterans Affairs, approved this document on October 11, 2022, and authorized the undersigned to sign and submit the document to the Office of the Federal Register for publication electronically as an official document of the Department of Veterans Affairs.

**Jeffrey M. Martin,**

*Assistant Director, Office of Regulation Policy & Management, Office of General Counsel, Department of Veterans Affairs.*

[FR Doc. 2022-22414 Filed 10-14-22; 8:45 am]

**BILLING CODE 8320-01-P**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 87, 1031, and 1068**

[EPA-HQ-OAR-2022-0389; FRL-5934-01-OAR]

RIN 2060-AT10

**Proposed Finding That Lead Emissions From Aircraft Engines That Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed action.

**SUMMARY:** In this action, the Administrator is proposing to find that lead air pollution may reasonably be anticipated to endanger the public health and welfare within the meaning of section 231(a) of the Clean Air Act. The Administrator is also proposing to find that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under section 231(a) of the Clean Air Act.

**DATES:**

*Comments:* Written comments must be received on or before January 17, 2023.

*Public Hearing:* The EPA plans to hold a virtual public hearing on November 1, 2022. See **SUPPLEMENTARY INFORMATION** for information on registering for a public hearing.

**ADDRESSES:** You may submit your comments, identified by Docket ID No. EPA-HQ-OAR-2022-0389, by any of the following methods:

- *Federal eRulemaking Portal:* <https://www.regulations.gov> (our preferred method). Follow the online instructions for submitting comments.
- *Email:* [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov).

Include Docket ID No. EPA-HQ-OAR-



2022–0389 in the subject line of the message.

- *Mail:* U.S. Environmental Protection Agency, EPA Docket Center, OAR, Docket EPA–HQ–OAR–2022–0389, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

- *Hand Delivery or Courier (by scheduled appointment only):* EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m.–4:30 p.m., Monday–Friday (except federal holidays).

*Instructions:* All submissions received must include the Docket ID No. for this action. Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments and additional information on the process for this action, see the “Public Participation” heading of the **SUPPLEMENTARY INFORMATION** section of this document.

*Public Hearing.* EPA plans to hold a virtual public hearing for this action. Please refer to Participation in Virtual Public Hearing in the **SUPPLEMENTARY INFORMATION** section of this document for additional information.

**FOR FURTHER INFORMATION CONTACT:** Marion Hoyer, Office of Transportation and Air Quality, Assessment and Standards Division (ASD), Environmental Protection Agency; Telephone number: (734) 214–4513; Email address: [hoyer.marion@epa.gov](mailto:hoyer.marion@epa.gov).

#### **SUPPLEMENTARY INFORMATION:**

##### **A. Public Participation**

*Written Comments:* Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2022–0389, at <https://www.regulations.gov> (our preferred method), or the other methods identified in the **ADDRESSES** section of this document. Once submitted, comments cannot be edited or withdrawn from the docket. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI), Proprietary Business Information (PBI), or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the

primary submission (including such content located on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI, PBI, or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

Documents to which the EPA refers in this proposed action are available online at <https://www.regulations.gov/> in the docket for this action (Docket EPA–HQ–OAR–2022–0389). To access reference documents in-person and for additional assistance, please refer to the following instructions.

The EPA plans to hold a virtual hearing on November 1, 2022. This hearing will be held using Zoom. In order to attend the virtual public hearing, all attendees (including those who will not be presenting verbal testimony) must register in advance. Upon publication of this document in the **Federal Register**, the EPA will begin registering speakers for the hearing. To register to speak at the virtual hearing, please use the instructions at <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-lead-emissions-aircraft>. If you have questions regarding registration, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this document. The last day to register to speak at the hearing will be October 31, 2022. Prior to the hearing, the EPA will post a general agenda that will list registered speakers in approximate order at: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-lead-emissions-aircraft>. The EPA will make every effort to follow the schedule as closely as possible on the day of the hearing; however, please plan for the hearings to run either ahead of schedule or behind schedule.

The EPA anticipates that each commenter will have 5 minutes to provide oral testimony. The EPA recommends submitting the text of your oral testimony as written comments to the docket for this action. The EPA may ask clarifying questions during the oral presentations but will not respond to the presentations at that time. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral testimony and supporting information presented at the public hearing.

If you require the services of a translator or special accommodations such as audio description, please

identify these needs when you register for the hearing no later than October 24, 2022. The EPA may not be able to arrange accommodations without advanced notice.

##### **B. General Information**

*Does this action apply to me?*

*Regulated Entities:* In this action, the EPA is proposing to make endangerment and cause or contribute findings for the lead air pollution and engine emissions of lead from certain aircraft. The classes of aircraft engines and of aircraft relevant to this proposed action are referred to as “covered aircraft engines” and as “covered aircraft,” respectively throughout this document. Covered aircraft engines in this context means any aircraft engine that is capable of using leaded aviation gasoline. Covered aircraft in this context means all aircraft and ultralight vehicles<sup>1</sup> equipped with covered engines. Covered aircraft would, for example, include smaller piston-engine aircraft such as the Cessna 172 (single-engine aircraft) and the Beechcraft Baron G58 (twin-engine aircraft), as well as the largest piston-engine aircraft—the Curtiss C–46 and the Douglas DC–6. Other examples of covered aircraft would include rotorcraft,<sup>2</sup> such as the Robinson R44 helicopter, light-sport aircraft, and ultralight vehicles equipped with piston engines. Because the majority of covered aircraft are piston-engine powered, this document focuses on those aircraft (in some contexts the EPA refers to these same engines as reciprocating engines). All such references and examples used in this document are covered aircraft as defined in this paragraph.

The proposed findings in this action, if finalized, would not themselves apply new requirements to entities other than the EPA and the Federal Aviation Administration (FAA). Specifically, if the EPA issues final findings that lead emissions from covered aircraft engines cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, then the EPA would, under section 231 of the Clean Air Act, promulgate aircraft engine emission standards for that air pollutant. In contrast to the findings, those standards would apply to and have an effect on other entities outside the federal government. Entities potentially interested in this proposed action include those that manufacture

<sup>1</sup> The FAA regulates ultralight vehicles under 14 CFR part 103.

<sup>2</sup> Rotorcraft encompass helicopters, gyroplanes, and any other heavier-than-air aircraft that depend principally for support in flight on the lift generated by one or more rotors.

and sell covered aircraft engines and covered aircraft in the United States and those who own or operate covered

aircraft. Categories that may be regulated in a future regulatory action

include, but are not limited to, those listed here:

Category	NAICS <sup>a</sup> code	SIC <sup>b</sup> code	Examples of potentially affected entities
Industry .....	3364412	3724	Manufacturers of new aircraft engines.
Industry .....	3364111	3721	Manufacturers of new aircraft.
Industry .....	481219	4522	Aircraft charter services ( <i>i.e.</i> , general purpose aircraft used for a variety of specialty air and flying services). Aviation clubs providing a variety of air transportation activities to the general public.
Industry .....	611512	8249 and 8299	Flight Training.

<sup>a</sup> North American Industry Classification System (NAICS).

<sup>b</sup> Standard Industrial Classification (SIC) code.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding potentially regulated entities likely to be interested in this proposed action. This table lists examples of the types of entities that the EPA is now aware of that could potentially have an interest in this proposed action. If the EPA issues final affirmative findings under section 231(a) of the Clean Air Act regarding lead, the EPA would then undertake a future notice and comment rulemaking to issue emission standards, and the FAA would be required to prescribe regulations to ensure compliance with these emissions standards pursuant to section 232 of the Clean Air Act. Such findings also would trigger the FAA's statutory mandate pursuant to 49 U.S.C. 44714 to prescribe standards for the composition or chemical or physical properties of an aircraft fuel or fuel additive to control or eliminate aircraft emissions which EPA has decided endanger public health or welfare under section 231(a) of the Clean Air Act. Other types of entities not listed in the table could also be interested and potentially affected by subsequent actions at some future time. If you have any questions regarding the scope of this proposed action, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this document.

### C. Children's Health

Executive Order 13045<sup>3</sup> requires agencies to identify and assess health and safety risks that may disproportionately affect children and ensure that activities address disproportionate risks to children. Children may be more vulnerable to environmental exposures and/or the associated health effects, and therefore more at risk than adults. These risks to children may arise because infants and children generally eat more food, drink

more water and breathe more air relative to their size than adults do, and consequently may be exposed to relatively higher amounts of contaminants. In addition, normal childhood activity, such as putting hands in mouths or playing on the ground, can result in exposures to contaminants that adults do not typically have. Furthermore, environmental contaminants may pose health risks specific to children because children's bodies are still developing. For example, during periods of rapid growth such as fetal development, infancy and puberty, their developing systems and organs may be more easily harmed.<sup>4</sup>

Protecting children's health from environmental risks is fundamental to the EPA's mission. Since the inception of Executive Order 13045, the understanding of children's environmental health has broadened to include conception, infancy, early childhood and through adolescence until 21 years of age.<sup>5</sup> Because behavioral and physiological characteristics can affect children's environmental health risks, childhood and children's health is viewed with an understanding of the concept of "lifestages," which recognize unique growth and developmental periods through which all humans pass.<sup>6</sup>

This document includes discussion and analysis that is focused particularly on children. For example, as described in Sections III.A and V of this document, the scientific evidence has long been established demonstrating that young children (due to rapid

growth and development of the brain) are vulnerable to a range of neurological effects resulting from exposure to lead. Low levels of lead in young children's blood have been linked to adverse effects on intellect, concentration, and academic achievement, and as the EPA has previously noted "there is no evidence of a threshold below which there are no harmful effects on cognition from [lead] exposure."<sup>7</sup> Evidence suggests that while some neurocognitive effects of lead in children may be transient, some lead-related cognitive effects may be irreversible and persist into adulthood, potentially contributing to lower educational attainment and financial well-being.<sup>8</sup> The 2013 Lead ISA notes that in epidemiologic studies, postnatal (early childhood) blood lead levels are consistently associated with cognitive function decrements in children and adolescents.<sup>9</sup> In Section II.A.5 of this document, we describe the number of children living near and attending school near airports and provide a proximity analysis of the potential for greater representation of children in the near-airport environment compared with neighboring areas.

### D. Environmental Justice

Executive Order 12898 establishes federal executive policy on environmental justice. It directs federal agencies, to the greatest extent practicable and permitted by law, to make achieving environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects

<sup>4</sup> EPA (2006) A Framework for Assessing Health Risks of Environmental Exposures to Children. EPA, Washington, DC, EPA/600/R-05/093F, 2006.

<sup>5</sup> EPA. Memorandum: Issuance of EPA's 2021 Policy on Children's Health. October 5, 2021. Available at <https://www.epa.gov/system/files/documents/2021-10/2021-policy-on-childrens-health.pdf>.

<sup>6</sup> EPA. "Childhood Lifestages relating to Children's Environmental Health." Oct. 25, 2021. Retrieved from <https://www.epa.gov/children/childhood-lifestages-relating-childrens-environmental-health> on Nov. 22, 2021.

<sup>7</sup> EPA (2013) ISA for Lead. Executive Summary "Effects of Pb Exposure in Children." pp. lxxxvii-lxxxviii. EPA/600/R-10/075F, 2013. See also, National Toxicology Program (NTP) (2012) NTP Monograph: Health Effects of Low-Level Lead. Available at <https://ntp.niehs.nih.gov/go/36443>.

<sup>8</sup> EPA (2013) ISA for Lead. Executive Summary "Effects of Pb Exposure in Children." pp. lxxxvii-lxxxviii. EPA/600/R-10/075F, 2013.

<sup>9</sup> EPA (2013) ISA for Lead. Section 1.9.4. "Pb Exposure and Neurodevelopmental Deficits in Children." p. I-75. EPA/600/R-10/075F, 2013.

<sup>3</sup> E.O. 13045. Protection of Children From Environmental Health Risks and Safety Risks. 62 FR 19885 (April 23, 1997).

of their programs, policies, and activities on people of color populations and low-income populations in the United States.<sup>10</sup> The EPA defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.<sup>11</sup>

Executive Order 14008 also calls on federal agencies to make achieving environmental justice part of their missions “by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.”<sup>12</sup> It also declares a policy “to secure environmental justice and spur economic opportunity for disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure and health care.” Under Executive Order 13563, federal agencies may consider equity, human dignity, fairness, and distributional considerations, where appropriate and permitted by law.<sup>13</sup>

The United States has made substantial progress in reducing lead exposure, but disparities remain along racial, ethnic, and socioeconomic lines. For example, blood lead levels in children from low-income households remain higher than those in children from higher income households, and the

most exposed Black children still have higher blood lead levels than the most exposed non-Hispanic White children.<sup>14–15</sup> Depending on the levels and associated risk, such blood lead levels may lead to lifelong health effects and barriers to social and economic well-being.<sup>16</sup>

In this action, the EPA is undertaking an evaluation, under section 231(a)(2)(A) of the Clean Air Act, of whether emissions of lead from engines in covered aircraft may cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. We are not proposing emission standards at this time, and therefore, our consideration of environmental justice is focused on describing populations living near airports in the United States. Section II.A.5 of this document, and the Technical Support Document<sup>17</sup> for this action describe the scientific evidence and analyses conducted by the EPA that provide information about the disparity in residential location for some low-income populations, people of color and some indigenous peoples in the United States, particularly Alaska Natives, with regard to their proximity to some airports where covered aircraft operate. The information presented in Section II.A.5 of this document indicates that there is a greater prevalence of people of color and of low-income populations within 500 meters or one kilometer of some airports compared with people living more distant. If such differences were to contribute to disproportionate and adverse impacts on people of color and low-income populations, they could indicate a potential environmental justice concern.

## Table of Contents

### I. Executive Summary

<sup>14</sup> EPA (2013) ISA for Lead. Section 5.4. “Summary.” pp. 5–40 through 5–42. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>15</sup> EPA (2022) “America’s Children and the Environment.” Summary of blood lead levels in children updated in 2022, available at <https://www.epa.gov/americanchildrenenvironment/biomonitoring-lead>. Data source: Centers for Disease Control and Prevention, National Report on Human Exposure to Environmental Chemicals. Blood Lead (2011–2018). Updated March 2022. Available at [https://www.cdc.gov/exposurereport/report/pdf/cgroup2\\_LBXPBP\\_2011-p.pdf](https://www.cdc.gov/exposurereport/report/pdf/cgroup2_LBXPBP_2011-p.pdf).

<sup>16</sup> EPA (2013) ISA for Lead. Section 1.9.1. “Public Health Significance.” p. 1–68; Section 1.9.5. “Reversibility and Persistence of Neurotoxic Effects of Pb.” p. 1–76. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>17</sup> EPA (2022) Technical Support Document (TSD) for the EPA’s Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. EPA, Washington, DC, EPA–420–R–22–025, 2022. Available in the docket for this action.

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- VII. Statutory Provisions and Legal Authority

### I. Executive Summary

Pursuant to section 231(a)(2)(A) of the Clean Air Act (CAA or Act), the Administrator proposes to find that

<sup>10</sup> 59 FR 7629 (Feb. 16, 1994).

<sup>11</sup> Fair treatment means that “no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental and commercial operations or programs and policies.” Meaningful involvement occurs when “(1) potentially affected populations have an appropriate opportunity to participate in decisions about a proposed activity [e.g., rulemaking] that will affect their environment and/or health; 2) the public’s contribution can influence the regulatory Agency’s decision; 3) the concerns of all participants involved will be considered in the decision-making process; and 4) [the EPA will] seek out and facilitate the involvement of those potentially affected.” A potential EJ concern is defined as “the actual or potential lack of fair treatment or meaningful involvement of minority populations, low-income populations, Tribes, and indigenous peoples in the development, implementation and enforcement of environmental laws, regulations and policies.” See, EPA’s Environmental Justice During the Development of an Action. Available at <https://www.epa.gov/sites/default/files/2015-06/documents/considering-ej-in-rulemaking-guide-final.pdf>. See also <https://www.epa.gov/environmentaljustice>.

<sup>12</sup> 86 FR 7619 (Feb. 1, 2021).

<sup>13</sup> 76 FR 3821 (Jan. 18, 2011).

emissions of lead from covered aircraft engines cause or contribute to lead air pollution that may reasonably be anticipated to endanger public health and welfare. Covered aircraft would, for example, include smaller piston-engine aircraft such as the Cessna 172 (single-engine aircraft) and the Beechcraft Baron G58 (twin-engine aircraft), as well as the largest piston-engine aircraft—the Curtiss C-46 and the Douglas DC-6. Other examples of covered aircraft would include rotorcraft, such as the Robinson R44 helicopter, light-sport aircraft, and ultralight vehicles equipped with piston engines.

For purposes of this action, the EPA is proposing to define the “air pollution” referred to in section 231(a)(2)(A) of the CAA as lead, which we also refer to as the lead air pollution in this document.<sup>18</sup> In proposing to find that the lead air pollution may reasonably be anticipated to endanger the public health and welfare, the EPA relies on the extensive scientific evidence critically assessed in the 2013 Integrated Science Assessment for Lead (2013 Lead ISA) and the previous Air Quality Criteria Documents (AQCDs) for Lead, which the EPA prepared to serve as the scientific foundation for periodic reviews of the National Ambient Air Quality Standards (NAAQS) for lead.<sup>19 20 21 22</sup>

Further, for purposes of this action, the EPA is proposing to define the “air pollutant” referred to in CAA section 231(a)(2)(A) as lead, which we also refer to as the lead air pollutant in this document.<sup>23</sup> Accordingly, the Administrator is proposing to find that emissions of the lead air pollutant from covered aircraft engines cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare under CAA section 231(a)(2)(A).

In addition to the proposed findings and the science on which they are based, this document includes an overview and background context helpful to understanding the source sector in the context of this proposal, a

brief summary of some of the federal actions focused on reducing lead exposures, and the legal framework for this action.

## II. Overview and Context for This Proposal

We summarize here background information that provides additional context for this proposed action. This includes information on the population of aircraft that have piston engines, information on the use of leaded aviation gasoline (avgas) in covered aircraft, physical and chemical characteristics of lead emissions from engines used in covered aircraft, concentrations of lead in air from these engine emissions, and the fate and transport of lead emitted by engines used in such aircraft. We also include here an analysis of populations residing near and attending school near airports and an analysis of potential environmental justice implications with regard to residential proximity to runways where covered aircraft operate. This section ends with a description of a broad range of federal actions to reduce lead exposure from a variety of environmental media and a summary of citizen petitions for rulemaking regarding lead emissions from covered aircraft and the EPA responses.

### A. Background Information Helpful to Understanding This Proposal

This proposal draws extensively from the EPA’s scientific assessments for lead, which are developed as part of the EPA’s periodic reviews of the air quality criteria<sup>24</sup> for lead and the lead NAAQS.<sup>25</sup> These scientific assessments provide a comprehensive review,

<sup>24</sup> Under section 108(a)(2) of the CAA, air quality criteria are intended to “accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of [a] pollutant in the ambient air . . . .” Section 109 of the CAA directs the Administrator to propose and promulgate “primary” and “secondary” NAAQS for pollutants for which air quality criteria are issued. Under CAA section 109(d)(1), EPA must periodically complete a thorough review of the air quality criteria and the NAAQS and make such revisions as may be appropriate in accordance with sections 108 and 109(b) of the CAA. A fuller description of these legislative requirements can be found, for example, in the ISA (see 2013 Lead ISA, p. lxix).

<sup>25</sup> Section 109(b)(1) defines a primary standard as one “the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health.” A secondary standard, as defined in section 109(b)(2), must “specify a level of air quality the attainment and maintenance of which, in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of [the] pollutant in the ambient air.”

synthesis, and evaluation of the most policy-relevant science that builds upon the conclusions of previous assessments. In the information that follows, we discuss and describe scientific evidence summarized in the most recent assessment, the 2013 Lead ISA<sup>26</sup> as well as information summarized in previous assessments, including the 1977, 1986, and 2006 AQCDs.<sup>27 28 29</sup>

As described in the 2013 Lead ISA, lead emitted to ambient air is transported through the air and is distributed from air to other environmental media through deposition.<sup>30</sup> Lead emitted in the past can remain available for environmental or human exposure for extended time in some areas.<sup>31</sup> Depending on the environment where it is deposited, it may to various extents be resuspended into the ambient air, integrated into the media on which it deposits, or transported in surface water runoff to other areas or nearby waterbodies.<sup>32</sup> Lead in the environment today may have been airborne yesterday or emitted to the air long ago.<sup>33</sup> Over time, lead that was initially emitted to air can become less available for environmental circulation by sequestration in soil, sediment and other reservoirs.<sup>34</sup>

The multimedia distribution of lead emitted into ambient air creates multiple air-related pathways of human and ecosystem exposure. These pathways may involve media other than air, including indoor and outdoor dust, soil, surface water and sediments, vegetation and biota. The human exposure pathways for lead emitted into air include inhalation of ambient air or ingestion of food, water or other materials, including dust and soil, that have been contaminated through a pathway involving lead deposition from

<sup>26</sup> EPA (2013) ISA for Lead. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>27</sup> EPA (1977) AQC for Lead. EPA, Washington, DC, EPA-600/8-77-017 (NTIS PB280411), 1977.

<sup>28</sup> EPA (1986) AQC for Lead. EPA, Washington, DC, EPA-600/8-83/028aF-dF (NTIS PB87142386), 1986.

<sup>29</sup> EPA (2006) AQC for Lead. EPA, Washington, DC, EPA/600/R-5/144aF, 2006.

<sup>30</sup> EPA (2013) ISA for Lead. Section 3.1.1. “Pathways for Pb Exposure.” p. 3-1. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>31</sup> EPA (2013) ISA for Lead. Section 3.7.1. “Exposure.” p. 3-144. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>32</sup> EPA (2013) ISA for Lead. Section 6.2. “Fate and Transport of Pb in Ecosystems.” p. 6-62. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>33</sup> EPA (2013) ISA for Lead. Section 2.3. “Fate and Transport of Pb.” p. 2-24. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>34</sup> EPA (2013) ISA for Lead. Section 1.2.1. “Sources, Fate and Transport of Ambient Pb;” p. 1-6. Section 2.3. “Fate and Transport of Pb.” p. 2-24. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>18</sup> As noted in Section IV.A of this notice, the lead air pollution that we are considering in this proposed finding can occur as elemental lead or in lead-containing compounds.

<sup>19</sup> EPA (2013) ISA for Lead. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>20</sup> EPA (2006) AQC for Lead. EPA, Washington, DC, EPA/600/R-5/144aF, 2006.

<sup>21</sup> EPA (1986) AQC for Lead. EPA, Washington, DC, EPA-600/8-83/028aF-dF, 1986.

<sup>22</sup> EPA (1977) AQC for Lead. EPA, Washington, DC, EPA-600/8-77-017 (NTIS PB280411), 1977.

<sup>23</sup> As noted in Section V.A of this notice, the lead air pollutant we are considering in this proposed finding can occur as elemental lead or in lead-containing compounds.

ambient air.<sup>35</sup> Ambient air inhalation pathways include both inhalation of air outdoors and inhalation of ambient air that has infiltrated into indoor environments.<sup>36</sup> The air-related ingestion pathways occur as a result of lead emissions to air being distributed to other environmental media, where humans can be exposed to it via contact with and ingestion of indoor and outdoor dusts, outdoor soil, food and drinking water.

