

Aircraft Owners and Pilots Association

Statement for the Record

Subcommittee on Environment

House Committee on Oversight and Reform

**Hearing on: “Toxic Air: How Leaded Aviation
Fuel Is Poisoning America’s Children”**

Submitted by:

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INTRODUCTION:

Chairman Khanna, Ranking Member Herrell, Members of the Subcommittee, thank you for the opportunity to provide testimony on behalf of the Aircraft Owners and Pilots Association (AOPA).

AOPA is the world's largest aviation membership organization, representing the general aviation interests of more than 300,000 aircraft owners and pilots across the country. Our members collectively operate more than 85% of all general aviation (GA) aircraft in the United States and represent two-thirds of all pilots, making AOPA the largest civil aviation organization in the world.

AOPA was founded in 1939, and for over eighty years, it has stayed true to the mission of protecting the freedom to fly. Safety remains AOPA's north star, helping to guide and protect this uniquely American experience.

POSITIVE IMPACT OF GENERAL AVIATION:

General Aviation in America also provides a significant economic impact to the communities in which we live and fly – GA is a \$247 billion industry and supports more than 1.2 million jobs.

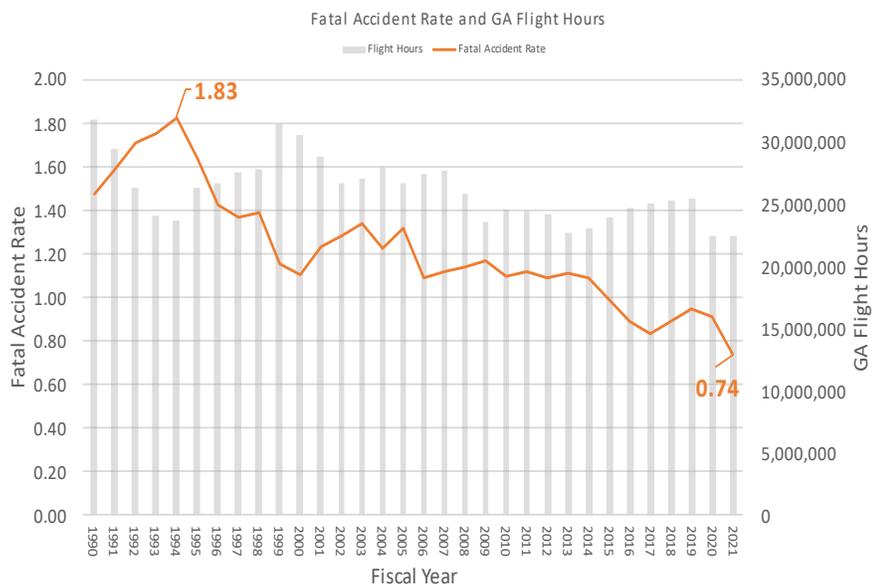
Our nation's communities are served by more than 5,000 public-use airports across the country, more than 10 times the amount that accommodate the airlines.

General aviation operations include emergency medical personnel and supplies delivery, disaster relief and recovery, search and rescue, agricultural aviation activities, recreational pursuits, and more. GA also protects our environment by providing the most efficient and cost-effective way to conduct wildlife surveys, map wetland losses and soil erosion, detect pipeline spills, as well as providing front-line support following natural disasters, including humanitarian assistance and delivery of medical supplies.

Through the network of public-use airports and more than 13,000 privately owned landing facilities nationwide, General Aviation is an integral part of the transportation system that supports communities across the United States, especially in rural areas. General Aviation also provides essential air travel options to businesses and the public, forging links between thousands of companies, their suppliers, and their customers.

GENERAL AVIATION INDUSTRY FOCUSED ON SAFETY:

We are also proud of the fact that general aviation had the safest year ever in fiscal year 2021, with a fatal accident rate of 0.74 accidents per 100,000 flight hours (as you can see in the below chart from AOPA's Air Safety Institute).



The General Aviation Joint Safety Committee, co-chaired by leaders from AOPA's Air Safety Institute and the FAA, analyzes mishap data to develop safety recommendations and drive implementation across the industry. This year, we are on track to again exceed the safety goal established by the GAJSC -- resulting in another ten percent reduction in fatal accidents over ten years.

GENERAL AVIATION WANTS THE LEAD OUT:

Let me make it very clear that we in General Aviation want lead out of fuel, and a transition to an unleaded future is something we have been striving for over many years. The best and brightest chemists and engineers are working on this mission each and every day, and the entire GA industry is working cooperatively with the Biden Administration on this important goal.