The scientific evidence documents exposure to many sources of lead emitted to the air that have resulted in higher blood lead levels, particularly for people living or working near sources, including stationary sources, such as mines and smelters, and mobile sources, such as cars and trucks when lead was a gasoline additive.<sup>37 38 39 40 41 42</sup> Similarly, with regard to emissions from engines used in covered aircraft there have been studies reporting positive associations of children's blood lead levels with proximity to airports and activity by covered aircraft,<sup>43 44</sup> thus indicating potential for children's exposure to lead from covered aircraft engine emissions. A recent study evaluating cardiovascular mortality rates in adults 65 and older living within a few kilometers and downwind of runways, while not evaluating blood lead levels, found higher mortality rates in adults living near single-runway airports in years with more piston-engine air traffic, but not in adults living near multi-runway airports, suggesting

the potential for adverse adult health effects near some airports.<sup>45</sup>

#### 1. Piston-Engine Aircraft and the Use of Leaded Aviation Gasoline

Aircraft operating in the U.S. are largely powered by either turbine engines or piston engines, although other propulsion systems are in use and in development. Turbine-engine powered aircraft and a small percentage of piston-engine aircraft (*i.e.*, those with diesel engines) operate on fuel that does not contain a lead additive. Covered aircraft, which are predominantly piston-engine powered aircraft, operate on leaded avgas. Examples of covered aircraft include smaller piston-powered aircraft such as the Cessna 172 (single-engine aircraft) and the Beechcraft Baron G58 (twin-engine aircraft), as well as the largest piston-engine aircraft—the Curtiss C-46 and the Douglas DC-6. Additionally, some rotorcraft, such as the Robinson R44 helicopter, light-sport aircraft, and ultralight vehicles can have piston engines that operate using leaded avgas.

Lead is added to avgas in the form of tetraethyl lead. Tetraethyl lead helps boost fuel octane, prevents engine knock, and prevents valve seat recession and subsequent loss of compression for engines without hardened valves. There are three main types of leaded avgas: 100 Octane, which can contain up to 4.24 grams of lead per gallon (1.12 grams of lead per liter), 100 Octane Low Lead (100LL), which can contain up to 2.12 grams of lead per gallon (0.56 grams of lead per liter), and 100 Octane Very Low Lead (100VLL), which can contain up to 0.71 grams of lead per gallon (0.45 grams of lead per liter).<sup>46</sup> Currently, 100LL is the most commonly available and most commonly used type of avgas.<sup>47</sup> Tetraethyl lead was first used in piston-engine aircraft in 1927.<sup>48</sup> Commercial and military aircraft in the U.S. operated on 100 Octane leaded avgas into the 1950s, but in subsequent years, the commercial and military aircraft fleet largely converted to turbine-engine powered aircraft which

do not use leaded avgas.<sup>49 50</sup> The use of avgas containing approximately 4 grams of lead per gallon continued in piston-engine aircraft until the early 1970s when 100LL became the dominant leaded fuel in use.

There are two sources of data from the federal government that provide annual estimates of the volume of leaded avgas supplied and consumed in the U.S.: the Department of Energy, Energy Information Administration (DOE EIA) provides information on the volume of leaded avgas supplied in the U.S.,<sup>51</sup> and the FAA provides information on the volume of leaded avgas consumed in the U.S.<sup>52</sup> Over the ten-year period from 2011 through 2020, DOE estimates of the annual volume of leaded avgas supplied averaged 184 million gallons, with year-on-year fluctuations in fuel supplied ranging from a 25 percent increase to a 29 percent decrease. Over the same period, from 2011 through 2020, the FAA estimates of the annual volume of leaded avgas consumed averaged 196 million gallons, with year-on-year fluctuations in fuel consumed ranging from an eight percent increase to a 14 percent decrease. The FAA forecast for consumption of leaded avgas in the U.S. ranges from 185 million gallons in 2026 to 179 million gallons in 2041, a decrease of three percent in that period.<sup>53</sup> As described later in this section, while the consumption of leaded avgas is expected to decrease three percent from 2026 to 2041, FAA projects increased activity at some airports and decreased activity at other airports out to 2045.

<sup>35</sup> EPA (2013) ISA for Lead. Section 3.1.1. "Pathways for Pb Exposure." p. 3–1. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>36</sup> EPA (2013) ISA for Lead. Sections 1.3. "Exposure to Ambient Pb." p. 1–11. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>37</sup> EPA (2013) ISA for Lead. Sections 3.4.1. "Pb in Blood." p. 3–85; Section 5.4. "Summary." p. 5–40. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>38</sup> EPA (2006) AQC for Lead. Chapter 3. EPA, Washington, DC, EPA/600/R-5/144aF, 2006.

<sup>39</sup> EPA (1986) AQC for Lead. Section 1.11.3. EPA, Washington, DC, EPA-600/8-83/028aF-dF (NTIS PB87142386), 1986.

<sup>40</sup> EPA (1977) AQC for Lead. Section 12.3.1.1. "Air Exposures." p. 12–10. EPA, Washington, DC, EPA-600/8-77-017 (NTIS PB280411), 1977.

<sup>41</sup> EPA (1977) AQC for Lead. Section 12.3.1.2. "Air Exposures." p. 12–10. EPA, Washington, DC, EPA-600/8-77-017 (NTIS PB280411), 1977.

<sup>42</sup> EPA (1977) AQC for Lead. Section 12.3.1.1. "Air Exposures." p. 12–10. EPA, Washington, DC, EPA-600/8-77-017 (NTIS PB280411), 1977.

<sup>43</sup> Miranda et al., 2011. A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels. *Environmental Health Perspectives*. 119:1513–1516.

<sup>44</sup> Zahran et al., 2017. The Effect of Leaded Aviation Gasoline on Blood Lead in Children. *Journal of the Association of Environmental and Resource Economists*. 4(2):575–610.

<sup>45</sup> Klemick et al., 2022. Cardiovascular Mortality and Leaded Aviation Fuel: Evidence from Piston-Engine Air Traffic in North Carolina. *International Journal of Environmental Research and Public Health*. 19(10):5941.

<sup>46</sup> ASTM International (May 1, 2021) Standard Specification for Leaded Aviation Gasolines D910–21.

<sup>47</sup> National Academies of Sciences, Engineering, and Medicine (NAS). 2021. Options for Reducing Lead Emissions from Piston-Engine Aircraft. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26050>.

<sup>48</sup> Ogston 1981. A Short History of Aviation Gasoline Development, 1903–1980. *Society of Automotive Engineers*. p. 810848.

<sup>49</sup> U.S. Department of Commerce Civil Aeronautics Administration. Statistical Handbook of Aviation (Years 1930–1959). <https://babel.hathitrust.org/cgi/pt?id=mdp.39015027813032&view=1up&seq=899>.

<sup>50</sup> U.S. Department of Commerce Civil Aeronautics Administration. Statistical Handbook of Aviation (Years 1960–1971). <https://babel.hathitrust.org/cgi/pt?id=mdp.39015004520279&view=1up&seq=9&skin=2021>.

<sup>51</sup> DOE. EIA. Petroleum and Other Liquids; Supply and Disposition. Aviation Gasoline in Annual Thousand Barrels. Fuel production volume data obtained from [https://www.eia.gov/dnav/pet/pet\\_sum\\_snd\\_a\\_eppv\\_mbb1\\_a\\_cur-1.htm](https://www.eia.gov/dnav/pet/pet_sum_snd_a_eppv_mbb1_a_cur-1.htm) and <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=C400000001&f=A> on Dec., 30, 2021.

<sup>52</sup> Department of Transportation (DOT). FAA. Aviation Policy and Plans. FAA Aerospace Forecast Fiscal Years 2009–2025. p. 81. Available at [http://www.faa.gov/data\\_research/aviation/aerospace\\_forecasts/2009-2025/media/2009%20Forecast%20Doc.pdf](http://www.faa.gov/data_research/aviation/aerospace_forecasts/2009-2025/media/2009%20Forecast%20Doc.pdf). This document provides historical data for 2000–2008 as well as forecast data.

<sup>53</sup> DOT. FAA. Aviation Policy and Plans. Table 23. p. 111. FAA Aerospace Forecast Fiscal Years 2021–2041. Available at [https://www.faa.gov/sites/faa.gov/files/data\\_research/aviation/aerospace\\_forecasts/FY2021-41\\_FAA\\_Aerospace\\_Forecast.pdf](https://www.faa.gov/sites/faa.gov/files/data_research/aviation/aerospace_forecasts/FY2021-41_FAA_Aerospace_Forecast.pdf).

The FAA's National Airspace System Resource (NASR)<sup>54</sup> provides a complete list of operational airport facilities in the U.S. Among the approximately 19,600 airports listed in the NASR, approximately 3,300 are included in the National Plan of Integrated Airport Systems (NPIAS) and support the majority of piston-engine aircraft activity that occurs annually in the U.S.<sup>55</sup> While less aircraft activity occurs at the remaining 15,336 airports, that activity is conducted predominantly by piston-engine aircraft. Approximately 6,000 airports have been in operation since the early 1970s when the leaded fuel being used contained up to 4.24 grams of lead per gallon of avgas.<sup>56</sup> The activity by piston-engine aircraft spans a range of purposes, as described further below. In Alaska this fleet of aircraft currently play a critical role in the transportation infrastructure.

As of 2019, there were 171,934 piston-engine aircraft in the U.S.<sup>57</sup> This total includes 128,926 single-engine aircraft, 12,470 twin-engine aircraft, and 3,089 rotorcraft.<sup>58</sup> The average age of single-engine aircraft in 2018 was 46.8 years and the average age of twin-engine aircraft in 2018 was 44.7 years old.<sup>59</sup> In 2019, 883 new piston-engine aircraft were manufactured in the U.S. some of which are exported.<sup>60</sup> For the period

from 2019 through 2041, the fleet of fixed wing<sup>61</sup> piston-engine aircraft is projected to decrease at an annual average rate of 0.9 percent, and the hours flown by these aircraft is projected to decrease 0.9 percent per year from 2019 to 2041.<sup>62</sup> An annual average growth rate in the production of piston-engine powered rotorcraft of 0.9 percent is forecast, with a commensurate 1.9 percent increase in hours flown in that period by piston-engine powered rotorcraft.<sup>63</sup> There were approximately 664,565 pilots certified to fly general aviation aircraft in the U.S. in 2021.<sup>64</sup> This included 197,665 student pilots and 466,900 non-student pilots. In addition, there were more than 301,000 FAA Non-Pilot Certificated mechanics.<sup>65</sup>

Piston-engine aircraft are used to conduct flights that are categorized as either general aviation or air taxi. General aviation flights are defined as all aviation other than military and those flights by scheduled commercial airlines. Air taxi flights are short duration flights made by small commercial aircraft on demand. The hours flown by aircraft in the general aviation fleet are comprised of personal and recreational transportation (67 percent), business (12 percent), instructional flying (8 percent), medical transportation (less than one percent), and the remainder includes hours spent in other applications such as aerial observation and aerial application.<sup>66</sup> Aerial application for agricultural activity includes crop and timber production, which involve fertilizer and

pesticide application and seeding cropland. In 2019, aerial application in agriculture represented 883,600 hours flown by general aviation aircraft, and approximately 17.5 percent of these total hours were flown by piston-engine aircraft.<sup>67</sup>

Approximately 71 percent of the hours flown that are categorized as general aviation activity are conducted by piston-engine aircraft, and 17 percent of the hours flown that are categorized as air taxi are conducted by piston-engine aircraft.<sup>68</sup> From the period 2012 through 2019, the total hours flown by piston-engine aircraft increased nine percent from 13.2 million hours in 2012 to 14.4 million hours in 2019.<sup>69 70</sup>

As noted earlier, the U.S. has a dense network of airports where piston-engine aircraft operate, and a small subset of those airports have air traffic control towers which collect daily counts of aircraft operations at the facility (one takeoff or landing event is termed an "operation"). These daily operations are provided by the FAA in the Air Traffic Activity System (ATADS).<sup>71</sup> The ATADS reports three categories of airport operations that can be conducted by piston-engine aircraft: Itinerant General Aviation, Local Civil, and Itinerant Air Taxi. The sum of Itinerant General Aviation and Local Civil at a facility is referred to as general aviation operations. Piston-engine aircraft operations in these categories are not reported separately from operations conducted by aircraft using other propulsion systems (e.g., turboprop). Because piston-engine aircraft activity generally comprises the majority of general aviation activity at an airport,

<sup>54</sup> See FAA. NASR. Available at [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/aero\\_data/eNASR\\_Browser/](https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/eNASR_Browser/).

<sup>55</sup> FAA (2020) National Plan of Integrated Airport Systems (NPIAS) 2021–2025 Published by the Secretary of Transportation Pursuant to Title 49 U.S. Code, Section 47103. Retrieved on Nov. 3, 2021 from: [https://www.faa.gov/airports/planning\\_capacity/npias/current/media/NPIAS-2021-2025-Narrative.pdf](https://www.faa.gov/airports/planning_capacity/npias/current/media/NPIAS-2021-2025-Narrative.pdf).

<sup>56</sup> See FAA's NASR. Available at [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/aero\\_data/eNASR\\_Browser/](https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/eNASR_Browser/).

<sup>57</sup> FAA. General Aviation and Part 135 Activity Surveys—CY 2019. Chapter 1: Historical General Aviation and Air Taxi Measures. Table 1.1—General Aviation and Part 135 Number of Active Aircraft By Aircraft Type 2008–2019. Retrieved on Dec., 27, 2021 at [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/CY2019/](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2019/). Separately, FAA maintains a database of FAA-registered aircraft and as of January 6, 2022 there were 222,592 piston-engine aircraft registered with FAA. See: <https://registry.faa.gov/aircraftinquiry/>.

<sup>58</sup> FAA. General Aviation and Part 135 Activity Surveys—CY 2019. Chapter 1: Historical General Aviation and Air Taxi Measures. Table 1.1—General Aviation and Part 135 Number of Active Aircraft By Aircraft Type 2008–2019. Retrieved on Dec., 27, 2021 at [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/CY2019/](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2019/).

<sup>59</sup> General Aviation Manufacturers Association (GAMA) (2019) General Aviation Statistical Databook and Industry Outlook, p.27. Retrieved on October 7, 2021 from: [https://gama.aero/wp-content/uploads/GAMA\\_2019Databook\\_Final-2020-03-20.pdf](https://gama.aero/wp-content/uploads/GAMA_2019Databook_Final-2020-03-20.pdf).

<sup>60</sup> GAMA (2019) General Aviation Statistical Databook and Industry Outlook, p.16. Retrieved on

October 7, 2021 from: [https://gama.aero/wp-content/uploads/GAMA\\_2019Databook\\_Final-2020-03-20.pdf](https://gama.aero/wp-content/uploads/GAMA_2019Databook_Final-2020-03-20.pdf).

<sup>61</sup> There are both fixed-wing and rotary-wing aircraft; and airplane is an engine-driven, fixed-wing aircraft and a rotorcraft is an engine-driven rotary-wing aircraft.

<sup>62</sup> See FAA Aerospace Forecast Fiscal Years 2021–2041. p. 28. Available at [https://www.faa.gov/sites/aa/files/data\\_research/aviation/aerospace\\_forecasts/FY2021-41\\_FAA\\_Aerospace\\_Forecast.pdf](https://www.faa.gov/sites/aa/files/data_research/aviation/aerospace_forecasts/FY2021-41_FAA_Aerospace_Forecast.pdf).

<sup>63</sup> FAA Aerospace Forecast Fiscal Years 2021–2041. Table 28. p. 116., and Table 29. p. 117. Available at [https://www.faa.gov/sites/aa/files/data\\_research/aviation/aerospace\\_forecasts/FY2021-41\\_FAA\\_Aerospace\\_Forecast.pdf](https://www.faa.gov/sites/aa/files/data_research/aviation/aerospace_forecasts/FY2021-41_FAA_Aerospace_Forecast.pdf).

<sup>64</sup> FAA. U.S. Civil Airmen Statistics. 2021 Active Civil Airman Statistics. Retrieved from [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/civil\\_airmen\\_statistics](https://www.faa.gov/data_research/aviation_data_statistics/civil_airmen_statistics) on May 20, 2022.

<sup>65</sup> FAA. U.S. Civil Airmen Statistics. 2021 Active Civil Airman Statistics. Retrieved from [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/civil\\_airmen\\_statistics](https://www.faa.gov/data_research/aviation_data_statistics/civil_airmen_statistics) on May 20, 2022.

<sup>66</sup> FAA. General Aviation and Part 135 Activity Surveys—CY 2019. Chapter 1: Historical General Aviation and Air Taxi Measures. Table 1.4—General Aviation and Part 135 Total Hours Flown By Actual Use 2008–2019 (Hours in Thousands). Retrieved on Dec., 27, 2021 at [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/CY2019/](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2019/).

<sup>67</sup> FAA. General Aviation and Part 135 Activity Surveys—CY 2019. Chapter 3: Primary and Actual Use. Table 3.2—General Aviation and Part 135 Total Hours Flown by Actual Use 2008–2019 (Hours in Thousands). Retrieved on Mar., 22, 2022 at [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/CY2019/](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2019/).

<sup>68</sup> FAA. General Aviation and Part 135 Activity Surveys—CY 2019. Chapter 3: Primary and Actual Use. Table 3.2—General Aviation and Part 135 Total Hours Flown by Actual Use 2008–2019 (Hours in Thousands). Retrieved on Mar., 22, 2022 at [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/CY2019/](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2019/).

<sup>69</sup> FAA. General Aviation and Part 135 Activity Surveys—CY 2019. Chapter 3: Primary and Actual Use. Table 1.3—General Aviation and Part 135 Total Hours Flown by Aircraft Type 2008–2019 (Hours in Thousands). Retrieved on Dec., 27, 2021 at [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/CY2019/](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2019/).

<sup>70</sup> In 2012, the FAA Aerospace Forecast projected a 0.03 percent increase in hours flown by the piston-engine aircraft fleet for the period 2012 through 2032. FAA Aerospace Forecast Fiscal Years 2012–2032. p. 53. Available at [https://www.faa.gov/data\\_research/aviation/aerospace\\_forecasts/media/2012%20FAA%20Aerospace%20Forecast.pdf](https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/2012%20FAA%20Aerospace%20Forecast.pdf).

<sup>71</sup> See FAA's Air Traffic Activity Data. Available at <https://aspm.faa.gov/opsnet/sys/airport.asp>.

general aviation activity is often used as a surrogate measure for understanding piston-engine activity.

In order to understand the trend in airport-specific piston-engine activity in the past ten years, we evaluated the trend in general aviation activity. We calculated the average activity at each of the airports in ATADS over three-year periods for the years 2010 through 2012 and for the years 2017 through 2019. We focused this trend analysis on the airports in ATADS because these data are collected daily at an airport-specific control tower (in contrast with annual activity estimates provided at airports without control towers). There were 513 airports in ATADS for which data were available to determine annual average activity for both the 2010–2012 period and the 2017–2019 time period. The annual average operations by general aviation at each of these airports in the period 2010 through 2012 ranged from 31 to 346,415, with a median of 34,368; the annual average operations by general aviation in the period from 2017 through 2019 ranged from 2,370 to 396,554, with a median of 34,365. Of the 513 airports, 211 airports reported increased general aviation activity over the period evaluated.<sup>72</sup> The increase in the average annual number of operations by general aviation aircraft at these 211 facilities ranged from 151 to 136,872 (an increase of two percent and 52 percent, respectively).

While national consumption of leaded avgas is forecast to decrease three percent from 2026 to 2045, this change in fuel consumption is not expected to occur uniformly across airports in the U.S. The FAA produces the Terminal Area Forecast (TAF), which is the official forecast of aviation activity for the 3,300 U.S. airports that are in the NPIAS.<sup>73</sup> For the 3,306 airports in the TAF, we compared the average activity by general aviation at each airport from 2017–2019 with the FAA forecast for general aviation activity at those airports in 2045. The FAA forecasts that activity by general aviation will decrease at 234 of the airports in the TAF, remain the same at 1,960 airports, and increase at 1,112 of the airports. To evaluate the magnitude of potential increases in activity for the same 513 airports for which we evaluated activity

trends in the past ten years, we compared the 2017–2019 average general aviation activity at each of these airports with the forecasted activity for 2045 in the TAF.<sup>74</sup> The annual operations estimated for the 513 airports in 2045 ranges from 2,914 to 427,821 with a median of 36,883. The TAF forecasts an increase in activity at 442 of the 513 airports out to 2045, with the increase in operations at those facilities ranging from 18 to 83,704 operations annually (an increase of 0.2 percent and 24 percent, respectively).

## 2. Emissions of Lead From Piston-Engine Aircraft

This section describes the physical and chemical characteristics of lead emitted by covered aircraft, and the national, state, county and airport-specific annual inventories of these engine emissions of lead. Information regarding lead emissions from motor vehicle engines operating on leaded fuel is summarized in prior AQCDs for Lead, and the 2013 Lead ISA also includes information on lead emissions from piston-engine aircraft.<sup>75 76 77</sup> Lead is added to avgas in the form of tetraethyl lead along with ethylene dibromide, both of which were used in leaded gasoline for motor vehicles in the past. Therefore, the summary of the science regarding emissions of lead from motor vehicles presented in the 1997 and 1986 AQCDs for Lead is relevant to understanding some of the properties of lead emitted from piston-engine aircraft and the atmospheric chemistry these emissions are expected to undergo. Recent studies relevant to understanding lead emissions from piston-engine aircraft have also been published and are discussed here.

### a. Physical and Chemical Characteristics of Lead Emitted by Piston-Engine Aircraft

As with motor vehicle engines, when leaded avgas is combusted, the lead is oxidized to form lead oxide. In the absence of the ethylene dibromide lead scavenger in the fuel, lead oxide can

collect on the valves and spark plugs, and if the deposits become thick enough, the engine can be damaged. Ethylene dibromide reacts with the lead oxide, converting it to brominated lead and lead oxybromides. These brominated forms of lead remain volatile at high combustion temperatures and are emitted from the engine along with the other combustion by-products.<sup>78</sup> Upon cooling to ambient temperatures these brominated lead compounds are converted to particulate matter. The presence of lead dibromide particles in the exhaust from a piston-engine aircraft has been confirmed by Griffith (2020) and is the primary form of lead emitted by engines operating on leaded fuel.<sup>79</sup> In addition to lead bromides, ammonium salts of other lead halides were also emitted by motor vehicles and would be expected in the exhaust of piston-engine aircraft.<sup>80</sup>

Uncombusted alkyl lead was also measured in the exhaust of motor vehicles operating on leaded gasoline and is therefore likely to be present in the exhaust from piston-engine aircraft.<sup>81</sup> Alkyl lead is the general term used for organic lead compounds and includes the lead additive tetraethyl lead. Summarizing the available data regarding emissions of alkyl lead from piston-engine aircraft, the 2013 Lead ISA notes that lead in the exhaust that might be in organic form may potentially be 20 percent (as an upper bound estimate).<sup>82</sup> In addition, tetraethyl lead is a highly volatile compound and therefore, a portion of tetraethyl lead in fuel exposed to air will partition into the vapor phase.<sup>83</sup>

Particles emitted by piston-engine aircraft are in the submicron size range (less than one micron in diameter). The Swiss Federal Office of Civil Aviation (FOCA) published a study of piston-engine aircraft emissions including

<sup>78</sup> EPA (1986) AQC for Lead. EPA, Washington, DC, EPA-600/8-83/028aF-dF (NTIS PB87142386), 1986.

<sup>79</sup> Griffith 2020. Electron microscopic characterization of exhaust particles containing lead dibromide beads expelled from aircraft burning leaded gasoline. *Atmospheric Pollution Research* 11:1481–1486.

<sup>80</sup> EPA (1986) AQC for Lead. Volume 2: Chapters 5 & 6. EPA, Washington, DC, EPA-600/8-83/028aF-dF (NTIS PB87142386), 1986.

<sup>81</sup> EPA (2013) ISA for Lead. Table 2-1. “Pb Compounds Observed in the Environment.” p. 2–8. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>82</sup> EPA (2013) ISA for Lead. Section 2.2.2.1 “Pb Emissions from Piston-engine Aircraft Operating on Leaded-Aviation Gasoline and Other Non-road Sources.” p. 2–10. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

<sup>83</sup> Memorandum to Docket EPA-HQ-OAR-2022-0389. Potential Exposure to Non-exhaust Lead and Ethylene Dibromide. June 15, 2022. Docket ID EPA-HQ-2022-0389.

<sup>72</sup> Geidosch. Memorandum to Docket EPA-HQ-OAR-2022-0389. Past Trends and Future Projections in General Aviation Activity and Emissions. June 1, 2022. Docket ID EPA-HQ-2022-0389.

<sup>73</sup> FAA’s TAF Fiscal Years 2020–2045 describes the forecast method, data sources, and review process for the TAF estimates. The documentation for the TAF is available at <https://taf.faa.gov/Downloads/TAFSummaryFY2020-2045.pdf>.

<sup>74</sup> The TAF is prepared to assist the FAA in meeting its planning, budgeting, and staffing requirements. In addition, state aviation authorities and other aviation planners use the TAF as a basis for planning airport improvements. The TAF is available on the internet. The TAF database can be accessed at: <https://taf.faa.gov>.

<sup>75</sup> EPA (1977) AQC for Lead. EPA, Washington, DC, EPA-600/8-77-017 (NTIS PB280411), 1977.

<sup>76</sup> EPA (1986) AQC for Lead. EPA, Washington, DC, EPA-600/8-83/028aF-dF (NTIS PB87142386), 1986.

<sup>77</sup> EPA (2013) ISA for Lead. Section 2.2.2.1 “Pb Emissions from Piston-engine Aircraft Operating on Leaded Aviation Gasoline and Other Non-road Sources.” p. 2–10. EPA, Washington, DC, EPA/600/R-10/075F, 2013.

measurements of lead.<sup>84</sup> The Swiss FOCA reported the mean particle diameter of particulate matter emitted by one single-engine piston-powered aircraft ranged from 0.049 to 0.108 microns under different power conditions (lead particles would be expected to be present, but these particles were not separately identified in this study). The particle number concentration ranged from 5.7x10<sup>6</sup> to 8.6x10<sup>6</sup> particles per cm<sup>3</sup>. The authors noted that these particle emission rates are comparable to those from a typical diesel passenger car engine without a particle filter.<sup>85</sup> Griffith (2020) collected exhaust particles from a piston-engine aircraft operating on leaded avgas and examined the particles using electron microscopy. Griffith reported that the

mean diameter of particles collected in exhaust was 13 nanometers (0.013 microns) consisting of a 4 nanometer (0.004 micron) lead dibromide particle surrounded by hydrocarbons.

b. Inventory of Lead Emitted by Piston-Engine Aircraft

Lead emissions from covered aircraft are the largest single source of lead to air in the U.S. in recent years, contributing over 50 percent of lead emissions to air starting in 2008 (Table 1).<sup>86</sup> In 2017, approximately 470 tons of lead were emitted by engines in piston-powered aircraft, which constituted 70 percent of the annual emissions of lead to air in that year.<sup>87</sup> Lead is emitted at and near thousands of airports in the U.S. as described in Section II.A.1 of

this document. The EPA’s method for developing airport-specific lead estimates is described in the EPA’s Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline<sup>88</sup> and in the document titled “Calculating Piston-Engine Aircraft Airport Inventories for Lead for the 2008 National Emissions Inventory.”<sup>89</sup> The EPA’s National Emissions Inventory (NEI) reports airport estimates of lead emissions as well as estimates of lead emitted in-flight, which are allocated to states based on the fraction of piston-engine aircraft activity estimated for each state. These inventory data are briefly summarized here at the state, county, and airport level.<sup>90</sup>

TABLE 1—PISTON-ENGINE EMISSIONS OF LEAD TO AIR

	2008	2011	2014	2017
Piston-engine emissions of lead to air, tons .....	560	490	460	470
Total U.S. lead emissions, tons .....	950	810	720	670
Piston-engine emissions as a percent of the total U.S. lead inventory .....	59%	60%	64%	70%

At the state level, the EPA estimates of lead emissions from piston-engine aircraft range from 0.3 tons (Rhode Island) to 50.5 tons (California), 47 percent of which is emitted in the landing and takeoff cycle and 53 percent of which the EPA estimates is emitted in-flight, outside the landing and takeoff cycle.<sup>91</sup> Among the counties in the U.S. where the EPA estimates engine emissions of lead from covered aircraft, lead inventories range from 0.00005 tons per year to 4.1 tons per year and constitute the only source of air-related lead in 1,140 counties (the county estimates of lead emissions include the

lead emitted during the landing and takeoff cycle and not lead emitted in-flight).<sup>92</sup> In the counties where engine emissions of lead from aircraft are the sole source of lead to these estimates, annual lead emissions from the landing and takeoff cycle ranged from 0.00015 to 0.74 tons. Among the 1,872 counties in the U.S. with multiple sources of lead, including engine emission from covered aircraft, the contribution of aircraft engine emissions ranges from 0.0006 to 0.26 tons, comprising 0.0065 to 99.98 percent of the county total, respectively.

The EPA estimates that among the approximately 20,000 airports in the

U.S., airport lead inventories range from 0.00005 tons per year to 0.9 tons per year.<sup>93</sup> In 2017, the EPA’s NEI includes 638 airports where the EPA estimates engine emissions of lead from covered aircraft were 0.1 ton or more of lead annually. Using the FAA’s forecasted activity in 2045 for the approximately 3,300 airports in the NPIAS (as described in Section II.A.1 of this document), the EPA estimates airport-specific inventories may range from 0.00003 tons to 1.28 tons of lead (median of 0.03 tons), with 656 airports

<sup>84</sup> Swiss FOCA (2007) Aircraft Piston Engine Emissions Summary Report. 33–05–003 Piston Engine Emissions\_Swiss FOCA\_Summary\_Report\_070612\_rit. Available at <https://www.bazl.admin.ch/bazl/en/home/specialists/regulations-and-guidelines/environment/pollutant-emissions/aircraft-engine-emissions/report-appendices-database-and-data-sheets.html>.

<sup>85</sup> Swiss FOCA (2007) Aircraft Piston Engine Emissions Summary Report. 33–05–003 Piston Engine Emissions\_Swiss FOCA\_Summary\_Report\_070612\_rit. Section 2.2.3.a. Available at <https://www.bazl.admin.ch/bazl/en/home/specialists/regulations-and-guidelines/environment/pollutant-emissions/aircraft-engine-emissions/report-appendices-database-and-data-sheets.html>.

<sup>86</sup> The lead inventories for 2008, 2011 and 2014 are provided in the U.S. EPA (2018b) Report on the Environment Exhibit 2. Anthropogenic lead emissions in the U.S. Available at <https://cfpub.epa.gov/roe/indicator.cfm?i=13#2>.

<sup>87</sup> EPA 2017 NEI. Available at <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>.

<sup>88</sup> Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using

Leaded Aviation Gasoline. 75 FR 2440 (April 28, 2010).

<sup>89</sup> Airport lead annual emissions data used were reported in the 2017 NEI. Available at <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>. The methods used to develop these inventories are described in EPA (2010) Calculating Piston-Engine Aircraft Airport Inventories for Lead for the 2008 NEI. EPA, Washington, DC, EPA–420–B–10–044, 2010. (Also available in the docket for this action, EPA–HQ–OAR–2022–0389).

<sup>90</sup> The 2017 NEI utilized 2014 aircraft activity data to develop airport-specific lead inventories. Details can be found on page 3–17 of the document located here: [https://www.epa.gov/sites/default/files/2021-02/documents/nei2017\\_tsd\\_full\\_jan2021.pdf#page=70&zoom=100,68,633](https://www.epa.gov/sites/default/files/2021-02/documents/nei2017_tsd_full_jan2021.pdf#page=70&zoom=100,68,633).

<sup>91</sup> Lead emitted in-flight is assigned to states based on their overall fraction of total piston-engine aircraft operations. The state-level estimates of engine emissions of lead include both lead emitted in the landing and takeoff cycle as well as lead emitted in-flight. The method used to develop these estimates is described in EPA (2010) Calculating Piston-Engine Aircraft Airport Inventories for Lead

for the 2008 NEI, available here: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1009I13.PDF?Dockey=P1009I13.PDF>.

<sup>92</sup> Airport lead annual emissions data used were reported in the 2017 NEI. Available at <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>. In addition to the triennial NEI, the EPA collects from state, local, and Tribal air agencies point source data for larger sources every year (see <https://www.epa.gov/air-emissions-inventories/air-emissions-reporting-requirements-aerr> for specific emissions thresholds). While these data are not typically published as a new NEI, they are available publicly upon request and are also included in <https://www.epa.gov/air-emissions-modeling/emissions-modeling-platforms> that are created for years other than the triennial NEI years. County estimates of lead emissions from non-aircraft sources used in this action are from the 2019 inventory. There are 3,012 counties and statistical equivalent areas where EPA estimates engine emissions of lead occur.

<sup>93</sup> See EPA lead inventory data available at <https://www.epa.gov/air-emissions-modeling/emissions-modeling-platforms>.



estimated to have inventories above 0.1 tons in 2045.<sup>94</sup>

We estimate that piston-engine aircraft have consumed approximately 38.6 billion gallons of leaded avgas in the U.S. since 1930, excluding military aircraft use of this fuel, emitting approximately 113,000 tons of lead to the air.<sup>95</sup>

### 3. Concentrations of Lead in Air Attributable to Emissions From Piston-Engine Aircraft

In this section, we describe the concentrations of lead in air resulting from emissions of lead from covered aircraft. Air quality monitoring and modeling studies for lead at and near airports have identified elevated concentrations of lead in air from piston-engine aircraft exhaust at, and downwind of, airports where these aircraft are active.<sup>96 97 98 99 100 101</sup> This section provides a summary of the literature regarding the local-scale impact of aircraft emissions of lead on concentrations of lead at and near airports, with specific focus on the results of air monitoring for lead that the

EPA required at a subset of airports and an analysis conducted by the EPA to estimate concentrations of lead at 13,000 airports in the U.S., titled “Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports.”<sup>102 103</sup>

Gradient studies evaluate how lead concentrations change with distance from an airport where piston-engine aircraft operate. These studies indicate that concentrations of lead in air are estimated to be one to two orders of magnitude higher at locations proximate to aircraft emissions, compared to nearby locations not impacted by a source of lead air emissions (concentrations for periods of approximately 18 hours to three-month averages).<sup>104 105 106 107 108 109</sup> The magnitude of lead concentrations at and near airports is highly influenced by the amount of aircraft activity (*i.e.*, the number of take-off and landing operations, particularly if concentrated at one runway) and the time spent by aircraft in specific modes of operation. The most significant emissions in terms of ground-based activity, and therefore

ground-level concentrations of lead in air, occur near the areas with greatest fuel consumption where the aircraft are stationary and running.<sup>110 111 112</sup> For piston-engine aircraft these areas are most commonly locations in which pilots conduct engine tests during run-up operations prior to take-off (*e.g.*, magneto checks during the run-up operation mode). Run-up operations are conducted while the brakes are engaged so the aircraft is stationary and are often conducted adjacent to the runway end from which the aircraft will take off. Additional modes of operation by piston-engine aircraft, such as taxiing or idling near the runway, may result in additional hotspots of elevated lead concentration (*e.g.*, start-up and idle, maintenance run-up).<sup>113</sup>

The lead NAAQS was revised in 2008.<sup>114</sup> The 2008 decision revised the level, averaging time and form of the standards to establish the current primary and secondary standards, which are both 0.15 micrograms per cubic meter of air, in terms of consecutive three-month average of lead in total suspended particles.<sup>115</sup> In conjunction with strengthening the lead NAAQS in 2008, the EPA enhanced the existing lead monitoring network by requiring monitors to be placed in areas with sources such as industrial facilities and airports with estimated lead emissions of 1.0 ton or more per year. Lead monitoring was conducted at two airports following from these requirements (Deer Valley Airport, AZ and the Van Nuys Airport, CA). In 2010, the EPA made further revisions to the monitoring requirements such that state and local air quality agencies are now required to monitor near industrial facilities with estimated lead emissions of 0.50 tons or more per year and at airports with estimated emissions of 1.0

<sup>94</sup> EPA used the method describe in EPA (2010) Calculating Piston-Engine Aircraft Airport Inventories for Lead for the 2008 NEI to estimate airport lead inventories in 2045. This document is available here: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1009I13.PDF?Dockey=P1009I13.PDF>.

<sup>95</sup> Geidosch. Memorandum to Docket EPA-HQ-OAR-2022-0389. Lead Emissions from the use of Leaded Aviation Gasoline from 1930 through 2020. June 1, 2022. Docket ID EPA-HQ-2022-0389.

<sup>96</sup> Carr et al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795–5804. DOI: <https://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

<sup>97</sup> Feinberg et al., 2016. Modeling of Lead Concentrations and Hot Spots at General Aviation Airports. *Journal of the Transportation Research Board*, No. 2569, Transportation Research Board, Washington, DC, pp. 80–87. DOI: 10.3141/2569-09.

<sup>98</sup> Municipality of Anchorage (2012). *Merrill Field Lead Monitoring Report*. Municipality of Anchorage Department of Health and Human Services. Anchorage, Alaska. Available at [https://www.muni.org/Departments/health/Admin/environment/AirQ/Documents/Merrill%20Field%20Lead%20Monitoring%20Study\\_2012/Merrill%20Field%20Lead%20Study%20Report%20-%20final.pdf](https://www.muni.org/Departments/health/Admin/environment/AirQ/Documents/Merrill%20Field%20Lead%20Monitoring%20Study_2012/Merrill%20Field%20Lead%20Study%20Report%20-%20final.pdf).

<sup>99</sup> Environment Canada (2000) Airborne Particulate Matter, Lead and Manganese at Buttonville Airport. Toronto, Ontario, Canada: Conor Pacific Environmental Technologies for Environmental Protection Service, Ontario Region.

<sup>100</sup> Fine et al., 2010. *General Aviation Airport Air Monitoring Study*. South Coast Air Quality Management District. Available at <https://www.aqmd.gov/docs/default-source/air-quality/air-quality-monitoring-studies/general-aviation-study/study-of-air-toxins-near-van-nuys-and-santa-monica-airport.pdf>.

<sup>101</sup> Lead emitted from piston-engine aircraft in the particulate phase would also be measured in samples collected to evaluate total ambient PM<sub>2.5</sub> concentrations.

<sup>102</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA, Washington, DC, EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>. EPA responses to peer review comments on the report are available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YIWD.pdf>. These documents are also available in the docket for this action (Docket EPA-HQ-OAR-2022-0389).

<sup>103</sup> EPA (2022) Technical Support Document (TSD) for the EPA’s Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. EPA, Washington, DC, EPA-420-R-22-025, 2022. Available in the docket for this action.

<sup>104</sup> These studies report monitored or modeled data for averaging times ranging from approximately 18 hours to three-month averages.

<sup>105</sup> Carr et al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795–5804. DOI: <https://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

<sup>106</sup> Heiken et al., 2014. Quantifying Aircraft Lead Emissions at Airports. ACRP Report 133. Available at <https://www.nap.edu/catalog/22142/quantifying-aircraft-lead-emissions-at-airports>.

<sup>107</sup> Hudda et al., 2022. Substantial Near-Field Air Quality Improvements at a General Aviation Airport Following a Runway Shortening. *Environmental Science & Technology*. DOI: 10.1021/acs.est.1c06765.

<sup>108</sup> Fine et al., 2010. *General Aviation Airport Air Monitoring Study*. South Coast Air Quality Management District. Available at <https://www.aqmd.gov/docs/default-source/air-quality/air-quality-monitoring-studies/general-aviation-study/study-of-air-toxins-near-van-nuys-and-santa-monica-airport.pdf>.

<sup>109</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA, Washington, DC, EPA-420-R-20-003, 2020.

<sup>110</sup> EPA (2010) Development and Evaluation of an Air Quality Modeling Approach for Lead Emissions from Piston-Engine Aircraft Operating on Leaded Aviation Gasoline. EPA, Washington, DC, EPA-420-R-10-007, 2010. <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1007H4Q.PDF?Dockey=P1007H4Q.PDF>.

<sup>111</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA, Washington, DC, EPA-420-R-20-003, 2020. EPA responses to peer review comments on the report are available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YIWD.pdf>.

<sup>112</sup> Feinberg et al., 2016. Modeling of Lead Concentrations and Hot Spots at General Aviation Airports. *Journal of the Transportation Research Board*, No. 2569, Transportation Research Board, Washington, DC, pp. 80–87. DOI: 10.3141/2569-09.

<sup>113</sup> Feinberg et al., 2016. Modeling of Lead Concentrations and Hot Spots at General Aviation Airports. *Journal of the Transportation Research Board*, No. 2569, Transportation Research Board, Washington, DC, pp. 80–87. DOI: 10.3141/2569-09.

<sup>114</sup> 73 FR 66965 (Nov. 12, 2008).

<sup>115</sup> 40 CFR 50.16 (Nov. 12, 2008).

ton or more per year.<sup>116</sup> As part of this 2010 requirement to expand lead monitoring, the EPA also required a one-year monitoring study of 15 additional airports with estimated lead emissions between 0.50 and 1.0 ton per year in an effort to better understand how these emissions affect concentrations of lead in the air at and near airports. Further, to help evaluate airport characteristics that could lead to ambient lead concentrations that approach or exceed the lead NAAQS, airports for this one-year monitoring study were selected based on factors such as the level of piston-engine aircraft activity and the predominant use of one runway due to wind patterns.

As a result of these requirements, state and local air authorities collected and certified lead concentration data for at least one year at 17 airports with most monitors starting in 2012 and generally continuing through 2013. The data presented in Table 2 are based on the certified data for these sites and represent the maximum concentration monitored in a rolling three-month average for each location.<sup>117 118</sup>

TABLE 2—LEAD CONCENTRATIONS MONITORED AT 17 AIRPORTS IN THE U.S.

Airport, State	Lead design value, <sup>119</sup> µg/m <sup>3</sup>
Auburn Municipal Airport, WA ..	0.06
Brookhaven Airport, NY .....	0.03
Centennial Airport, CO .....	0.02
Deer Valley Airport, AZ .....	0.04
Gillespie Field, CA .....	0.07
Harvey Field, WA .....	0.02
McClellan-Palomar Airport, CA	0.17
Merrill Field, AK .....	0.07
Nantucket Memorial Airport, MA .....	0.01
Oakland County International Airport, MI .....	0.02
Palo Alto Airport, CA .....	0.12
Pryor Field Regional Airport, AL	0.01
Reid-Hillview Airport, CA .....	0.10
Republic Airport, NY .....	0.01
San Carlos Airport, CA .....	0.33
Stinson Municipal, TX .....	0.03
Van Nuys Airport, CA .....	0.06

<sup>116</sup> 75 FR 81226 (Dec. 27, 2010).

<sup>117</sup> EPA (2015) Program Overview: Airport Lead Monitoring. EPA, Washington, DC, EPA-420-F-15-003, 2015. Available at: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100LJDW.PDF?Dockey=P100LJDW.PDF>.

<sup>118</sup> EPA (2022) Technical Support Document (TSD) for the EPA's Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. EPA, Washington, DC, EPA-420-R-22-025, 2022. Available in the docket for this action.

Monitored lead concentrations violated the lead NAAQS at two airports in 2012: the McClellan-Palomar Airport and the San Carlos Airport. At both of these airports, monitors were located in close proximity to the area at the end of the runway most frequently used for pre-flight safety checks (*i.e.*, run-up). Alkyl lead emitted by piston-engine aircraft would be expected to partition into the vapor phase and would not be collected by the monitoring conducted in this study, which is designed to quantitatively collect particulate forms of lead.<sup>120</sup>

Airport lead monitoring and modeling studies have identified the sharp decrease in lead concentrations with distance from the run-up area and therefore the importance of considering monitor placement relative to the run-up area when evaluating the maximum impact location attributable to lead emissions from piston-engine aircraft. The monitoring data in Table 2 reflect differences in monitor placement relative to the run-up area as well as other factors; this study also provided evidence that air lead concentrations at and downwind from airports could be influenced by factors such as the use of more than one run-up area, wind speed, and the number of operations conducted by single- versus twin-engine aircraft.<sup>121</sup>

The EPA recognized that the airport lead monitoring study provided a small sample of the potential locations where emissions of lead from piston-engine aircraft could potentially cause

<sup>119</sup> A design value is a statistic that summarizes the air quality data for a given area in terms of the indicator, averaging time, and form of the standard. Design values can be compared to the level of the standard and are typically used to designate areas as meeting or not meeting the standard and assess progress towards meeting the NAAQS.

<sup>120</sup> As noted earlier, when summarizing the available data regarding emissions of alkyl lead from piston-engine aircraft, the 2013 Lead ISA notes that an upper bound estimate of lead in the exhaust that might be in organic form may potentially be 20 percent (2013 Lead ISA, p. 2–10). Organic lead in engine exhaust would be expected to influence receptors within short distances of the point of emission from piston-engine aircraft. Airports with large flight schools and/or facilities with substantial delays for aircraft queued for takeoff could experience higher concentrations of alkyl lead in the vicinity of the aircraft exhaust.

<sup>121</sup> The data in Table 2 represent concentrations measured at one location at each airport and monitors were not consistently placed in close proximity to the run-up areas. As described in Section II.A.3, monitored concentrations of lead in air near airports are highly influenced by proximity of the monitor to the run-up area. In addition to monitor placement, there are individual airport factors that can influence lead concentrations (*e.g.*, the use of multiple run-up areas at an airport, fleet composition, and wind speed). The monitoring data reported in Table 2 reflect a range of lead concentrations indicative of the location at which measurements were made and the specific operations at an airport.

concentrations of lead in ambient air to exceed the lead NAAQS. Because we anticipated that additional airports and conditions could lead to exceedances of the lead NAAQS at and near airports where piston-engine aircraft operate, and in order to understand the range of lead concentrations at airports nationwide, we developed an analysis of 13,000 airports in the peer-reviewed report titled, “Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports.”<sup>122 123</sup> This report provides estimated ranges of lead concentrations that may occur at and near airports where leaded avgas is used. The study extrapolated modeling results from one airport to estimate air lead concentrations at the maximum impact area near the run-up location for over 13,000 U.S. airports.<sup>124</sup> The model-extrapolated lead estimates in this study indicate that some additional U.S. airports may have air lead concentrations above the NAAQS at this area of maximum impact. The report also indicates that, at the levels of activity analyzed at the 13,000 airports, estimated lead concentrations decrease to below the standard within 50 meters from the location of highest concentration.

To estimate the potential ranges of lead concentrations at and downwind of the anticipated area of highest concentration at airports in the U.S., the relationship between piston-engine aircraft activity and lead concentration at and downwind of the maximum impact site at one airport was applied to piston-engine aircraft activity estimates for each U.S. airport.<sup>125</sup> This approach for conducting a nationwide analysis of airports was selected due to the impact of piston-engine aircraft run-up

<sup>122</sup> EPA (2020) Model-Extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA, Washington, DC, EPA-420-R-20-003, 2020.

<sup>123</sup> EPA (2022) Technical Support Document (TSD) for the EPA's Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. EPA, Washington, DC, EPA-420-R-22-025, 2022. Available in the docket for this action.

<sup>124</sup> In this study, the EPA defined the maximum impact site as 15 meters downwind of the tailpipe of an aircraft conducting run-up operations in the area designated for these operations at a runway end. The maximum impact area was defined as approximately 50 meters surrounding the maximum impact site.

<sup>125</sup> Prior to this model extrapolation study, the EPA developed and evaluated an air quality modeling approach (this study is available here: <https://nepis.epa.gov/Exe/ZyPDF.cgi/P1007H4Q.PDF?Dockey=P1007H4Q.PDF>), and subsequently applied the approach to a second airport and again performed an evaluation of the model output using air monitoring data (this second study is available here: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100Y5G2.pdf>).

operations on ground-level lead concentrations, which creates a maximum impact area that is expected to be generally consistent across airports. Specifically, these aircraft consistently take off into the wind and typically conduct run-up operations immediately adjacent to the take-off runway end, and thus, modeling lead concentrations from this source is constrained by variation in a few key parameters. These parameters include: (1) Total amount of piston-engine aircraft activity, (2) the proportion of activity conducted at one runway end, (3) the proportion of activity conducted by multi-piston-engine aircraft, (4) the duration of run-up operations, (5) the concentration of lead in avgas, (6) wind speed at the model airport relative to the extrapolated airport, and (7) additional meteorological, dispersion model, or operational parameters. These parameters were evaluated through sensitivity analyses as well as quantitative or qualitative uncertainty analyses. To generate robust concentration estimates, the EPA evaluated these parameters, conducted wind-speed correction of extrapolated estimates, and used airport-specific information regarding airport layout and prevailing wind directions for the 13,000 airports.<sup>126</sup>

Results of this national analysis show that model-extrapolated three-month average lead concentrations in the maximum impact area may potentially exceed the lead NAAQS at airports with activity ranging from 3,616–26,816 Landing and Take-Off events (LTOs) in a three-month period.<sup>127</sup> The lead concentration estimates from this model-extrapolation approach account for lead engine emissions from aircraft only, and do not include other sources of air-related lead. The broad range in LTOs that may lead to concentrations of lead exceeding the lead NAAQS is due to the piston-engine aircraft fleet mix at individual airports such that airports where the fleet is dominated by twin-engine aircraft would potentially reach concentrations of lead exceeding the lead NAAQS with fewer LTOs compared with airports where single-engine aircraft dominate the piston-

engine fleet.<sup>128</sup> Model-extrapolated three-month average lead concentrations from aircraft engine emissions were estimated to extend to a distance of at least 500 meters from the maximum impact area at airports with activity ranging from 1,275–4,302 LTOs in that three-month period.<sup>129</sup> In a separate modeling analysis at an airport at which hundreds of take-off and landing events by piston-engine aircraft occur per day, the EPA found that modeled 24-hour concentrations of lead were estimated above background extending almost 1,000 meters downwind from the runway.<sup>130</sup>

Model-extrapolated estimates of lead concentrations in the EPA report “Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports” were compared with monitored values and show general agreement, suggesting that the extrapolation method presented in this report provides reasonable estimates of the range in concentrations of lead in air attributable to three-month activity periods of piston-engine aircraft at airports. The assessment included detailed evaluation of the potential impact of run-up duration, the concentration of lead in avgas, and the impact of meteorological parameters on model-extrapolated estimates of lead concentrations attributable to engine emissions of lead from piston-powered aircraft. Additionally, this study included a range of sensitivity analyses as well as quantitative and qualitative uncertainty analyses. The EPA invites comment on the approach used in this model-extrapolation analysis.

The EPA’s model-extrapolation analysis of lead concentrations from engine emissions resulting from covered aircraft found that the lowest annual airport emissions of lead estimated to result in air lead concentrations approaching or potentially exceeding the NAAQS was 0.1 tons per year. There are key pieces of airport-specific data that are needed to fully evaluate the potential for piston-engine aircraft operating at an airport to cause concentrations of lead in the air to exceed the lead NAAQS, and the EPA’s report “Model-extrapolated Estimates of

Airborne Lead Concentrations at U.S. Airports” provides quantitative and qualitative analyses of these factors.<sup>131</sup> The EPA’s estimate of airports that have annual lead inventories of 0.1 ton or more are illustrative of, and provide one approach for an initial screening evaluation of locations where engine emissions of lead from aircraft increase localized lead concentrations in air. Airport-specific assessments would be needed to determine the magnitude of the potential range in lead concentrations at and downwind of each facility.

As described in Section II.A.1 of this document, the FAA forecasts 0.9 percent decreases in piston-engine aircraft activity out to 2041, however these decreases are not projected to occur uniformly across airports. Among the more than 3,300 airports in the FAA TAF, the FAA forecasts both decreases and increases in general aviation, which is largely comprised of piston-engine aircraft. If the current conditions on which the forecast is based persist, then lead concentrations in the air may increase at the airports where general aviation activity is forecast to increase.

In addition to airport-specific modeled estimates of lead concentrations, the EPA also provides annual estimates of lead concentrations for each census tract in the U.S. as part of the Air Toxics Screening Assessment (AirToxScreen).<sup>132</sup> The census tract concentrations are averages of the area-weighted census block concentrations within the tract. Lead concentrations reported in the AirToxScreen are based on emissions estimates from anthropogenic and natural sources, including aircraft engine emissions.<sup>133</sup> The 2017 AirToxScreen provides lead concentration estimates in air for 73,449

<sup>131</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 6. p.53. EPA, Washington, DC, EPA-420-R-20-003, 2020. EPA responses to peer review comments on the report are available here: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YIWD.pdf>.

<sup>132</sup> See EPA’s 2017 AirToxScreen. Available at <https://www.epa.gov/AirToxScreen>.

<sup>133</sup> These concentration estimates are not used for comparison to the level of the Lead NAAQS due to different temporal averaging times and underlying assumptions in modeling. The AirToxScreen estimates are provided to help state, local and Tribal air agencies and the public identify which pollutants, emission sources and places they may wish to study further to better understand potential risks to public health from air toxics. There are uncertainties inherent in these estimates described by the EPA, some of which are relevant to these estimates of lead concentrations; however, these estimates provide perspective on the potential influence of piston-engine emissions of lead on air quality. See <https://www.epa.gov/AirToxScreen/airtoxscreen-limitations>.

<sup>126</sup> EPA (2022) Technical Support Document (TSD) for the EPA’s Proposed Finding that Lead Emissions from Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution that May Reasonably Be Anticipated to Endanger Public Health and Welfare. EPA, Washington, DC, EPA-420-R-22-025, 2022. Available in the docket for this action.

<sup>127</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 6. p. 53. EPA, Washington, DC, EPA-420-R-20-003, 2020.

<sup>128</sup> See methods used in EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 2. p.23. EPA, Washington, DC, EPA-420-R-20-003, 2020.

<sup>129</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 6. p.53. EPA, Washington, DC, EPA-420-R-20-003, 2020.

<sup>130</sup> Carr et. al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment* 45: 5795–5804.

census tracts in the U.S.<sup>134</sup> Lead emissions from piston-engine aircraft comprised more than 50 percent of these census block area-weighted lead concentrations in over half of the census tracts, which included tracts in all 50 states, as well as Puerto Rico and the Virgin Islands.

#### 4. Fate and Transport of Emissions of Lead From Piston-Engine Aircraft

This section summarizes the chemical transformation that piston-engine aircraft lead emissions are anticipated to undergo in the atmosphere and describes what is known about the deposition of piston-engine aircraft lead, and potential impacts on soil, food, and aquatic environments.

##### a. Atmospheric Chemistry and Transport of Emissions of Lead From Piston-Engine Aircraft

Lead emitted by piston-engine aircraft can have impacts in the local environment and, due to their small size (*i.e.*, typically less than one micron in diameter),<sup>135</sup> <sup>136</sup> lead-bearing particles emitted by piston engines may disperse widely in the environment. However, lead emitted during the landing and takeoff cycle, particularly during ground-based operations such as start-up, idle, preflight run-up checks, taxi and the take-off roll on the runway, may deposit to the local environment and/or infiltrate into buildings.<sup>137</sup> Depending on ambient conditions (*e.g.*, ozone and hydroxyl concentrations in the atmosphere), alkyl lead may exist in the atmosphere for hours to days<sup>138</sup> and may therefore be transported off airport property into nearby communities.

Lead halides emitted by motor vehicles operating on leaded fuel were reported to undergo compositional changes upon cooling and mixing with the ambient air as well as during

transport, and we would anticipate lead bromides emitted by piston-engine aircraft to behave similarly in the atmosphere. The water-solubility of these lead-bearing particles was reported to be higher for the smaller lead-bearing particles.<sup>139</sup> Lead halides emitted in motor vehicle exhaust were reported to break down rapidly in the atmosphere via redox reactions in the presence of atmospheric acids.<sup>140</sup> Tetraethyl lead has an atmospheric residence time ranging from a few hours to a few days. Tetraethyl lead reacts with the hydroxyl radical in the gas phase to form a variety of products that include ionic trialkyl lead, dialkyl lead and metallic lead. Trialkyl lead is slow to react with the hydroxyl radical and is quite persistent in the atmosphere.<sup>141</sup>

##### b. Deposition of Lead Emissions From Piston-Engine Aircraft and Soil Lead Concentrations to Which Piston-Engine Aircraft May Contribute

Lead is removed from the atmosphere and deposited on soil, into aquatic systems and on other surfaces via wet or dry deposition.<sup>142</sup> Meteorological factors (*e.g.*, wind speed, convection, rain, humidity) influence local deposition rates. With regard to deposition of lead from aircraft engine emissions, the EPA modeled the deposition rate for aircraft lead emissions at one airport in a temperate climate in California with dry summer months. In this location, the average lead deposition rate from aircraft emissions of lead was 0.057 milligrams per square meter per year.<sup>143</sup>

Studies summarized in the 2013 Lead ISA suggest that soil is a reservoir for contemporary and historical emissions of lead to air.<sup>144</sup> Once deposited to soil, lead can be absorbed onto organic material, can undergo chemical and physical transformation depending on a number of factors (*e.g.*, pH of the soil and the soil organic content), and can participate in further cycling through air

or other media.<sup>145</sup> The extent of atmospheric deposition of lead from aircraft engine emissions would be expected to depend on a number of factors including the size of the particles emitted (smaller particles, such as those in aircraft emissions, have lower settling velocity and may travel farther distances before being deposited compared with larger particles), the temperature of the exhaust (the high temperature of the exhaust creates plume buoyancy), as well as meteorological factors (*e.g.*, wind speed, precipitation rates). As a result of the size of the lead particulate matter emitted from piston-engine aircraft and as a result of these emissions occurring at various altitudes, lead emitted from these aircraft may distribute widely through the environment.<sup>146</sup> Murphy et al. (2008) reported weekend increases in ambient lead monitored at remote locations in the U.S. that the authors attributed to weekend increases in piston-engine powered general aviation activity.<sup>147</sup>

Heiken et al. (2014) assessed air lead concentrations potentially attributable to resuspended lead that previously deposited onto soil relative to air lead concentrations resulting directly from aircraft engine emissions.<sup>148</sup> Based on comparisons of lead concentrations in total suspended particulate (TSP) and fine particulate matter (PM<sub>2.5</sub>) measured at the three airports, coarse particle lead was observed to account for about 20–30 percent of the lead found in TSP. The authors noted that based on analysis of lead isotopes present in the air samples collected at these airports, the original source of the lead found in the coarse particle range appeared to be from aircraft exhaust emissions of lead that previously deposited to soil and were resuspended by wind or aircraft-induced turbulence. Results from lead isotope analysis in soil samples collected at the same three airports led the authors to conclude that lead emitted from piston-engine aircraft was not the dominant source of lead in soil in the samples measured at the airports they studied. The authors note the

<sup>134</sup> As airports are generally in larger census blocks within a census tract, concentrations for airport blocks dominate the area-weighted average in cases where an airport is the predominant lead emissions source in a census tract.

<sup>135</sup> Swiss FOCA (2007) Aircraft Piston Engine Emissions Summary Report. 33–05–003 Piston Engine Emissions. Swiss FOCA Summary Report\_070612 rit. Available at <https://www.bazl.admin.ch/bazl/en/home/specialists/regulations-and-guidelines/environment/pollutant-emissions/aircraft-engine-emissions/report-appendices-database-and-data-sheets.html>.

<sup>136</sup> Griffith 2020. Electron microscopic characterization of exhaust particles containing lead dibromide beads expelled from aircraft burning leaded gasoline. *Atmospheric Pollution Research* 11:1481–1486.

<sup>137</sup> EPA (2013) ISA for Lead. Section 1.3. “Exposure to Ambient Pb.” p. 1–11. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>138</sup> EPA (2006) AQC for Lead. Section E.6. p. 2–5. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>139</sup> EPA (1977) AQC for Lead. Section 6.2.2.1. EPA, Washington, DC, EPA–600/8–77–017, 1977.

<sup>140</sup> EPA (2006) AQC for Lead. Section E.6. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>141</sup> EPA (2006) AQC for Lead. Section 2. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>142</sup> EPA (2013) ISA for Lead. Section 1.2.1. “Sources, Fate and Transport of Ambient Pb;” p. 1–6; and Section 2.3. “Fate and Transport of Pb.” p. 2–24 through 2–25. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>143</sup> Memorandum to Docket EPA–HQ–OAR–2022–0389. Deposition of Lead Emitted by Piston-engine Aircraft. June 15, 2022. Docket ID EPA–HQ–2022–0389.

<sup>144</sup> EPA (2013) ISA for Lead. Section 2.6.1. “Soils.” p. 2–118. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>145</sup> EPA (2013) ISA for Lead. Chapter 6. “Ecological Effects of Pb.” p. 6–57. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>146</sup> Murphy et al., 2008. Weekly patterns of aerosol in the United States. *Atmospheric Chemistry and Physics*. 8:2729–2739.

<sup>147</sup> Lead concentrations collected as part of the Interagency Monitoring of Protected Visual Environments (IMPROVE) network and the National Oceanic and Atmospheric Administration (NOAA) monitoring sites.

<sup>148</sup> Heiken et al., 2014. ACRP Web-Only Document 21: Quantifying Aircraft Lead Emissions at Airports. Contractor’s Final Report for ACRP 02–34. Available at <https://www.trb.org/Publications/Blurbs/172599.aspx>.

complex history of topsoil can create challenges in understanding the extent to which aircraft lead emissions impact soil lead concentrations at and near airports (e.g., the source of topsoil can change as a result of site renovation, construction, landscaping, natural events such as wildfire and hurricanes, and other activities). Concentrations of lead in soil at and near airports servicing piston-engine aircraft have been measured using a range of approaches.<sup>149 150 151 152 153 154</sup> Kavouras et al. (2013) collected soil samples at three airports and reported that construction at an airport involving removal and replacement of topsoil complicated interpretation of the findings at that airport and that the number of runways at an airport may influence resulting lead concentrations in soil (i.e., multiple runways may provide for more wide-spread dispersal of the lead over a larger area than that potentially affected at a single-runway airport).

#### c. Potential for Lead Emissions From Piston-Engine Aircraft To Impact Agricultural Products

Studies conducted near stationary sources of lead emissions (e.g., smelters) have shown that atmospheric lead sources can lead to contamination of agricultural products, such as vegetables.<sup>155 156</sup> In this way, air lead sources may contribute to dietary exposure pathways.<sup>157</sup> As described in

Section II.A.1 of this document, piston-engine aircraft are used in the application of pesticides, fertilizers and seeding crops for human and animal consumption and as such, provide a potential route of exposure for lead in food. To minimize drift of pesticides and other applications from the intended target, pilots are advised to maintain a height between eight and 12 feet above the target crop during application.<sup>158</sup> The low flying height is needed to minimize the drift of the fertilizer and pesticide particles away from their intended target. An unintended consequence of this practice is that exhaust emissions of lead have a substantially increased potential for directly depositing on vegetation and surrounding soil. Lead halides, the primary form of lead emitted by engines operating on leaded fuel,<sup>159</sup> are slightly water soluble and, therefore, may be more readily absorbed by plants than other forms of inorganic lead.

The 2006 AQCD indicated that surface deposition of lead onto plants may be significant.<sup>160</sup> Atmospheric deposition of lead provides a pathway for lead in vegetation as a result of contact with above-ground portions of the plant.<sup>161 162 163</sup> Livestock may subsequently be exposed to lead in vegetation (e.g., grasses and silage) and in surface soils via incidental ingestion of soil while grazing.<sup>164</sup>

#### d. Potential for Lead Emissions From Piston-Engine Aircraft To Impact Aquatic Ecosystems

As discussed in Section 6.4 of the 2013 Lead ISA, lead bioaccumulates in the tissues of aquatic organisms through ingestion of food and water or direct uptake from the environment (e.g., across membranes such as gills or

skin).<sup>165</sup> Alkyl lead, in particular, has been identified by the EPA as a Persistent, Bioaccumulative, and Toxic (PBT) pollutant.<sup>166</sup> There are 527 seaport facilities in the U.S., and landing and take-off activity by seaplanes at these facilities provides a direct pathway for emission of organic and inorganic lead to the air near/above inland waters and ocean seaports where these aircraft operate.<sup>167</sup> Inland airports may also provide a direct pathway for emission of organic and inorganic lead to the air near/above inland waters. Lead emissions from piston-engine aircraft operating at seaplane facilities as well as airports and heliports near water bodies can enter the aquatic ecosystem by either deposition from ambient air or runoff of lead deposited to surface soils.

In addition to deposition of lead from engine emissions by piston-powered aircraft, lead may enter aquatic systems from the pre-flight inspection of the fuel for contaminants that pilots conduct. While some pilots return the checked fuel to their fuel tank or dispose of it in a receptacle provided on the airfield, some pilots discard the fuel onto the tarmac, ground, or water, in the case of a fuel check being conducted on a seaplane. Lead in the fuel discarded to the environment may evaporate to the air and may be taken up by the surface on which it is discarded. Lead on tarmac or soil surfaces is available for runoff to surface water. Tetraethyl lead in the avgas directly discarded to water will be available for uptake and bioaccumulation in aquatic life. The National Academy of Sciences Airport Cooperative Research Program (ACRP) conducted a survey study of pilots' fuel sampling and disposal practices. Among the 146 pilots responding to the survey, 36 percent indicated they discarded all fuel check samples to the ground regardless of contamination status and 19 percent of the pilots indicated they discarded only contaminated fuel to the ground.<sup>168</sup> Leaded avgas discharged to the ground and water includes other

<sup>149</sup> McCumber and Strevett 2017. A Geospatial Analysis of Soil Lead Concentrations Around Regional Oklahoma Airports. *Chemosphere* 167:62–70.

<sup>150</sup> Kavouras et al., 2013. Bioavailable Lead in Topsoil Collected from General Aviation Airports. *The Collegiate Aviation Review International* 31(1):57–68. Available at <https://doi.org/10.22488/okstate.18.100438>.

<sup>151</sup> Heiken et al., 2014. ACRP Web-Only Document 21: Quantifying Aircraft Lead Emissions at Airports. Contractor's Final Report for ACRP 02–34. Available at <https://www.trb.org/Publications/Blurbs/172599.aspx>.

<sup>152</sup> EPA (2010) Development and Evaluation of an Air Quality Modeling Approach for Lead Emissions from Piston-Engine Aircraft Operating on Leaded Aviation Gasoline. EPA, Washington, DC, EPA–420–R–10–007, 2010. <https://nepis.epa.gov/Exec/zyPDF.cgi/P1007H4Q.PDF?Dockey=P1007H4Q.PDF>.

<sup>153</sup> Environment Canada (2000) Airborne Particulate Matter, Lead and Manganese at Buttonville Airport. Toronto, Ontario, Canada: Conor Pacific Environmental Technologies for Environmental Protection Service, Ontario Region.

<sup>154</sup> Lejano and Ericson 2005. Tragedy of the Temporal Commons: Soil-Bound Lead and the Anachronicity of Risk. *Journal of Environmental Planning and Management*. 48(2):301–320.

<sup>155</sup> EPA (2013) ISA for Lead. Section 3.1.3.3. “Dietary Pb Exposure.” p. 3–20 through 3–24. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>156</sup> EPA (2006) AQC for Lead. Section 8.2.2. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>157</sup> EPA (2006) AQC for Lead. Section 8.2.2. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>158</sup> O'Connor-Marer. Aerial Applicator's Manual: A National Pesticide Applicator Certification Study Guide. p. 40. National Association of State Departments of Agriculture Research Foundation. Available at [https://www.agaviation.org/Files/RelatedEntities/Aerial\\_Applicators\\_Manual.pdf](https://www.agaviation.org/Files/RelatedEntities/Aerial_Applicators_Manual.pdf).

<sup>159</sup> The additive used in the fuel to scavenge lead determines the chemical form of the lead halide emitted; because ethylene dibromide is added to leaded aviation gasoline used in piston-engine aircraft, the lead halide emitted is in the form of lead dibromide.

<sup>160</sup> EPA (2006) AQC for Lead. pp. 7–9 and AXZ7–39. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>161</sup> EPA (2006) AQC for Lead. p. AXZ7–39. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>162</sup> EPA (1986) AQC for Lead. Sections 6.5.3. EPA, Washington, DC, EPA–600/8–83/028aF–dF (NTIS PB87142386), 1986.

<sup>163</sup> EPA (1986) AQC for Lead. Section 7.2.2.1. EPA, Washington, DC, EPA–600/8–83/028aF–dF (NTIS PB87142386), 1986.

<sup>164</sup> EPA (1986) AQC for Lead. Section 7.2.2.2. EPA, Washington, DC, EPA–600/8–83/028aF–dF (NTIS PB87142386), 1986.

<sup>165</sup> EPA (2013) ISA for Lead. Section 6.4.2. “Biogeochemistry and Chemical Effects of Pb in Freshwater and Saltwater Systems.” p. 6–147. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>166</sup> EPA (2002) Persistent, Bioaccumulative, and Toxic Pollutants (PBT) Program. PBT National Action Plan for Alkyl-Pb. Washington, DC. June. 2002.

<sup>167</sup> See FAA's NASR. Available at [https://www.faa.gov/air\\_traffic/flight\\_info/aeronav/aero\\_data/eNASR\\_Browser/](https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/eNASR_Browser/).

<sup>168</sup> National Academies of Sciences, Engineering, and Medicine 2014. Best Practices for General Aviation Aircraft Fuel-Tank Sampling. Washington, DC: The National Academies Press. <https://doi.org/10.17226/22343>.

hazardous fuel components such as ethylene dibromide.<sup>169</sup>

##### 5. Consideration of Environmental Justice and Children in Populations Residing Near Airports

This section provides a description of how many people live in close proximity to airports where they may be exposed to airborne lead from aircraft engine emissions of lead (referred to here as the “near-airport” population). This section also provides the demographic composition of the near-airport population, with attention to implications related to environmental justice (EJ) and the population of children in this near-source environment. Consideration of EJ implications in the population living near airports is important because blood lead levels in children from low-income households remain higher than those in children from higher income households, and the most exposed Black children still have higher blood lead levels than the most exposed non-Hispanic White children.<sup>170 171 172</sup>

Executive Orders 12898 (59 FR 7629, February 16, 1994) and 14008 (86 FR 7619, February 1, 2021) direct Federal agencies, to the greatest extent practicable and permitted by law, to make achieving EJ part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on people of color populations and low-income populations in the United States. The EPA defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

<sup>169</sup> Memorandum to Docket EPA–HQ–OAR–2022–0389. Potential Exposure to Non-exhaust Lead and Ethylene Dibromide. June 15, 2022. Docket ID EPA–HQ–2022–0389.

<sup>170</sup> EPA (2013) ISA for Lead. Section 5.4. “Summary.” p. 5–40. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>171</sup> EPA. America’s Children and the Environment. Summary of blood lead levels in children updated in 2022, available at <https://www.epa.gov/americaschildrenenvironment/biomonitoring-lead>. Data source: Centers for Disease Control and Prevention, National Report on Human Exposure to Environmental Chemicals. Blood Lead (2011–2018). Updated March 2022. Available at [https://www.cdc.gov/exposurereport/report/pdf/cgroup2\\_LBXPBP\\_2011-p.pdf](https://www.cdc.gov/exposurereport/report/pdf/cgroup2_LBXPBP_2011-p.pdf).

<sup>172</sup> The relative contribution of lead emissions from covered aircraft engines to these disparities has not been determined and is not a goal of the evaluation described here.

For the reasons described in **SUPPLEMENTARY INFORMATION** Section D, our consideration of EJ implications here is focused on describing conditions relevant to the most recent year for which demographic data are available. The analysis described here provides information regarding whether some demographic groups are more highly represented in the near-airport environment compared with people who live farther from airports. Residential proximity to airports implies that there is an increased potential for exposure to lead from covered aircraft engine emissions.<sup>173</sup> As described in Section II.A.3 of this document, several studies have measured higher concentrations of lead in air near airports with piston-engine aircraft activity. Additionally, as noted in Section II.A of this document, two studies have reported increased blood lead levels in children with increasing proximity to airports.<sup>174 175</sup>

We first summarize here the literature on disparity with regard to those who live in proximity to airports. Then we describe the analyses the EPA has conducted to evaluate potential disparity in the population groups living near runways where piston-engine aircraft operate compared to those living elsewhere.

Numerous studies have found that environmental hazards such as air pollution are more prevalent in areas where people of color and low-income populations represent a higher fraction of the population compared with the general population, including near transportation sources.<sup>176 177 178 179 180</sup>

<sup>173</sup> Residential proximity to a source of a specific air pollutant(s) is a widely used surrogate measure to evaluate the potential for higher exposures to that pollutant (EPA Technical Guidance for Assessing Environmental Justice in Regulatory Analysis, Section 4.2.1). Data presented in Section II.A.3 demonstrate that lead concentrations in air near the runup area can exceed the lead NAAQS and concentrations decrease sharply with distance from the ground-based aircraft exhaust and vary with the amount of aircraft activity at an airport. Not all people living within 500 meters of a runway are expected to be equally exposed to lead.

<sup>174</sup> Miranda et al., 2011. A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels. *Environmental Health Perspectives*. 119:1513–1516.

<sup>175</sup> Zahran et al., 2017. The Effect of Leaded Aviation Gasoline on Blood Lead in Children. *Journal of the Association of Environmental and Resource Economists*. 4(2):575–610.

<sup>176</sup> Rowangould 2013. A census of the near-roadway population: public health and environmental justice considerations. *Transportation Research Part D* 25:59–67. <https://dx.doi.org/10.1016/j.trd.2013.08.003>.

<sup>177</sup> Marshall et al., 2014. Prioritizing environmental justice and equality: diesel emissions in Southern California. *Environmental*

The literature includes studies that have reported on communities in close proximity to airports that are disproportionately represented by people of color and low-income populations. McNair (2020) described nineteen major airports that underwent capacity expansion projects between 2000 and 2010, thirteen of which had a large concentration or presence of persons of color, foreign-born persons or low-income populations nearby.<sup>181</sup> Woodburn (2017) reported on changes in communities near airports from 1970–2010, finding suggestive evidence that at many hub airports over time, the presence of marginalized groups residing in close proximity to airports increased.<sup>182</sup> Rissman et al. (2013) reported that with increasing proximity to the Hartsfield-Jackson Atlanta International Airport, exposures to particulate matter were higher, and there were lower home values, income, education, and percentage of white residents.<sup>183</sup>

The EPA used two approaches to understand whether some members of the population (e.g., children five and under, people of color, indigenous populations, low-income populations) represent a larger share of the people living in proximity to airports where piston-engine aircraft operate compared with people who live farther away from these airports. In the first approach, we evaluated people living within, and children attending school within, 500 meters of all of the approximately 20,000 airports in the U.S., using methods described in the EPA’s report titled “National Analysis of the Populations Residing Near or Attending

*Science & Technology* 48: 4063–4068. <https://doi.org/10.1021/es405167f>.

<sup>178</sup> Marshall 2008. Environmental inequality: air pollution exposures in California’s South Coast Air Basin. *Atmospheric Environment* 21:5499–5503. <https://doi.org/10.1016/j.atmosenv.2008.02.005>.

<sup>179</sup> Tessum et al., 2021. PM<sub>2.5</sub> polluters disproportionately and systemically affect people of color in the United States. *Science Advances* 7:eabf4491.

<sup>180</sup> Mohai et al., 2009. Environmental justice. *Annual Reviews* 34:405–430. Available at <https://doi.org/10.1146/annurev-environ-082508-094348>.

<sup>181</sup> McNair 2020. Investigation of environmental justice analysis in airport planning practice from 2000 to 2010. *Transportation Research Part D* 81:102286.

<sup>182</sup> Woodburn 2017. Investigating neighborhood change in airport-adjacent communities in multi-airport regions from 1970 to 2010. *Journal of the Transportation Research Board*, 2626, 1–8.

<sup>183</sup> Rissman et al., 2013. Equity and health impacts of aircraft emissions at the Hartfield-Jackson Atlanta International Airport. *Landscape and Urban Planning*, 120: 234–247.

School Near U.S. Airports.”<sup>184</sup> In the second approach, we evaluated people living near the NPIAS airports in the conterminous 48 states. As noted in Section II.A.1 of this document, the NPIAS airports support the majority of piston-engine aircraft activity that occurs in the U.S. Among the NPIAS airports, we compared the demographic composition of people living within one kilometer of runways with the demographic composition of people living at a distance of one to five kilometers from the same airports.

The distances analyzed for those people living closest to airports (*i.e.*, distances of 500 meters and 1,000 meters) were chosen for evaluation following from the air quality monitoring and modeling data presented in Section II.A.3 of this document. Specifically, the EPA’s modeling and monitoring data indicate that concentrations of lead from piston-engine aircraft emissions can be elevated above background levels at distances of 500 meters over a rolling three-month period. On individual days, concentrations of lead from piston-engine aircraft emissions can be elevated above background levels at distances of 1,000 meters on individual

days downwind of a runway, depending on aircraft activity and prevailing wind direction.<sup>185 186 187</sup>

Because the U.S. has a dense network of airports, many of which have neighboring communities, we first quantified the number of people living and children attending school within 500 meters of the approximately 20,000 airports in the U.S. The results of this analysis are summarized at the national scale in the EPA’s report titled “National Analysis of the Populations Residing Near or Attending School Near U.S. Airports.”<sup>188</sup> From this analysis, the EPA estimates that approximately 5.2 million people live within 500 meters of an airport runway, 363,000 of whom are children age five and under. The EPA also estimates that 573 schools attended by 163,000 children in kindergarten through twelfth grade are within 500 meters of an airport runway.<sup>189</sup>

In order to identify potential disparities in the near-airport population, we first evaluated populations at the state level. Using the U.S. Census population data for each State in the U.S., we compared the percent of people by age, race and indigenous peoples (*i.e.*, children five

and under, Black, Asian, and Native American or Alaska Native) living within 500 meters of an airport runway with the percent by age, race, and indigenous peoples comprising the state population.<sup>190</sup> Using the methodology described in Clarke (2022), the EPA identified states in which children, Black, Asian, and Native American or Alaska Native populations represent a greater fraction of the population compared with the percent of these groups in the state population.<sup>191</sup> Results of this analysis are presented in the following tables.<sup>192</sup> This state-level analysis presents summary information for a subset of potentially relevant demographic characteristics. We present data in this section regarding a wider array of demographic characteristics when evaluating populations living near NPIAS airports.

Among children five and under, there were three states (Nevada, South Carolina, and South Dakota), in which the percent of children five and under living within 500 meters of a runway represent a greater fraction of the population by a difference of one percent or greater compared with the percent of children five and under in the state population (Table 3).

TABLE 3—THE POPULATION OF CHILDREN FIVE YEARS AND UNDER WITHIN 500 METERS OF AN AIRPORT RUNWAY COMPARED TO THE STATE POPULATION OF CHILDREN FIVE YEARS AND UNDER

State	Percent of children aged five years and under within 500 meters	Percent of children aged five years and under within the state	Number of children aged five years and under within 500 meters	Number of children aged five years and under in the state
Nevada .....	10	8	1,000	224,200
South Carolina .....	9	8	400	361,400
South Dakota .....	11	9	3,000	71,300

There were nine states in which the Black population represented a greater fraction of the population living in the

near-airport environment by a difference of one percent or greater compared with the state as a whole. These states were

California, Kansas, Kentucky, Louisiana, Mississippi, Nevada, South Carolina, West Virginia, and Wisconsin (Table 4).

<sup>184</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA, Washington, DC, EPA-420-R-20-003, 2020. EPA responses to peer review comments on the report are available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YISM.pdf>.

<sup>185</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. EPA, Washington, DC, EPA-420-R-20-003, 2020.

<sup>186</sup> Carr et. al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795–5804. DOI: <https://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

<sup>187</sup> We do not assume or expect that all people living within 500m or 1,000m of a runway are exposed to lead from piston-engine aircraft

emissions, and the wide range of activity of piston-engine aircraft at airports nationwide suggests that exposure to lead from aircraft emissions is likely to vary widely.

<sup>188</sup> In this analysis, we included populations living in census blocks that intersected the 500-meter buffer around each runway in the U.S. Potential uncertainties in this approach are described in our report National Analysis of the Populations Residing Near or Attending School Near U.S. Airports. EPA-420-R-20-001, available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG4A.pdf>, and in the EPA responses to peer review comments on the report, available here: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YISM.pdf>.

<sup>189</sup> EPA (2020) National Analysis of the Populations Residing Near or Attending School Near U.S. Airports. EPA-420-R-20-001. Available

at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG4A.pdf>.

<sup>190</sup> Clarke. Memorandum to Docket EPA-HQ-OAR-2022-0389. Estimation of Population Size and Demographic Characteristics among People Living Near Airports by State in the United States. May 31, 2022. Docket ID EPA-HQ-2022-0389.

<sup>191</sup> Clarke. Memorandum to Docket EPA-HQ-OAR-2022-0389. Estimation of Population Size and Demographic Characteristics among People Living Near Airports by State in the United States. May 31, 2022. Docket ID EPA-HQ-2022-0389.

<sup>192</sup> These data are presented in tabular form for all states in this memorandum located in the docket: Clarke. Memorandum to Docket EPA-HQ-OAR-2022-0389. Estimation of Population Size and Demographic Characteristics among People Living Near Airports by State in the United States. May 31, 2022. Docket ID EPA-HQ-2022-0389.

TABLE 4—THE BLACK POPULATION WITHIN 500 METERS OF AN AIRPORT RUNWAY AND THE BLACK POPULATION, BY STATE

State	Percent Black within 500 meters	Percent Black within the state	Black population within 500 meters	Black population in the state
California .....	8	7	18,981	2,486,500
Kansas .....	8	6	1,240	173,300
Kentucky .....	9	8	3,152	342,800
Louisiana .....	46	32	14,669	1,463,000
Mississippi .....	46	37	8,542	1,103,100
Nevada .....	12	9	1,794	231,200
South Carolina .....	31	28	10,066	1,302,900
West Virginia .....	10	3	1,452	63,900
Wisconsin .....	9	6	4,869	367,000

There were three states with a greater fraction of Asians in the near-airport environment compared with the state as a whole by a difference of one percent or greater: Indiana, Maine, and New Hampshire (Table 5).

TABLE 5—THE ASIAN POPULATION WITHIN 500 METERS OF AN AIRPORT RUNWAY AND THE ASIAN POPULATION, BY STATE

State	Percent Asian within 500 meters	Percent Asian within the state	Asian population within 500 meters	Asian population in the state
Indiana .....	4	2	1,681	105,500
Maine .....	2	1	406	13,800
New Hampshire .....	4	2	339	29,000

Among Native Americans and Alaska Natives, there were five states (Alaska, Arizona, Delaware, South Dakota, and New Mexico) where the near-airport population had greater representation by Native Americans and Alaska Natives compared with the portion of the population they comprise at the state level by a difference of one percent or greater. In Alaska, as anticipated due to the critical nature of air travel for the transportation infrastructure in that state, the disparity in residential proximity to a runway was the largest; 16,000 Alaska Natives were estimated to live within 500 meters of a runway, representing 48 percent of the population within 500 meters of an airport runway compared with 15 percent of the Alaska state population (Table 6).

TABLE 6—THE NATIVE AMERICAN AND ALASKA NATIVE POPULATION WITHIN 500 METERS OF AN AIRPORT RUNWAY AND THE NATIVE AMERICAN AND ALASKA NATIVE POPULATION, BY STATE

State	Percent Native American and Alaska Native within 500 meters	Percent Native American and Alaska Native within the state	Native American and Alaska Native population within 500 meters	Native American and Alaska Native population in the state
Alaska .....	48	15	16,020	106,300
Arizona .....	18	5	5,017	335,300
Delaware .....	2	1	112	5,900
New Mexico .....	21	10	2,265	208,900
South Dakota .....	22	9	1,606	72,800

In a separate analysis, the EPA focused on evaluating the potential for disparities in populations residing near the NPIAS airports. The EPA compared the demographic composition of people living within one kilometer of runways at 2,022 of the approximately 3,300 NPIAS airports with the demographic composition of people living at a distance of one to five kilometers from

the same airports.<sup>193 194</sup> In this analysis,

<sup>193</sup> For this analysis, we evaluated the 2,022 airports with a population of greater than 100 people inside the zero to one kilometer distance to avoid low population counts distorting the assessment of percent contributions of each group to the total population within the zero to one kilometer distance.

<sup>194</sup> Kamal et al., Memorandum to Docket EPA–HQ–OAR–2022–0389. Analysis of Potential Disparity in Residential Proximity to Airports in the Conterminous United States. May 24, 2022. Docket ID EPA–HQ–2022–0389. Methods used are described in this memo and include the use of block group resolution data to evaluate the

over one-fourth of airports (*i.e.*, 515) were identified at which children under five were more highly represented in the zero to one kilometer distance compared with the percent of children under five living one to five kilometers away (Table 7). There were 666 airports where people of color had a greater presence in the zero to one kilometer area closest

representation of different demographic groups near-airport and for those living one to five kilometers away.



to airport runways than in populations farther away. There were 761 airports where people living at less than two-times the Federal Poverty Level

represented a higher proportion of the overall population within one kilometer of airport runways compared with the proportion of people living at less than

two-times the Federal Poverty Level among people living one to five kilometers away.

TABLE 7—NUMBER OF AIRPORTS (AMONG THE 2,022 AIRPORTS EVALUATED) WITH DISPARITY FOR CERTAIN DEMOGRAPHIC POPULATIONS WITHIN ONE KILOMETER OF AN AIRPORT RUNWAY IN RELATION TO THE COMPARISON POPULATION BETWEEN ONE AND FIVE KILOMETERS FROM AN AIRPORT RUNWAY

Demographic group	Number of airports with disparity <sup>a</sup>				
	Total airports with disparity	Disparity 1–5%	Disparity 5–10%	Disparity 10–20%	Disparity 20%+
Children under five years of age .....	515	507	7	1	0
People with income less than twice the Federal Poverty Level .....	761	307	223	180	51
People of Color (all races, ethnicities and indigenous peoples) .....	666	377	126	123	40
Non-Hispanic Black .....	405	240	77	67	21
Hispanic .....	551	402	85	47	17
Non-Hispanic Asian .....	268	243	18	4	3
Non-Hispanic Native American or Alaska Native <sup>195</sup> .....	144	130	6	7	1
Non-Hispanic Hawaiian or Pacific Islander .....	18	17	1	0	0
Non-Hispanic Other Race .....	11	11	0	0	0
Non-Hispanic Two or More Races .....	226	226	0	0	0

To understand the extent of the potential disparity among the 2,022 NPIAS airports, Table 7 provides information about the distribution in the percent differences in the proportion of children, individuals with incomes below two-times the Federal Poverty Level, and people of color living within one kilometer of a runway compared with those living one to five kilometers away. For children, Table 7 indicates that for the vast majority of these airports where there is a higher percentage of children represented in the near-airport population, differences are relatively small (e.g., less than five percent). For the airports where disparity is evident on the basis of poverty, race and ethnicity, the disparities are potentially large, ranging up to 42 percent for those with incomes below two-times the Federal Poverty Level, and up to 45 percent for people of color.<sup>196</sup>

There are uncertainties in the results provided here inherent to the proximity-based approach used. These uncertainties include the use of block group data to provide population numbers for each demographic group analyzed, and uncertainties in the Census data, including from the use of data from different analysis years (e.g., 2010 Census Data and 2018 income data). These uncertainties are described,

<sup>195</sup> This analysis of 2,022 NPIAS airports did not include airports in Alaska.

<sup>196</sup> Kamal et.al., Memorandum to Docket EPA–HQ–OAR–2022–0389. Analysis of Potential Disparity in Residential Proximity to Airports in the Conterminous United States. May 24, 2022. Docket ID EPA–HQ–2022–0389.

and their implications discussed in Kamal et.al. (2022).<sup>197</sup>

The data summarized here indicate that there is a greater prevalence of children under five years of age, an at-risk population for lead effects, within 500 meters or one kilometer of some airports compared to more distant locations. This information also indicates that there is a greater prevalence of people of color and of low-income populations within 500 meters or one kilometer of some airports compared with people living more distant. If such differences were to contribute to disproportionate and adverse impacts on people of color and low-income populations, they could indicate a potential EJ concern. Given the number of children in close proximity to runways, including those in EJ populations, there is a potential for substantial implications for children’s health. The EPA invites comment on the potential EJ impacts of aircraft lead emissions from aircraft engines and on the potential impacts on children in close proximity to runways where piston-engine aircraft operate.

*B. Federal Actions To Reduce Lead Exposure*

The federal government has a longstanding commitment to programs to reduce exposure to lead, particularly for children. In December 2018, the President’s Task Force on

<sup>197</sup> Kamal et.al., Memorandum to Docket EPA–HQ–OAR–2022–0389. Analysis of Potential Disparity in Residential Proximity to Airports in the Conterminous United States. May 24, 2022. Docket ID EPA–HQ–2022–0389.

Environmental Health Risks and Safety Risks to Children released the Federal Lead Action Plan, detailing the federal government’s commitments and actions to reduce lead exposure in children, some of which are described in this section.<sup>198</sup> In this section, we describe some of the EPA’s actions to reduce lead exposures from air, water, lead-based paint, and contaminated sites.

In 1976, the EPA listed lead under CAA section 108, making it what is called a “criteria air pollutant.”<sup>199</sup> Once lead was listed, the EPA issued primary and secondary NAAQS under sections 109(b)(1) and (2), respectively. The EPA issued the first NAAQS for lead in 1978 and revised the lead NAAQS in 2008 by reducing the level of the standard from 1.5 micrograms per cubic meter to 0.15 micrograms per cubic meter, and revising the averaging time and form to an average over a consecutive three-month period, as described in 40 CFR 50.16.<sup>200</sup> The EPA’s 2016 **Federal Register** notice describes the Agency’s decision to retain the existing Lead

<sup>198</sup> Federal Lead Action Plan to Reduce Childhood Lead Exposures and Associated Health Impacts. (2018) President’s Task Force on Environmental Health Risks and Safety Risks to Children. Available at [https://www.epa.gov/sites/default/files/2018-12/documents/fedactionplan\\_lead\\_final.pdf](https://www.epa.gov/sites/default/files/2018-12/documents/fedactionplan_lead_final.pdf).

<sup>199</sup> 41 FR 14921 (April 8, 1976). See also, e.g., 81 FR at 71910 (Oct. 18, 2016) for a description of the history of the listing decision for lead under CAA section 108.

<sup>200</sup> 73 FR 66965 (Nov. 12, 2008).

NAAQS.<sup>201</sup> The Lead NAAQS is currently undergoing review.<sup>202</sup>

States are primarily responsible for ensuring attainment and maintenance of the NAAQS. Under section 110 of the Act and related provisions, states are to submit, for EPA review and, if appropriate, approval, state implementation plans that provide for the attainment and maintenance of such standards through control programs directed to sources of the pollutants involved. The states, in conjunction with the EPA, also administer the Prevention of Significant Deterioration program for these pollutants.

Additional EPA programs to address lead in the environment include the Federal Motor Vehicle Control program under Title II of the Act, which involves controls for motor vehicles and nonroad engines and equipment; the new source performance standards under section 111 of the Act; and emissions standards for solid waste incineration units and the national emission standards for hazardous air pollutants (NESHAP) under sections 129 and 112 of the Act, respectively.

The EPA has taken a number of actions associated with these air pollution control programs, including completion of several regulations requiring reductions in lead emissions from stationary sources regulated under the CAA sections 112 and 129. For example, in January 2012, the EPA updated the NESHAP for the secondary lead smelting source category.<sup>203</sup> These amendments to the original maximum achievable control technology standards apply to facilities nationwide that use furnaces to recover lead from lead-bearing scrap, mainly from automobile batteries. Regulations completed in 2013 for commercial and industrial solid waste incineration units also require reductions in lead emissions.<sup>204</sup>

A broad range of Federal programs beyond those that focus on air pollution control provide for nationwide reductions in environmental releases and human exposures to lead. For example, pursuant to section 1417 of the Safe Drinking Water Act (SDWA), any pipe, pipe or plumbing fitting or fixture, solder, or flux for potable water applications may not be used in new installations or repairs or introduced into commerce unless it is considered “lead free” as defined by that Act.<sup>205</sup>

Also under section 1412 of the SDWA, the EPA’s 1991 Lead and Copper Rule<sup>206</sup> regulates lead in public drinking water systems through corrosion control and other utility actions which work together to minimize lead levels at the tap.<sup>207</sup> On January 15, 2021, the agency published the Lead and Copper Rule Revisions (LCRR)<sup>208</sup> and subsequently reviewed the rule in accordance with Executive Order 13990.<sup>209</sup> While the LCRR took effect in December 2021, the agency concluded that there are significant opportunities to improve the LCRR.<sup>210</sup> The EPA is developing a new proposed rule, the Lead and Copper Rule Improvements (LCRI),<sup>211</sup> that would further strengthen the lead drinking water regulations. The EPA identified priority improvements for the LCRI: proactive and equitable lead service line replacement (LSLR), strengthening compliance tap sampling to better identify communities most at risk of lead in drinking water and to compel lead reduction actions, and reducing the complexity of the regulation through improvement of “methods to identify and trigger action in communities that are most at risk of elevated drinking water levels.”<sup>212</sup> The EPA intends to propose the LCRI and take final action on it prior to October 16, 2024.

Federal programs to reduce exposure to lead in paint, dust, and soil are specified under the comprehensive federal regulatory framework developed under the Residential Lead-Based Paint Hazard Reduction Act (Title X). Under Title X (codified, in part, as Title IV of the Toxic Substances Control Act [TSCA]), the EPA has established regulations and associated programs in six categories: (1) Training, certification and work practice requirements for persons engaged in lead-based paint activities (abatement, inspection and risk assessment); accreditation of training providers; and authorization of state and Tribal lead-based paint programs; (2) training, certification, and work practice requirements for persons

engaged in home renovation, repair and painting (RRP) activities; accreditation of RRP training providers; and authorization of state and Tribal RRP programs; (3) ensuring that, for most housing constructed before 1978, information about lead-based paint and lead-based paint hazards flows from sellers to purchasers, from landlords to tenants, and from renovators to owners and occupants; (4) establishing standards for identifying dangerous levels of lead in paint, dust and soil; (5) providing grant funding to establish and maintain state and Tribal lead-based paint programs; and (6) providing information on lead hazards to the public, including steps that people can take to protect themselves and their families from lead-based paint hazards.

The most recent rules issued under Title IV of TSCA revised the dust-lead hazard standards (DLHS) and dust-lead clearance levels (DLCL) which were established in a 2001 final rule entitled “Identification of Dangerous Levels of Lead.”<sup>213</sup> The DLHS are incorporated into the requirements and risk assessment work practice standards in the EPA’s Lead-Based Paint Activities Rule, codified at 40 CFR part 745, subpart L. They provide the basis for risk assessors to determine whether dust-lead hazards are present in target housing (*i.e.*, most pre-1978 housing) and child-occupied facilities (pre-1978 nonresidential properties where children 6 years of age or under spend a significant amount of time such as daycare centers and kindergartens). If dust-lead hazards are present, the risk assessor will identify acceptable options for controlling the hazards in the respective property, which may include abatements and/or interim controls. In July 2019, the EPA published a final rule revising the DLHS from 40 micrograms per square foot and 250 micrograms per square foot to 10 micrograms per square foot and 100 micrograms per square foot of lead in dust on floors and windowsills, respectively.<sup>214</sup> The DLCL are used to evaluate the effectiveness of a cleaning following an abatement. If the dust-lead levels are not below the clearance levels, the components (*i.e.*, floors, windowsills, troughs) represented by the failed sample(s) shall be recleaned and retested. In January 2021, the EPA published a final rule revising the DLCL to match the DLHS, lowering them from 40 micrograms per square foot and 250 micrograms per square foot to 10 micrograms per square foot and 100 micrograms per square foot on floors

lowered. *See*, Section 1417 of the Safe Drinking Water Act: Prohibition on Use of Lead Pipes, Solder, and Flux at <https://www.epa.gov/sdwa/use-lead-free-pipes-fittings-fixtures-solder-and-flux-drinking-water>.

<sup>206</sup> 40 CFR 141 Subpart I (June 7, 1991).

<sup>207</sup> 40 CFR 141 Subpart I (June 7, 1991).

<sup>208</sup> 86 FR 4198. (Jan. 15, 2021).

<sup>209</sup> E.O. 13990. Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. 86 FR 7037 (Jan. 20, 2021).

<sup>210</sup> 86 FR 31939. (Dec. 17, 2021).

<sup>211</sup> *See* <https://www.epa.gov/ground-water-and-drinking-water/review-national-primary-drinking-water-regulation-lead-and-copper>. Accessed on Nov. 30, 2021.

<sup>212</sup> 86 FR 31939 (Dec. 17, 2021).

<sup>213</sup> 66 FR 1206 (Jan. 5, 2001).

<sup>214</sup> 84 FR 32632 (July 9, 2019).

<sup>201</sup> 81 FR 71912–71913 (Oct. 18, 2016).

<sup>202</sup> Documents pertaining to the current review of the NAAQS for Lead can be found here: <https://www.epa.gov/naaqs/lead-pb-air-quality-standards>.

<sup>203</sup> 77 FR 555 (Jan. 5, 2012).

<sup>204</sup> 78 FR 9112 (Feb. 7, 2013).

<sup>205</sup> Effective in Jan. 2014, the amount of lead permitted in pipes, fittings, and fixtures was

and windowsills, respectively.<sup>215</sup> The EPA is now reconsidering the 2019 and 2021 rules in accordance with Executive Order 13990<sup>216</sup> and in response to a May 2021 decision by U.S. Court of Appeals for the Ninth Circuit.

Programs associated with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund)<sup>217</sup> and Resource Conservation Recovery Act (RCRA)<sup>218</sup> also implement removal and remedial response programs that reduce exposures to the release or threat of a release of lead and other hazardous substances. The EPA develops and implements protective levels for lead in soil at Superfund sites and, together with states, at RCRA corrective action facilities. The Office of Land and Emergency Management develops policy and guidance for addressing multimedia lead contamination and determining appropriate response actions at lead sites. Federal programs, including those implementing RCRA, provide for management of hazardous substances in hazardous and municipal solid waste (e.g., 66 FR 58258, November 20, 2001).

### C. History of Lead Endangerment Petitions for Rulemaking and the EPA Responses

The Administrator's proposed findings further respond to several citizen petitions on this subject including the following: petition for rulemaking submitted by Friends of the Earth in 2006, petition for rulemaking submitted by Friends of the Earth, Oregon Aviation Watch and Physicians for Social Responsibility in 2012, petition for reconsideration submitted by Friends of the Earth, Oregon Aviation Watch, and Physicians for Social Responsibility in 2014, and petition for rulemaking from Alaska Community Action on Toxics, Center for Environmental Health, Friends of the Earth, Montgomery-Gibbs Environmental Coalition, Oregon Aviation Watch, the County of Santa Clara, CA, and the Town of Middleton, WI in 2021. These petitions and the EPA's responses are described here.<sup>219</sup>

In a 2003 letter to the EPA, Friends of the Earth initially raised the issue of the potential for lead emissions from the

use of leaded avgas in general aviation aircraft using piston engines to cause or contribute to endangerment of public health or welfare.<sup>220</sup> In 2006, Friends of the Earth filed a petition with the EPA requesting that the Administrator find endangerment or, if there was insufficient information to find endangerment, commence a study of lead emissions from piston-engine aircraft. In 2007, the EPA issued a **Federal Register** notice on the petition requesting comments and information related to a wide range of issues regarding the use of leaded avgas and potential public health and welfare exposure issues.<sup>221</sup> The EPA did not receive new information to inform the evaluation of whether lead emissions from aircraft engines using leaded avgas cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.

In 2010, the EPA further responded to the 2006 petition from Friends of the Earth by issuing an Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline (ANPR).<sup>222</sup> In the ANPR, the EPA described information currently available and information being collected that would be used by the Administrator to issue a subsequent proposal regarding whether, in the Administrator's judgment, aircraft lead emissions from aircraft using leaded avgas cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare. After issuing the ANPR, the EPA continued the data collection and evaluation of information that is described in Sections II.A, IV and V of this action.

In 2012, Friends of the Earth, Physicians for Social Responsibility, and Oregon Aviation Watch filed a new petition claiming that, among other things, the EPA had unreasonably delayed in responding to the 2006 petition from Friends of the Earth because it had failed to determine whether emissions of lead from general aviation aircraft engines cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.<sup>223</sup> The EPA

responded to the 2012 petition with our plan for collecting the necessary information and conducting a proceeding under CAA section 231 regarding whether lead emissions from piston-engine aircraft cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. Friends of the Earth, Physicians for Social Responsibility, and Oregon Aviation Watch submitted a petition for reconsideration in 2014<sup>224</sup> to which the EPA responded in 2015.<sup>225</sup>

In 2021, Alaska Community Action on Toxics, Center for Environmental Health, Friends of the Earth, Montgomery-Gibbs Environmental Coalition, Oregon Aviation Watch, the County of Santa Clara, CA, and the Town of Middleton, WI, again petitioned the EPA to conduct a proceeding under CAA section 231 regarding whether lead emissions from piston-engine aircraft cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare.<sup>226</sup> The EPA responded in 2022 noting our intent to develop this proposal regarding whether lead emissions from piston-engine aircraft cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare.<sup>227</sup>

### III. Legal Framework for This Action

In this action, the EPA is proposing to make two separate determinations—an endangerment finding and a cause or contribute finding—under section 231(a)(2)(A) of the Clean Air Act. The EPA has, most recently, finalized such findings under CAA section 231 for greenhouse gases (GHGs) in 2016 (Findings), and in that action the EPA

EPA's motion for summary judgment on the remaining claims, the court concluded that making the endangerment determination is not a nondiscretionary act or duty and thus that it lacked jurisdiction to grant the relief requested by plaintiffs. *Friends of the Earth v. EPA*, 934 F. Supp. 2d 40, 55 (D.D.C. 2013).

<sup>224</sup> The petition for reconsideration submitted to EPA by Friends of the Earth, Physicians for Social Responsibility, and Oregon Aviation Watch is available at <https://www.epa.gov/sites/default/files/2016-09/documents/avgas-petition-reconsider-04-21-14.pdf>.

<sup>225</sup> The 2015 EPA response to the 2014 petition for reconsideration is available at <https://www.epa.gov/sites/default/files/2016-09/documents/ltr-response-av-ld-foe-psr-oaw-2015-1-23.pdf>.

<sup>226</sup> The 2021 petition is available at <https://www.epa.gov/system/files/documents/2022-01/aviation-leaded-avgas-petition-exhibits-final-2021-10-12.pdf>.

<sup>227</sup> EPA's response to the 2021 petition is available at <https://www.epa.gov/system/files/documents/2022-01/ltr-response-aircraft-lead-petitions-aug-oct-2022-01-12.pdf>.

<sup>220</sup> Friends of the Earth (formerly Bluewater Network) comment dated Dec. 12, 2003, submitted to EPA's 68 FR 56226, published Sept. 30, 2003.

<sup>221</sup> See 72 FR 64570 (Nov. 16, 2007).

<sup>222</sup> 75 FR 22440–68 (Apr. 28, 2010).

<sup>223</sup> Petitioners filed a complaint in district court seeking to compel EPA to respond to their 2006 petition for rulemaking and to issue an endangerment finding and promulgate regulations. The EPA then issued its response to the petition, mooted that claim of the complaint. In response to

<sup>215</sup> 86 FR 983 (Jan. 7, 2021).

<sup>216</sup> 86 FR 7037 (Jan. 20, 2021).

<sup>217</sup> For more information about the EPA's CERCLA program, see [www.epa.gov/superfund](http://www.epa.gov/superfund).

<sup>218</sup> For more information about the EPA's RCRA program, see <https://www.epa.gov/rcra>.

<sup>219</sup> See <https://www.epa.gov/regulations-emissions-vehicles-and-engines/petitions-and-epa-response-memorandums-related-lead>. Accessed on Dec. 12, 2021.

provided a detailed explanation of the legal framework for making such findings and the statutory interpretations and caselaw supporting its approach.<sup>228</sup> In this proposal, the Administrator is using the same approach of applying a two-part test under section 231(a)(2)(A) as described in the 2016 Findings and is relying on the same interpretations supporting that approach, which are briefly described in this Section, and set forth in greater detail in the 2016 Findings.<sup>229</sup> This is also the same approach that the EPA used in making endangerment and cause and contribute findings for GHGs under section 202(a) of the CAA in 2009 (2009 Findings),<sup>230</sup> which was affirmed by the U.S. Court of Appeals for the D.C. Circuit in 2012.<sup>231</sup> As explained further in the 2016 Findings, the text of the CAA section concerning aircraft emissions in section 231(a)(2)(A) mirrors the text of CAA section 202(a) that was the basis for the 2009 Findings.<sup>232</sup> Accordingly, for the same reasons as discussed in the 2016 Findings, the EPA believes it is reasonable to use the same approach under section 231(a)(2)(A)'s similar text as was used under section 202(a) for the 2009 Findings, and it is proposing to act consistently with that framework for purposes of these proposed section 231 findings.<sup>233</sup> As this approach has been previously discussed at length in the 2016 and 2009 Findings, the EPA provides only a brief description in this proposal.

#### A. Statutory Text and Basis for This Proposal

Section 231(a)(2)(A) of the CAA provides that the “The Administrator shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.”<sup>234</sup> In this proposal, the EPA

is addressing the predicate for regulatory action under CAA section 231 through a two-part test, which as noted previously, is the same as the test used in the 2016 Findings and in the 2009 Findings.

As the first step of the two-part test, the Administrator must decide whether, in his judgment, the air pollution under consideration may reasonably be anticipated to endanger public health or welfare. As the second step, the Administrator must decide whether, in his judgment, emissions of an air pollutant from certain classes of aircraft engines cause or contribute to this air pollution. If the Administrator answers both questions in the affirmative, he will issue standards under section 231.<sup>235</sup>

In accordance with the EPA's interpretation of the text of section 231(a)(2)(A), as described in the 2016 Findings, the phrase “may reasonably be anticipated” and the term “endanger” in section 231(a)(2)(A) authorize, if not require, the Administrator to act to prevent harm and to act in conditions of uncertainty.<sup>236</sup> They do not limit him to merely reacting to harm or to acting only when certainty has been achieved; indeed, the references to anticipation and to endangerment imply that the failure to look to the future or to less than certain risks would be to abjure the Administrator's statutory responsibilities. As the D.C. Circuit explained, the language “may reasonably be anticipated to endanger public health or welfare” in CAA section 202(a) requires a “precautionary, forward-looking scientific judgment about the risks of a particular air pollutant, consistent with the CAA's precautionary and preventive orientation.”<sup>237</sup> The court determined that “[r]equiring that the EPA find ‘certain’ endangerment of public health or welfare before regulating greenhouse gases would effectively prevent the EPA from doing the job that Congress gave it in [section] 202(a)—utilizing emission standards to prevent reasonably anticipated endangerment from

maturing into concrete harm.”<sup>238</sup> The same language appears in section 231(a)(2)(A), and the same interpretation applies in that context.

Moreover, by instructing the Administrator to consider whether emissions of an air pollutant cause or contribute to air pollution in the second part of the two-part test, the Act makes clear that he need not find that emissions from any one sector or class of sources are the sole or even the major part of the air pollution considered. This is clearly indicated by the use of the term “contribute.” Further, the phrase “in his judgment” authorizes the Administrator to weigh risks and to consider projections of future possibilities, while also recognizing uncertainties and extrapolating from existing data.

Finally, when exercising his judgment in making both the endangerment and cause-or-contribute findings, the Administrator balances the likelihood and severity of effects. Notably, the phrase “in his judgment” modifies both “may reasonably be anticipated” and “cause or contribute.”

Often, past endangerment and cause or contribute findings have been proposed concurrently with proposed standards under various sections of the CAA, including section 231.<sup>239</sup> Comment has been taken on these proposed findings as part of the notice and comment process for the emission standards.<sup>240</sup> However, there is no requirement that the Administrator propose the endangerment and cause or contribute findings concurrently with proposed standards and, most recently under section 231, the EPA made separate endangerment and cause or contribute findings for GHGs before proceeding to set standards.

The Administrator is applying the rulemaking provisions of CAA section 307(d) to this action, pursuant to CAA section 307(d)(1)(V), which provides that the provisions of 307(d) apply to “such other actions as the Administrator may determine.”<sup>241</sup> Any subsequent

<sup>228</sup> FR 54422–54475 (Aug. 15, 2016).

<sup>229</sup> See e.g., 81 FR at 55434–54440 (Aug. 19, 2016).

<sup>230</sup> 74 FR 66496, 66505–10 (Dec. 15, 2009).

<sup>231</sup> *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012) (*CRR*) (subsequent history omitted).

<sup>232</sup> 81 FR at 55434 (Aug. 19, 2016).

<sup>233</sup> 81 FR at 55434 (Aug. 19, 2016).

<sup>234</sup> Regarding “welfare,” the CAA states that “[a]ll language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.” CAA

section 302(h). Regarding “public health,” there is no definition of “public health” in the Clean Air Act. The Supreme Court has discussed the concept of “public health” in the context of whether costs can be considered when setting NAAQS. *Whitman v. American Trucking Ass'n*, 531 U.S. 457 (2001). In *Whitman*, the Court imbued the term with its most natural meaning: “the health of the public.” *Id.* at 466.

<sup>235</sup> See *Massachusetts v. EPA*, 549 U.S. 497, 533 (2007) (interpreting an analogous provision in CAA section 202).

<sup>236</sup> See 81 FR at 54435 (Aug. 19, 2016).

<sup>237</sup> *CRR*, 684 F.3d at 122 (internal citations omitted) (June 26, 2012).

<sup>238</sup> *CRR*, 684 F.3d at 122 (internal citations omitted) (June 26, 2012).

<sup>239</sup> 81 FR at 54425 (Aug. 19, 2016).

<sup>240</sup> See, e.g., Rulemaking for non-road compression-ignition engines under section 213(a)(4) of the CAA, Proposed Rule at 58 FR 28809, 28813–14 (May 17, 1993), Final Rule at 59 FR 31306, 31318 (June 17, 1994); Rulemaking for highway heavy-duty diesel engines and diesel sulfur fuel under sections 202(a) and 211(c) of the CAA, Proposed Rule at 65 FR 35430 (June 2, 2000), and Final Rule at 66 FR 5002 (Jan. 18, 2001).

<sup>241</sup> As the Administrator is applying the provisions of CAA section 307(d) to this action under section 307(d)(1)(V), we need not determine whether those provisions would apply to this action under section 307(d)(1)(F).

standard setting rulemaking under CAA section 231 will also be subject to the notice and comment rulemaking procedures under CAA section 307(d), as provided in CAA section 307(d)(1)(F) (applying the provisions of CAA section 307(d) to the promulgation or revision of any aircraft emission standard under CAA section 231). Thus, these proposed findings will be subject to the same procedural requirements that would apply if the proposed findings were part of a standard-setting rulemaking.

#### *B. Considerations for the Endangerment and Cause or Contribute Analyses Under Section 231(a)(2)(A)*

In the context of this proposal, the EPA understands section 231(a)(2)(A) of the CAA to call for the Administrator to exercise his judgment and make two separate determinations: first, whether the relevant kind of air pollution (here, lead air pollution) may reasonably be anticipated to endanger public health or welfare, and second, whether emissions of any air pollutant from classes of the sources in question (here, any aircraft engine that is capable of using leaded aviation gasoline), cause or contribute to this air pollution.<sup>242</sup>

This analysis entails a scientific judgment by the Administrator about the potential risks posed by lead emissions to public health and welfare. In this proposed action, the EPA is using the same approach in making scientific judgments regarding endangerment as it has previously described in the 2016 Findings, and its analysis is guided by the same five principles that guided the Administrator's analysis in those Findings.<sup>243</sup>

Similarly, the EPA is taking the same approach to the cause or contribute analysis as was previously explained in the 2016 Findings.<sup>244</sup> For example, as previously noted, section 231(a)(2)(A)'s instruction to consider whether emissions of an air pollutant cause or contribute to air pollution makes clear that the Administrator need not find that emissions from any one sector or class of sources are the sole or even the major part of an air pollution problem.<sup>245</sup> Moreover, like the CAA section 202(a) language that governed the 2009 Findings, the statutory language in section 231(a)(2)(A) does not contain a modifier on its use of the

term "contribute."<sup>246</sup> Unlike other CAA provisions, it does not require "significant" contribution. Compare, e.g., CAA sections 111(b); 213(a)(2), (4). Congress made it clear that the Administrator is to exercise his judgment in determining contribution, and authorized regulatory controls to address air pollution even if the air pollution problem results from a wide variety of sources.<sup>247</sup> While the endangerment test looks at the air pollution being considered as a whole and the risks it poses, the cause or contribute test is designed to authorize the EPA to identify and then address what may well be many different sectors, classes, or groups of sources that are each part of the problem.<sup>248</sup>

Moreover, as the EPA has previously explained, the Administrator has ample discretion in exercising his reasonable judgment and determining whether, under the circumstances presented, the cause or contribute criterion has been met.<sup>249</sup> As noted in the 2016 Findings, in addressing provisions in section 202(a), the D.C. Circuit has explained that the Act at the endangerment finding step did not require the EPA to identify a precise numerical value or "a minimum threshold of risk or harm before determining whether an air pollutant endangers." <sup>250</sup> Accordingly, the EPA "may base an endangerment finding on 'a lesser risk of greater harm . . . or a greater risk of lesser harm' or any combination in between."<sup>251</sup> As the language in section 231(a)(2)(A) is analogous to that in section 202(a), it is reasonable to apply this interpretation to the endangerment determination under section 231(a)(2)(A).<sup>252</sup> Moreover, the logic underlying this interpretation supports the general principle that under CAA section 231 the EPA is not required to identify a specific minimum threshold of contribution from potentially subject source categories in determining whether their emissions "cause or contribute" to the endangering air pollution.<sup>253</sup> The reasonableness of this principle is further supported by the fact that section 231 does not impose on the EPA a requirement to find that such contribution is "significant," let alone

the sole or major cause of the endangering air pollution.<sup>254</sup>

Finally, as also described in the 2016 Findings, there are a number of possible ways of assessing whether air pollutants cause or contribute to the air pollution which may reasonably be anticipated to endanger public health and welfare, and no single approach is required or has been used exclusively in previous cause or contribute determinations under title II of the CAA.<sup>255</sup>

#### *C. Regulatory Authority for Emission Standards*

Though the EPA is not proposing standards in this action, should the EPA finalize these findings, the EPA would then proceed to propose emission standards under CAA section 231. As noted in Section III.A of this document, section 231(a)(2)(A) of the CAA directs the Administrator of the EPA to, from time to time, propose aircraft engine emission standards applicable to the emission of any air pollutant from classes of aircraft engines which in his or her judgment causes or contributes to air pollution that may reasonably be anticipated to endanger public health or welfare.

CAA section 231(a)(2)(B) further directs the EPA to consult with the Administrator of the FAA on such standards, and it prohibits the EPA from changing aircraft emission standards if such a change would significantly increase noise and adversely affect safety. CAA section 231(a)(3) provides that after we provide notice and an opportunity for a public hearing on standards, the Administrator shall issue such standards "with such modifications as he deems appropriate." In addition, under CAA section 231(b), the EPA determines, in consultation with the U.S. Department of Transportation (DOT), that the effective date of any standard provides the necessary time to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance.

Once the EPA adopts standards, CAA section 232 then directs the Secretary of Transportation to prescribe regulations to ensure compliance with the EPA's standards. Finally, section 233 of the CAA vests the authority to promulgate emission standards for aircraft or aircraft engines only in the federal government. States are preempted from adopting or enforcing any standard respecting aircraft or aircraft engine

<sup>242</sup> See *CRR*, 684 F.3d at 117 (explaining two-part analysis under section 202(a)) (June 26, 2012).

<sup>243</sup> See, e.g., 81 FR 54422, 54434–55435 (Aug. 15, 2016).

<sup>244</sup> See, e.g., 81 FR at 54437–54438 (September 4, 2013).

<sup>245</sup> See, e.g., 81 FR at 54437–54438 (Aug. 15, 2016).

<sup>246</sup> See, e.g., 81 FR at 54437–54438 (Aug. 15, 2016).

<sup>247</sup> See 81 FR at 54437–54438 (Aug. 15, 2016).

<sup>248</sup> See 81 FR at 54437–54438 (Aug. 15, 2016).

<sup>249</sup> See 81 FR at 54437–54438 (Aug. 15, 2016).

<sup>250</sup> *CRR*, 684 F.3d at 122–123 (June 26, 2012).

<sup>251</sup> *CRR*, 684 F.3d at 122–123. (quoting Ethyl Corp., 541 F.2d at 18) (June 26, 2012).

<sup>252</sup> 81 FR at 54438 (Aug. 15, 2016).

<sup>253</sup> 81 FR at 54438 (Aug. 15, 2016).

<sup>254</sup> 81 FR at 54438 (Aug. 15, 2016).

<sup>255</sup> See 81 FR at 54462 (Aug. 15, 2016).

emissions unless such standard is identical to the EPA's standards.<sup>256</sup>

#### IV. The Proposed Endangerment Finding Under CAA Section 231

##### A. Scientific Basis of the Endangerment Finding

###### 1. Lead Air Pollution

Lead is emitted and exists in the atmosphere in a variety of forms and compounds and is emitted by a wide range of sources.<sup>257</sup> Lead is persistent in the environment. Atmospheric transport distances of airborne lead vary depending on its form and particle size, as discussed in Section II.A of this document, with coarse lead-bearing particles deposited to a greater extent near the source, while fine lead-bearing particles can be transported long distances before being deposited. Through atmospheric deposition, lead is distributed to other environmental media, including soils and surface water bodies.<sup>258</sup> Lead is retained in soils and sediments, where it provides a historical record and, depending on several factors, can remain available in some areas for extended periods for environmental or human exposure, with any associated potential public health and public welfare impacts.

For purposes of this action, the EPA is proposing to define the "air pollution" referred to in section 231(a)(2)(A) of the CAA as lead, which we also refer to as the lead air pollution in this document.<sup>259</sup>

###### 2. Health Effects and Lead Air Pollution

As noted in Section II.A of this document, in 2013, the EPA completed the Integrated Science Assessment for Lead which built on the findings of previous AQCDs for Lead. These documents critically assess and integrate relevant scientific information regarding the health and welfare effects

of lead and have undergone extensive critical review by the EPA, the Clean Air Scientific Advisory Committee (CASAC), and the public. As such, these assessments provide the primary scientific and technical basis on which the Administrator is proposing to find that lead air pollution is reasonably anticipated to endanger public health and welfare.<sup>260 261</sup>

As summarized in Section II.A of this document, human exposure to lead that is emitted into the air can occur by multiple pathways. Ambient air inhalation pathways include both inhalation of air outdoors and inhalation of ambient air that has infiltrated into indoor environments. Additional exposure pathways may involve media other than air, including indoor and outdoor dust, soil, surface water and sediments, vegetation and biota. While the bioavailability of air-related lead is modified by several factors in the environment (e.g., the chemical form of lead, environmental fate of lead emitted to air), as described in Section II.A of this document, it is well-documented that exposures to air-related lead can result in increased blood lead levels, particularly for children living near air lead sources, who may have increased blood lead levels due to their proximity to these sources of exposure.<sup>262</sup>

As described in the EPA's 2013 Lead ISA and in prior Criteria Documents, lead has been demonstrated to exert a broad array of deleterious effects on multiple organ systems. The 2013 Lead ISA characterizes the causal nature of relationships between lead exposure and health effects using a weight-of-evidence approach.<sup>263</sup> We summarize here those health effects for which the

EPA in the 2013 Lead ISA has concluded that the evidence supports a determination of either a "causal relationship," or a "likely to be causal relationship," or for which the evidence is "suggestive of a causal relationship" between lead exposure and a health effect.<sup>264</sup> In the discussion that follows, we summarize findings regarding effects observed in children, effects observed in adults, and additional effects observed that are not specific to an age group.

The EPA has concluded that there is a "causal relationship" between lead exposure during childhood (pre and postnatal) and a range of health effects in children, including the following: Cognitive function decrements; the group of externalizing behaviors comprising attention, increased impulsivity, and hyperactivity; and developmental effects (i.e., delayed pubertal onset).<sup>265</sup> In addition, the EPA has concluded that the evidence supports a conclusion that there is a "likely to be causal relationship" between lead exposure and conduct disorders in children and young adults, internalizing behaviors such as depression, anxiety and withdrawn behavior, auditory function decrements, and fine and gross motor function decrements.<sup>266</sup>

Multiple epidemiologic studies conducted in diverse populations of children consistently demonstrate the harmful effects of lead exposure on cognitive function (as measured by decrements in intelligence quotient [IQ], decreased academic performance, and poorer performance on tests of executive function). These findings are supported by extensively documented toxicological evidence substantiating the plausibility of these findings in the epidemiological literature and provide information on the likely mechanisms underlying these neurotoxic effects.<sup>267</sup>

Intelligence quotient is a well-established, widely recognized and rigorously standardized measure of neurocognitive function which has been

<sup>256</sup> CAA Section 233 (Dec. 31, 1970).

<sup>257</sup> EPA (2013) ISA for Lead. Section 2.2. "Sources of Atmospheric Pb." p. 2–1. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>258</sup> EPA (2013) ISA for Lead. Executive Summary. "Sources, Fate and Transport of Lead in the Environment, and the Resulting Human Exposure and Dose." pp. lxxviii–lxxix. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>259</sup> The lead air pollution that we are considering in this proposed finding can occur as elemental lead or in lead-containing compounds, and this proposed definition of the air pollution recognizes that lead in air (whatever form it is found in, including in inorganic and organic compounds containing lead) has the potential to elicit public health and welfare effects. We note, for example, that the 2013 Lead ISA and 2008 AQCD described the toxicokinetics of inorganic and organic forms of lead and studies evaluating lead-related health effects commonly measure total lead level (i.e., all forms of lead in various biomarker tissues such as blood).

<sup>260</sup> EPA (2013) ISA for Lead. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>261</sup> EPA (2006) AQC for Lead. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>262</sup> EPA (2013) ISA for Lead. Section 5.4. "Summary." p. 5–40. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>263</sup> The causal framework draws upon the assessment and integration of evidence from across scientific disciplines, spanning atmospheric chemistry, exposure, dosimetry and health effects studies (i.e., epidemiologic, controlled human exposure, and animal toxicological studies), and assessment of the related uncertainties and limitations that ultimately influence our understanding of the evidence. This framework employs a five-level hierarchy that classifies the overall weight-of-evidence with respect to the causal nature of relationships between criteria pollutant exposures and health and welfare effects using the following categorizations: causal relationship; likely to be causal relationship; suggestive of, but not sufficient to infer, a causal relationship; inadequate to infer the presence or absence of a causal relationship; and not likely to be a causal relationship. EPA (2013) ISA for Lead. Preamble Section. p. xlv. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>264</sup> EPA (2013) ISA for Lead. Table ES–1.

"Summary of causal determinations for the relationship between exposure to Pb and health effects." pp. lxxxiii–lxxxvii. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>265</sup> EPA (2013) ISA for Lead. Table ES–1. "Summary of causal determinations for the relationship between exposure to Pb and health effects." p. lxxxiii and p. lxxxvi. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>266</sup> EPA (2013) ISA for Lead. Table ES–1. "Summary of causal determinations for the relationship between exposure to Pb and health effects." pp. lxxxiii–lxxxiv. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>267</sup> EPA (2013) ISA for Lead. Executive Summary. "Effects of Pb Exposure in Children." pp. lxxxvii–lxxxviii. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

used extensively as a measure of the negative effects of exposure to lead.<sup>268 269</sup> Examples of other measures of cognitive function negatively associated with lead exposure include measures of intelligence and cognitive development and cognitive abilities, such as learning, memory, and executive functions, as well as academic performance and achievement.<sup>270</sup>

In summarizing the evidence related to neurocognitive impacts of lead at different childhood lifestages, the 2013 Lead ISA notes that “in individual studies, postnatal (early childhood and concurrent [with IQ testing]) blood lead levels are also consistently associated with cognitive function decrements in children and adolescents.”<sup>271</sup> The 2013 Lead ISA additionally notes that the findings from experimental animal studies indicate that lead exposures during multiple early lifestages and periods are observed to induce impairments in learning, and that these findings “are consistent with the understanding that the nervous system continues to develop (*i.e.*, synaptogenesis and synaptic pruning remains active) throughout childhood and into adolescence.”<sup>272</sup> The 2013 Lead ISA further notes that “it is clear that lead exposure in childhood presents a risk; further, there is no evidence of a threshold below which there are no harmful effects on cognition from lead exposure,” and additionally recognizes uncertainty about the lead exposures that are part of the effects and blood lead levels observed in epidemiologic studies (uncertainties which are greater in studies of older children and adults than in studies of younger children).<sup>273</sup> Evidence suggests that while some neurocognitive effects of lead in children may be transient, some lead-related cognitive effects may be irreversible and persist into adulthood,<sup>274</sup> potentially affecting lower

educational attainment and financial well-being.<sup>275</sup>

The 2013 Lead ISA concluded that neurodevelopmental effects in children were among the effects best substantiated as occurring at the lowest blood lead levels, and that these categories of effects were clearly of the greatest concern with regard to potential public health impact.<sup>276</sup> For example, in considering population risk, the 2013 Lead ISA notes that “[s]mall shifts in the population mean IQ can be highly significant from a public health perspective”.<sup>277</sup> Specifically, if lead-related decrements are manifested uniformly across the range of IQ scores in a population, “a small shift in the population mean IQ may be significant from a public health perspective because such a shift could yield a larger proportion of individuals functioning in the low range of the IQ distribution, which is associated with increased risk of educational, vocational, and social failure” as well as a decrease in the proportion with high IQ scores.<sup>278</sup>

With regard to lead effects identified for the adult population, the 2013 Lead ISA concluded that there is a “causal relationship” between lead exposure and hypertension and coronary heart disease in adults. The 2013 Lead ISA concluded that cardiovascular effects in adults were those of greatest public health concern for adults because the evidence indicated that these effects occurred at the lowest blood lead levels, compared to other health effects, although the role of past versus current exposures to lead is unclear.<sup>279</sup>

With regard to evidence of cardiovascular effects and other effects of lead on adults, the 2013 Lead ISA notes that “[a] large body of evidence from both epidemiologic studies of adults and experimental studies in animals demonstrates the effect of long-term lead exposure on increased blood pressure and hypertension.”<sup>280</sup> In

addition to its effect on blood pressure, “lead exposure can also lead to coronary heart disease and death from cardiovascular causes and is associated with cognitive function decrements, symptoms of depression and anxiety, and immune effects in adult humans.”<sup>281</sup> The extent to which the effects of lead on the cardiovascular system are reversible is not well-characterized. Additionally, the frequency, timing, level, and duration of lead exposure causing the effects observed in adults has not been pinpointed, and higher exposures earlier in life may play a role in the development of health effects measured later in life.<sup>282</sup> The 2013 Lead ISA states that “[i]t is clear however, that lead exposure can result in harm to the cardiovascular system that is evident in adulthood and may also affect a broad array of organ systems.”<sup>283</sup> In summarizing the public health significance of lead on the adult population, the 2013 Lead ISA notes that “small lead-associated increases in the population mean blood pressure could result in an increase in the proportion of the population with hypertension that is significant from a public health perspective.”<sup>284</sup>

In addition to the effects summarized here, the EPA has concluded there is a “likely to be causal relationship” between lead exposure and both cognitive function decrements and psychopathological effects in adults. The 2013 Lead ISA also concludes that there is a “causal relationship” between lead exposure and decreased red blood cell survival and function, altered heme synthesis, and male reproductive function. The EPA has also concluded there is a “likely to be causal relationship” between lead exposure and decreased host resistance, resulting in increased susceptibility to bacterial infection and suppressed delayed type hypersensitivity, and cancer.<sup>285</sup>

Additionally, the evidence is suggestive of lead exposure and some additional effects. These include auditory function decrements and

<sup>268</sup> EPA (2013) ISA for Lead. Section 4.3.2. “Cognitive Function.” p. 4–59. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>269</sup> EPA (2006) AQC for Lead. Sections 6.2.2 and 8.4.2. EPA, Washington, DC, EPA/600/R–5/144aF, 2006.

<sup>270</sup> EPA (2013) ISA for Lead. Section 4.3.2. “Cognitive Function.” p. 4–59. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>271</sup> EPA (2013) ISA for Lead. Section 1.9.4. “Pb Exposure and Neurodevelopmental Deficits in Children.” p. 1–76. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>272</sup> EPA (2013) ISA for Lead. Section 1.9.4. “Pb Exposure and Neurodevelopmental Deficits in Children.” p. 1–76. EPA/600/R–10/075F, 2013.

<sup>273</sup> EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Children.” pp. lxxxvii–lxxxviii. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>274</sup> EPA (2013) ISA for Lead. Section 1.9.5. “Reversibility and Persistence of Neurotoxic Effects

of Pb.” p. 1–76. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>275</sup> EPA (2013) ISA for Lead. Section 4.3.14. “Public Health Significance of Associations between Pb Biomarkers and Neurodevelopmental Effects.” p. 4–279. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>276</sup> EPA (2013) ISA for Lead. Section 1.9.1. “Public Health Significance.” p. 1–68. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>277</sup> EPA (2013) ISA for Lead. Executive Summary. “Public Health Significance.” p. xciii. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>278</sup> EPA (2013) ISA for Lead. Section 1.9.1. “Public Health Significance.” p. 1–68. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>279</sup> EPA (2013) ISA for Lead. Section 1.9.1. “Public Health Significance.” p. 1–68. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>280</sup> EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R–10/075F, 2013.

<sup>281</sup> EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R–10/075F, 2013.

<sup>282</sup> EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R–10/075F, 2013.

<sup>283</sup> EPA (2013) ISA for Lead. Executive Summary. “Effects of Pb Exposure in Adults.” p. lxxxviii. EPA/600/R–10/075F, 2013.

<sup>284</sup> EPA (2013) ISA for Lead. Executive Summary. “Public Health Significance.” p. xciii. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>285</sup> EPA (2013) ISA for Lead. Table ES–1. “Summary of causal determinations for the relationship between exposure to Pb and health effects.” pp. lxxxiv–lxxxvii. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

subclinical atherosclerosis, reduced kidney function, birth outcomes (*e.g.*, low birth weight, spontaneous abortion), and female reproductive function.<sup>286</sup>

The EPA has identified factors that may increase the risk of health effects of lead exposure due to susceptibility and/or vulnerability; these are termed “at-risk” factors. The 2013 Lead ISA describes the systematic approach the EPA uses to evaluate the coherence of evidence to determine the biological plausibility of associations between at-risk factors and increased vulnerability and/or susceptibility. An overall weight of evidence is used to determine whether a specific factor results in a population being at increased risk of lead-related health effects.<sup>287</sup> The 2013 Lead ISA concludes that “there is adequate evidence that several factors—childhood, race/ethnicity, nutrition, residential factors, and proximity to lead sources—confer increased risk of lead-related health effects.”<sup>288</sup>

### 3. Welfare Effects and Lead Air Pollution

The 2013 Lead ISA characterizes the causal nature of relationships between lead exposure and welfare effects using a five-level hierarchy that classifies the overall weight-of-evidence.<sup>289</sup> We summarize here the welfare effects for which the EPA has concluded that the evidence supports a determination of either a “causal relationship,” or a “likely to be causal relationship,” with exposure to lead, or that the evidence is “suggestive of a causal relationship” with lead exposure. The discussion that follows is organized to first provide a summary of the effects of lead in the terrestrial environment, followed by a summary of effects of lead in freshwater and saltwater ecosystems. The 2013 Lead ISA further describes the scales or levels at which these determinations between lead exposure and effects on

plants, invertebrates, and vertebrates were made (*i.e.*, community-level, ecosystem-level, population-level, organism-level or sub-organism level).<sup>290</sup>

In terrestrial environments, the EPA determined that “causal relationships” exist between lead exposure and reproductive and developmental effects in vertebrates and invertebrates, growth in plants, survival for invertebrates, hematological effects in vertebrates, and physiological stress in plants.<sup>291</sup> The EPA also determined that there were “likely to be causal relationships” between lead exposure and community and ecosystem effects, growth in invertebrates, survival in vertebrates, neurobehavioral effects in invertebrates and vertebrates, and physiological stress in invertebrates and vertebrates.

In freshwater environments, the EPA found that “causal relationships” exist between lead exposure and reproductive and developmental effects in vertebrates and invertebrates, growth in invertebrates, survival for vertebrates and invertebrates, and hematological effects in vertebrates. The EPA also determined that there were “likely to be causal relationships” between lead exposure and community and ecosystem effects, growth in plants, neurobehavioral effects in invertebrates and vertebrates, hematological effects in invertebrates, and physiological stress in plants, invertebrates, and vertebrates.<sup>292</sup>

The EPA also determined that the evidence for saltwater ecosystems was “suggestive of a causal relationship” between lead exposure and reproductive and developmental effects in invertebrates, hematological effects in vertebrates, and physiological stress in invertebrates.<sup>293</sup>

The 2013 Lead ISA concludes, “With regard to the ecological effects of lead, uptake of lead into fauna and subsequent effects on reproduction, growth and survival are established and

are further supported by more recent evidence. These may lead to effects at the population, community, and ecosystem level of biological organization. In both terrestrial and aquatic organisms, gradients in response are observed with increasing concentration of lead and some studies report effects within the range of lead detected in environmental media over the past several decades. Specifically, effects on reproduction, growth, and survival in sensitive freshwater invertebrates are well-characterized from controlled studies at concentrations at or near lead concentrations occasionally encountered in U.S. fresh surface waters. Hematological and stress related responses in some terrestrial and aquatic species were also associated with elevated lead levels in polluted areas. However, in natural environments, modifying factors affect lead bioavailability and toxicity and there are considerable uncertainties associated with generalizing effects observed in controlled studies to effects at higher levels of biological organization. Furthermore, available studies on community and ecosystem-level effects are usually from contaminated areas where lead concentrations are much higher than typically encountered in the environment. The contribution of atmospheric lead to specific sites is not clear and the connection between air concentration of lead and ecosystem exposure continues to be poorly characterized.”<sup>294</sup>

#### B. Proposed Endangerment Finding

The Administrator proposes to find, for purposes of CAA section 231(a)(2)(A), that lead air pollution may reasonably be anticipated to endanger the public health and welfare. This proposal is based on consideration of the extensive scientific evidence, described in this section, that has been amassed over decades and rigorously peer reviewed by CASAC.

### V. The Proposed Cause or Contribute Finding Under CAA Section 231

#### A. Proposed Definition of the Air Pollutant

Under section 231, the Administrator is to determine whether emissions of any air pollutant from any class or classes of aircraft engines cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare. As in the 2016 Findings that the EPA made under

<sup>286</sup> EPA (2013) ISA for Lead. Table ES–1. “Summary of causal determinations for the relationship between exposure to Pb and health effects.” pp. lxxxiv-lxxxvi. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>287</sup> EPA (2013) ISA for Lead. Chapter 5. “Approach to Classifying Potential At-Risk Factors.” p. 5–2. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>288</sup> EPA (2013) ISA for Lead. Section 5.4. “Summary.” p. 5–44. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>289</sup> Causal determinations for ecological effects were based on integration of information on biogeochemistry, bioavailability, biological effects, and exposure-response relationships of lead in terrestrial, freshwater, and saltwater environments. This framework employs a five-level hierarchy that classifies the overall weight-of-evidence with respect to the causal nature of relationships between criteria pollutant exposures and health and welfare effects using the categorizations described in the 2013 Lead NAAQS.

<sup>290</sup> EPA (2013) ISA for Lead. Table ES–2. “Schematic representation of the relationships between the various MOAs by which Pb exerts its effects.” p. lxxxii. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>291</sup> EPA (2013) ISA for Lead. Table ES–2. “Summary of causal determinations for the relationship between Pb exposure and effects on plants, invertebrates, and vertebrates.” p. xc. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>292</sup> EPA (2013) ISA for Lead. Table ES–2. “Summary of causal determinations for the relationship between Pb exposure and effects on plants, invertebrates, and vertebrates.” p. xc. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>293</sup> EPA (2013) ISA for Lead. Table ES–2. “Summary of causal determinations for the relationship between Pb exposure and effects on plants, invertebrates, and vertebrates.” p. xc. EPA, Washington, DC, EPA/600/R–10/075F, 2013.

<sup>294</sup> EPA (2013) ISA for Lead. “Summary.” p. xcvi. EPA, Washington, DC, EPA/600/R–10/075F, 2013.



section 231 for greenhouse gases, in making this proposed cause or contribute finding under section 231(a)(2), the Administrator first defines the air pollutant being evaluated. The Administrator has reasonably and logically considered the relationship between the lead air pollution and the air pollutant when considering emissions of lead from engines used in covered aircraft. The Administrator proposes to define the air pollutant to match the proposed definition of the air pollution, such that the air pollutant analyzed for contribution would mirror the air pollution considered in the endangerment finding. Accordingly, for purposes of this action, the Administrator is proposing to define the “air pollutant” referred to in section 231(a)(2)(A) as lead, which we also refer to as the lead air pollutant in this document.<sup>295</sup> As noted in Section II.A.2 of this document, lead emitted to the air from covered aircraft engines is predominantly in particulate form as lead dibromide; however, some chemical compounds of lead that are expected in the exhaust from these engines, including alkyl lead compounds, would occur in the air in gaseous form.

Under section 231(a), the Administrator is required to set “emission standards applicable to the emission of any air pollutant” from classes of aircraft engines that the Administrator determines causes or contributes to air pollution that may reasonably be anticipated to endanger public health or welfare. If the Administrator makes a final determination under section 231 that the emissions of the lead air pollutant from certain classes of aircraft engines cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare, then he is called on to set standards applicable to the emission of this air pollutant. The term “standards applicable to the emission of any air pollutant” is not defined, and the Administrator has the discretion to interpret it in a reasonable manner to effectuate the purposes of section 231. We anticipate that the Administrator would consider a variety of factors in determining what approach to take in setting the standard or standards, and the EPA would provide notice and an opportunity to comment on the

<sup>295</sup> The lead air pollutant we are considering in this proposed finding can occur as elemental lead or in lead-containing compounds, and this definition of the air pollutant recognizes the range of chemical forms of lead emitted by engines in covered aircraft.

proposed standards before finalizing them.

#### *B. The Data Used To Evaluate the Proposed Cause or Contribute Finding*

The Administrator’s assessment of whether emissions from the engines used in covered aircraft cause or contribute to lead air pollution is informed by estimates of lead emissions from the covered aircraft, lead concentrations in air at and near airports that are attributable to lead emissions from piston engines used in covered aircraft, and potential future conditions.

As used in this proposal, the term, “covered aircraft” refers to all aircraft and ultralight vehicles equipped with covered engines which, in this context, means any aircraft engine that is capable of using leaded avgas. Examples of covered aircraft would include smaller piston-powered aircraft such as the Cessna 172 (single-engine aircraft) and the Beechcraft Baron G58 (twin-engine aircraft), as well as the largest piston-engine aircraft—the Curtiss C–46 and the Douglas DC–6. Other examples of covered aircraft would include rotorcraft, such as the Robinson R44 helicopter, light-sport aircraft, and ultralight vehicles equipped with piston engines. The vast majority of covered aircraft are piston-engine powered.

In recent years, covered aircraft are estimated to be the largest single source of lead to air in the U.S. Since 2008, as described in Section II.A.2.b of this document, lead emissions from covered aircraft are estimated to have contributed over 50 percent of all lead emitted to the air nationally. The EPA estimates 470 tons of lead were emitted by covered aircraft in 2017, comprising 70 percent of lead emitted to air nationally that year.<sup>296</sup> In approximately 1,000 counties in the U.S., the EPA’s emissions inventory identifies covered aircraft as the sole source of lead emissions. Among the 1,872 counties in the U.S. for which the inventory identifies multiple sources of lead emissions, including engine emissions from covered aircraft, the contribution of aircraft engine emissions ranges from 0.0006 to 0.26 tons per year, comprising 0.0065 to 99.98 percent (respectively) of total lead emissions to air in those counties from covered aircraft.<sup>297</sup>

<sup>296</sup> The lead inventories for 2008, 2011 and 2014 are provided in the EPA (2018b) Report on the Environment Exhibit 2. Anthropogenic lead emissions in the U.S. Available at <https://cfpub.epa.gov/roe/indicator.cfm?i=13#2>. The lead inventories for 2017 are available at <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#data>.

<sup>297</sup> Airport lead annual emissions data used were reported in the 2017 NEI. Available at <https://>

Covered aircraft activity, as measured by the number of hours flown nationwide, increased nine percent in the period from 2012 through 2019.<sup>298</sup> General aviation activity, largely conducted by covered aircraft, increased up to 52 percent at airports that are among the busiest in the U.S.<sup>299</sup> In future years, while piston-engine aircraft activity overall is projected to decrease slightly, this change in activity is not projected to occur uniformly across airports in the U.S.; some airports are forecast to have increased activity by general aviation aircraft, the majority of which is conducted by piston-engine aircraft.<sup>300</sup> Although there is some uncertainty in these projections, they indicate that lead emissions from covered aircraft may increase at some airports in the future.<sup>301</sup>

Additionally, engine emissions of lead from covered aircraft may deposit in the local environment and, due to the small size of the lead-bearing particles emitted by engines in covered aircraft, these particles may disperse widely in the environment. Therefore, because lead is a persistent pollutant in the environment, we anticipate current and future emissions of lead from covered aircraft engines may contribute to exposures and uptake by humans and biota into the future.

In evaluating the contributions of engine emissions from covered aircraft

[www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data](https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data). In addition to the triennial NEI, the EPA collects from state, local, and Tribal air agencies point source data for larger sources every year (see <https://www.epa.gov/air-emissions-inventories/air-emissions-reporting-requirements-aerr> for specific emissions thresholds). While these data are not typically published as a new NEI, they are available publicly upon request and are also included in <https://www.epa.gov/air-emissions-modeling/emissions-modeling-platforms>, which are created for years other than the triennial NEI years. County estimates of lead emissions from non-aircraft sources used in this action are from the 2019 inventory. There are 3,012 counties and statistical equivalent areas where EPA estimates engine emissions of lead occur.

<sup>298</sup> FAA. General Aviation and Part 135 Activity Surveys—CY 2019. Chapter 3: Primary and Actual Use. Table 1.3—General Aviation and Part 135 Total Hours Flown by Aircraft Type 2008–2019 (Hours in Thousands). Retrieved on Dec., 27, 2021 at [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/CY2019/](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/CY2019/).

<sup>299</sup> Geidosch. Memorandum to Docket EPA–HQ–OAR–2022–0389. Past Trends and Future Projections in General Aviation Activity and Emissions. June 1, 2022. Docket ID EPA–HQ–2022–0389.

<sup>300</sup> Geidosch. Memorandum to Docket EPA–HQ–OAR–2022–0389. Past Trends and Future Projections in General Aviation Activity and Emissions. June 1, 2022. Docket ID EPA–HQ–2022–0389.

<sup>301</sup> FAA TAF Fiscal Years 2020–2045 describes the forecast method, data sources, and review process for the TAF estimates. The documentation for the TAF is available at <https://taf.faa.gov/Downloads/TAFSummaryFY2020-2045.pdf>.

to lead air pollution, as defined in Section V.A of this document, the EPA also considers lead concentrations in the ambient air—monitored concentrations, modeled concentrations, and model-extrapolated estimates of lead concentrations. Lead concentrations monitored in the ambient air typically quantify lead compounds collected as suspended particulate matter. The information gained from air monitoring and air quality modeling provides insight into how lead emissions from piston engines used in covered aircraft can affect lead concentrations in air.

As described in Section II.A.3 of this document, the EPA has conducted air quality modeling at two airports and extrapolated modeled estimates of lead concentrations to 13,000 airports with piston-engine aircraft activity. These studies indicate that over a three-month averaging time (the averaging time for the Lead NAAQS), the engine emissions of lead from covered aircraft are estimated to contribute to air lead concentrations to a distance of at least 500 meters downwind from a runway.<sup>302 303</sup> Additional studies have reported that lead emissions from covered aircraft may have increased concentrations of lead in air by one to two orders of magnitude at locations proximate to aircraft emissions compared to nearby locations not impacted by a source of lead air emissions.<sup>304 305 306</sup>

In 2008 and 2010, the EPA enhanced the lead monitoring network by requiring monitors to be placed in areas with sources such as industrial facilities and airports, as described further in Section II.A.3 of this document.<sup>307 308</sup> As

part of this 2010 requirement to expand lead monitoring nationally, the EPA required a 1-year monitoring study of 15 additional airports with estimated lead emissions between 0.50 and 1.0 ton per year in an effort to better understand how these emissions affect concentrations of lead in the air at and near airports. Further, to help evaluate airport characteristics that could lead to ambient lead concentrations that approach or exceed the lead NAAQS, airports for this 1-year monitoring study were selected based on factors such as the level of activity of covered aircraft and the predominant use of one runway due to wind patterns. Monitored lead concentrations in ambient air are highly sensitive to monitor location relative to the location of the run-up areas for piston-engine aircraft and other localized areas of elevated lead concentrations relative to the air monitor locations.

The lead monitoring study at airports began in 2011. In 2012, air monitors were placed in close proximity to the run-up areas at the San Carlos Airport (starting on March 10, 2012) and the McClellan-Palomar Airport (starting on March 16, 2012). The concentrations of lead measured at both of these airports in 2012 were above the level of the lead NAAQS, with the highest measured levels of lead in total suspended particles over a rolling three-month average of 0.33 micrograms per cubic meter of air at the San Carlos Airport and 0.17 micrograms per cubic meter of air at the McClellan-Palomar Airport. These concentrations violate the primary and secondary lead NAAQS, which are set at a level of 0.15 micrograms per cubic meter of air measured in total suspended particles, as an average of three consecutive monthly concentrations.

In recognition of the potential for lead concentrations to exceed the lead NAAQS in ambient air near the area of maximum concentration at airports, the EPA further conducted an assessment of airports nationwide, titled “Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports” and described in Section II.A.3 of this document.<sup>309</sup> The model-extrapolated lead concentrations estimated in this study are attributable solely to emissions from engines in covered aircraft operating at the airports evaluated and did not include other sources of lead emissions to air. The

EPA identified four airports with the potential for lead concentrations above the lead NAAQS due to lead emissions from engines used in covered aircraft.

Additional information regarding the contribution of engine emissions of lead from covered aircraft to lead air pollution is provided by the EPA’s Air Toxics Screening Assessment. As described and summarized in Section II.A.3 of this document, the EPA’s Air Toxics Screening Assessment estimates that piston engines used in aircraft contribute more than 50 percent of the lead concentration in over half of the census tracts in the U.S.<sup>310</sup>

The EPA also notes that lead emissions from engines in covered aircraft are present in three of the ten areas in the U.S. currently designated as nonattainment for the 2008 lead NAAQS. These areas are Arecibo, PR, and Hayden, AZ, each of which include one airport servicing covered aircraft, and the Los Angeles County-South Coast Air Basin, CA, which contains at least 22 airports within its nonattainment area boundary.<sup>311 312</sup> Although the lead emissions from aircraft are not the predominant source of airborne lead in these areas, the emissions from covered aircraft may increase ambient air lead concentrations in these areas.

### C. Proposed Cause or Contribution Finding for Lead

Taking into consideration the data and information summarized in Section V of this document, the Administrator proposes to find that engine emissions of the lead air pollutant from covered aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare. In reaching this proposed conclusion, the Administrator notes that piston-engine aircraft operate on leaded avgas. That operation emits lead-

<sup>310</sup> EPA’s 2017 AirToxScreen is available at <https://www.epa.gov/AirToxScreen>.

<sup>311</sup> South Coast Air Quality Management District (2012) Adoption of 2012 Lead SIP Los Angeles County by South Coast Governing Board, p.3–11, Table 3–3. Available at <https://www.aqmd.gov/home/air-quality/clean-air-plans/lead-state-implementation-plan>. The South Coast Air Quality Management District identified 22 airports in the Los Angeles County-South Coast Air Basin nonattainment area; the Whiteman Airport is among those in the nonattainment area and the EPA estimated activity at this airport may increase lead concentrations to levels above the lead NAAQS in the report, Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 7. EPA, Washington, DC, EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>.

<sup>312</sup> EPA provides updated information regarding nonattainment areas at this website: <https://www.epa.gov/green-book/green-book-lead-2008-area-information>.

<sup>302</sup> Carr et al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795–5804. DOI: <https://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

<sup>303</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports. Table 6. EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>.

<sup>304</sup> Carr et al., 2011. Development and evaluation of an air quality modeling approach to assess near-field impacts of lead emissions from piston-engine aircraft operating on leaded aviation gasoline. *Atmospheric Environment*, 45 (32), 5795–5804. DOI: <https://dx.doi.org/10.1016/j.atmosenv.2011.07.017>.

<sup>305</sup> Heiken et al., 2014. Quantifying Aircraft Lead Emissions at Airports. ACRP Report 133. Available at <https://www.nap.edu/catalog/22142/quantifying-aircraft-lead-emissions-at-airports>.

<sup>306</sup> Hudda et al., 2022. Substantial Near-Field Air Quality Improvements at a General Aviation Airport Following a Runway Shortening. *Environmental Science & Technology*. DOI: 10.1021/acs.est.1c06765.

<sup>307</sup> 73 FR 66965 (Nov. 12, 2008).

<sup>308</sup> 75 FR 81226 (Dec. 27, 2010).

<sup>309</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports Table 6. EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>.

containing compounds into the air, contributing to lead air pollution in the environment. As explained in Section II.A of this document, once emitted from covered aircraft, lead may be transported and distributed to other environmental media, and present the potential for human exposure through air and non-air pathways before the lead is removed to deeper soils or waterbody sediments. In reaching this proposed finding, the Administrator takes into consideration different air quality scenarios in which emissions of the lead air pollutant from engines in covered aircraft may cause or contribute to lead air pollution. Among these considerations, he places weight on the fact that current lead emissions from covered aircraft are an important source of air-related lead in the environment and that engine emissions of lead from covered aircraft are the largest single source of lead to air in the U.S. in recent years. In this regard, he notes that these emissions contributed over 50 percent of lead emissions to air starting in 2008, when approximately 560 tons of lead was emitted by engines in covered aircraft, and more recently, in 2017, when approximately 470 tons of lead was emitted by engines in covered aircraft.<sup>313</sup>

Additionally, he takes into account the fact that in some situations lead emissions from covered aircraft have contributed and may continue to contribute to air quality that exceeds the lead NAAQS. The NAAQS are standards that have been set to protect public health, including the health of sensitive groups, with an adequate margin of safety, and to protect public welfare from any known or anticipated adverse effects associated with the presence of the pollutant in the ambient air. For example, the EPA's monitoring data show that lead concentrations at two airports, McClellan-Palomar and San Carlos, violated the lead NAAQS. The EPA's model-extrapolated estimates of lead also indicate that some U.S. airports may have air lead concentrations above the NAAQS in the area of maximum impact from operation of covered aircraft.<sup>314</sup> Given that the lead NAAQS are established to protect

public health and welfare, contributions to concentrations that exceed the lead NAAQS are of particular concern to the Administrator and add support for the proposed conclusion that lead emissions from engines in covered aircraft cause or contribute to the endangering air pollution.

The Administrator is also concerned about the likelihood for these emissions to continue to be an important source of air-related lead in the environment in the future, if uncontrolled. While recognizing that national consumption of leaded avgas is forecast to decrease slightly from 2026 to 2041 commensurate with overall piston-engine aircraft activity, the Administrator also notes that these changes are not expected to occur uniformly across the U.S. For example, he takes note of the FAA forecasts for airport-specific aircraft activity out to 2045 that project decreases in activity by general aviation at some airports, while projecting increases at other airports. Although there is some uncertainty in these projections, they indicate that lead emissions from covered aircraft may increase at some airports in the future. Thus, even assuming that consumption of leaded avgas and general aviation activity decrease somewhat overall, as projected, the Administrator anticipates that current concerns about these sources of air-related lead will continue into the future, without controls. Accordingly, the Administrator is considering both current levels of emissions and anticipated future levels of emissions from covered aircraft. In doing so, the Administrator is proposing to find that current levels cause or contribute to pollution that may reasonably be anticipated to endanger public health and welfare. He also is taking into consideration the projections that some airports may see increases in activity while others see decreases, as well as the uncertainties in these predictions. The Administrator therefore considers all this information and data collectively to inform his judgment on whether lead emissions from covered aircraft cause or contribute to endangering air pollution.

Accordingly, for all the reasons described, the Administrator proposes to conclude that emissions of the lead air pollutant from engines in covered aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare.

## VI. Statutory Authority and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <https://www2.epa.gov/laws-regulations/laws-and-executive-orders>.

### A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a "significant regulatory action" because of the cross-agency nature of this issue. Accordingly, it was submitted to the Office of Management and Budget (OMB) for review under Executive Order 12866. This action proposes a finding that emissions of the lead air pollutant from engines in covered aircraft cause or contribute to the lead air pollution that may be reasonably anticipated to endanger public health and welfare. Any changes made in response to OMB recommendations have been documented in the docket.

### B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA. The proposed endangerment and cause or contribute findings under CAA section 231(a)(2)(A) do not contain any information collection activities.

### C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. The proposed endangerment and cause or contribute findings under CAA section 231(a)(2)(A) do not in-and-of-themselves impose any new requirements but rather set forth the Administrator's proposed finding that emissions of the lead air pollutant from engines in covered aircraft cause or contribute to lead air pollution that may be reasonably anticipated to endanger public health and welfare. Accordingly, this action affords no opportunity for the EPA to fashion for small entities less burdensome compliance or reporting requirements or timetables or exemptions from all or part of the proposal.

### D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538 and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or Tribal governments or the private sector.

<sup>313</sup> The lead inventories for 2008, 2011 and 2014 are provided in the U.S. EPA (2018b) Report on the Environment Exhibit 2. Anthropogenic lead emissions in the U.S. Available at <https://cfpub.epa.gov/roe/indicator.cfm?i=13#2>. The lead inventories for 2017 are available at <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data#dataq>.

<sup>314</sup> EPA (2020) Model-extrapolated Estimates of Airborne Lead Concentrations at U.S. Airports Table 7. EPA-420-R-20-003, 2020. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100YG52.pdf>.

*E. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

*F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

This action does not have Tribal implications as specified in Executive Order 13175. The proposed endangerment and cause or contribute findings under CAA section 231(a)(2)(A) do not in-and-of-themselves impose any new requirements but rather set forth the Administrator's proposed finding that emissions of the lead air pollutant from engines in covered aircraft cause or contribute to lead air pollution that may be reasonably anticipated to endanger public health and welfare. Thus, Executive Order 13175 does not apply to this action.

Tribes have previously submitted comments to the EPA noting their concerns regarding potential impacts of lead emitted by piston-engine aircraft operating on leaded avgas at airports on, and near, their Reservation Land.<sup>315</sup> The EPA plans to continue engaging with Tribal stakeholders on this issue and will offer a government-to-government consultation upon request.

*G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

The EPA interprets E.O. 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the E.O. has the potential to influence the regulation. This action is not subject to E.O. 13045 because it does not propose to establish an environmental standard intended to mitigate health or safety risks. Although the Administrator considered health and safety risks as part of the proposed endangerment and cause or contribute findings under CAA

section 231(a)(2)(A), the proposed findings themselves, if finalized, would not impose a standard intended to mitigate those risks. While this action is not subject to Executive Order 13045 in this scenario, the Agency's Policy on Children's Health<sup>316</sup> still applies. The Administrator considered lead exposure risks to children as part of this proposed endangerment finding under CAA section 231(a)(2)(A). This action's discussion of the impacts of lead exposure on public health and welfare is found in Section IV of this document, and specific discussion with regard to children are contained in Supplemental Information Section C, as well as Sections II.A.5, and IV of this document. A copy of the documents pertaining to the impacts on children's health from emissions of lead from piston-engine aircraft that the EPA references in this action have been placed in the public docket for this action (Docket EPA-HQ-OAR-2022-0389).

*H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use*

This action is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution or use of energy. Further, we have concluded that this action is not likely to have any adverse energy effects because the proposed endangerment and cause or contribute findings under section 231(a)(2)(A) do not in-and-of-themselves impose any new requirements but rather set forth the Administrator's proposed finding that emissions of the lead air pollutant from engines in covered aircraft cause or contribute to lead air pollution that may be reasonably anticipated to endanger public health and welfare.

*I. National Technology Transfer and Advancement Act (NTTAA)*

This action does not involve technical standards.

*J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

The EPA believes this action will not have potentially disproportionately high and adverse human health or

environmental effects on people of color, low-income, or indigenous populations because this action does not affect the level of protection provided to human health or the environment. The Administrator considered the potential for lead exposure risks to people of color, low-income, and indigenous populations as part of this proposed endangerment finding under CAA section 231(a)(2)(A). This action's discussion of lead exposure impacts on public health and welfare is found in Section IV of this document. Specific discussion focused on environmental justice with regard to people of color, low-income, and indigenous populations are found in Supplemental Information Section D, as well as Sections II.A.5, and Section IV of this document. A copy of the documents pertaining to the EPA's analysis of potential environmental justice concerns related to this action have been placed in the public docket for this action (Docket EPA-HQ-OAR-2022-0389).

*K. Determination Under Section 307(d)*

Section 307(d)(1)(V) of the CAA provides that the provisions of section 307(d) apply to "such other actions as the administrator may determine." Pursuant to section 307(d)(1)(V), the Administrator determines that this action is subject to the provisions of section 307(d).

**VII. Statutory Provisions and Legal Authority**

Statutory authority for this action comes from 42 U.S.C. 7571, 7601 and 7607.

**List of Subjects**

*40 CFR Parts 87 and 1031*

Environmental protection, Air pollution control, Aircraft, Aircraft engines.

*40 CFR Part 1068*

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements, Warranties.

**Michael S. Regan,**  
Administrator.

[FR Doc. 2022-22223 Filed 10-14-22; 8:45 am]

**BILLING CODE 6560-50-8**

<sup>315</sup> See Docket ID Number EPA-HQ-OAR-2006-0735. The Tribes that submitted comments were: The Bad River Band of Lake Superior Tribe of Chippewa Indians, The Quapaw Tribe of Oklahoma, The Leech Lake Band of Ojibwe, The Lone Pine Paiute-Shoshone Reservation, The Fond du Lac Band of Lake Superior Chippewa, and The Mille Lacs Band of Ojibwe.

<sup>316</sup> EPA (2021) EPA Policy on Children's Health. Available at <https://www.epa.gov/system/files/documents/2021-10/2021-policy-on-childrens-health.pdf>.

# **ATTACHMENT E**



[Aviation Gasoline](#)

[Environment and Airports](#)

[The Alternative Fuels Team](#)

## Environment & Airports

### Environmental Information

## Is Tetraethyllead (TEL) Toxic?

All forms of lead are toxic if inhaled or ingested. Lead can affect human health in several ways, including effects on the nervous system, red blood cells and cardiovascular and immune systems. Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning difficulties, and lower IQ due to their developing nervous systems.

### Airport Mitigation

## What can airports do in the short term to reduce lead emissions?

The goal is to eliminate the use of leaded aviation fuels for piston-engine aircraft in the United States by the end of 2030 without adversely impacting the safe and efficient operation of the existing GA fleet.

In the short-term, there are measures that airport owners and operators can take to reduce or minimize potential exposure to aircraft lead emissions.

- Work to offer additional unleaded fuel types to facilitate the transition.
- Minimize engine idling time and run-up times of piston-engine aircraft.
- Promote airport and pilot awareness.
- Increase distance between pre-flight / maintenance run-up locations and people on/off airport by relocating run-up locations or distributing run-ups to multiple locations.
  - If existing run-up areas typically cause propeller wash to be directed off-airport property or into areas where the public can be exposed, the airport operator should consider shifting either the location or orientation of run-up activities to locations where the emissions can be better contained to non-public areas on the airport. Additionally airport owners are encouraged to work with piston-engine aircraft operators to inform and promote implementation of these simple but effective measures.
  - In cases where it is not immediately feasible to reduce lead emissions, consider minimizing the public's outdoor air exposure to lead emissions by either shifting fences (to increase the distance between run-up areas and public observation areas) and/or posting signs to discourage loitering by the public in those areas where there may be potential and unnecessary exposure to lead from piston engine aircraft emissions.

Airport operators are encouraged to evaluate these suggested measures while taking into account the specific operational and safety needs unique to their airport. Any change in operation that relocates a lead emission source must be carefully considered.

#### U.S. DEPARTMENT OF TRANSPORTATION

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Washington, DC 20591  
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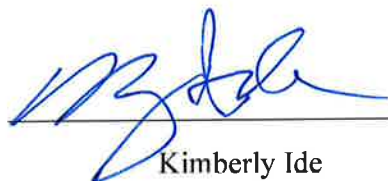
## CERTIFICATE OF SERVICE

I hereby certify that I have this 28<sup>th</sup> day of March, 2023, served the foregoing document by email to the following persons:

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Dated this 28<sup>th</sup> day of March, 2023.



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Kimberly Ide