But this transition to a fully unleaded solution is one that needs to be safe and smart – one that works for the entire General Aviation fleet, which includes hundreds of thousands of piston engine airplanes. By comparison, the commercial airline fleet is made up of nearly 6,000 aircraft.

Removing lead from avgas is not only the biggest priority for the General Aviation industry, it is the most important issue I have faced in my nine years leading AOPA.

THE SAFETY THREAT TO GENERAL AVIATION AND UNINTENDED

CONSEQUENCES:

We all agree on the need to get lead out of aviation gasoline; however, a real threat to General Aviation safety is currently being played out in Santa Clara County, California. This threat also carries the real possibility of extending to other communities and states across the nation.

Santa Clara 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. Putting the wrong fuel in an aircraft can cause catastrophic engine failure – placing the pilot and those on the ground in danger.

Aircraft needing this higher-octane 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 have already been shelved, which is unfortunate news to local residents who rely on these services.

What is troubling is a lack of transparency and facts regarding Reid-Hillview.

On August 17, 2021, the Santa Clara County Board of Supervisors accepted a report from Mountain Data Group. The report found that there were increased levels of lead in the blood of children living in the area surrounding Reid-Hillview Airport compared to other areas in the county. However, the report downplayed or omitted some important facts of the matter.

For example, prior to an airport, orchards were located in the areas where lead-based pesticides were used for decades. Many homes surrounding Reid-Hillview (and within the entire county) continue to contain lead-based paint and lead water pipes. Between 1954-1977, the NASCAR West San Jose raceway was located adjacent to Reid-Hillview with cars using leaded fuels every weekend for almost three decades.

Also 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 also 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.

In a June 2022 report, for which Santa Clara 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 the airport in 2020 due to measurements being below the EPA nationally mandated limits.

My point is not to defend lead in any way but simply to bring transparency to this issue.

In addition, we believe that Santa Clara County is in violation of Airport Improvement Plan grant assurances with respect to its prohibition of 100LL fuel. Should an obligated airport cease offering fuel that had been available, as is the case at Reid-Hillview, this action could pose a violation of federal grant obligations by creating an access restriction to that airport and unjust discrimination. Aircraft that need 100LL will be unable to obtain it and therefore denied access to the airport.

The FAA is also looking into additional grant assurance non-compliance issues at Reid-Hillview.

Allowing Santa Clara County's unilateral action to unfairly discriminate against certain users of our public-use airport system is illegal and wrong, and if not addressed could exacerbate the situation by causing a domino effect at airports across the nation.

Does this mitigate the general aviation industry's desire to transition to an unleaded future? Absolutely not. We are as committed as ever to ridding lead from aviation fuel. But it needs to be done smartly and safely, and it needs to be based on common sense.

The GA industry is employing practices to significantly reduce lead emissions around airport communities during this transition to unleaded fuel. These include the availability of 91- and 94-octane unleaded fuel for aircraft that can safely use it, and practices to reduce impact, such as moving aircraft run-up areas, assessing traffic patterns and pilot education. Again, a transition needs to be done both safely and smartly.

A DEDICATED EFFORT TOWARD UNLEADED FUEL

Toward the mission of an unleaded future for GA, Congress has provided funding for the Piston Aviation Fuels Initiative (PAFI) for more than a decade. PAFI is a public-private initiative aimed at finding an alternative to leaded aviation gasoline.

Since FY12, Congress has appropriated \$47 million to these efforts. As the Committee is aware, the House recently passed the FY23 House Transportation, Housing and Urban Development, and related agencies bill (H.R. 8294), recommending \$12.385 million for PAFI, the same amount included in President Biden's FY23 Budget request. We strongly support this funding level.

The following timeline of events outlines how general aviation stakeholders, FAA and Congress have been working together for the past decade to bring us closer to an unleaded fuel solution:

- In 2011, the FAA's Unleaded Avgas Transition Aviation Rulemaking Committee was established in response to the GA industry's request to move the issue forward.
- In 2012, the FAA Modernization and Reform Act provided for the qualification of an unleaded aviation fuel and safe transition to the fuel in the fleet of piston engine aircraft.

- In 2013 the FAA established the Central Fuels Program Office & and the Piston Aviation Fuels Initiative (PAFI), an industry-government collaborative initiative. PAFI's purpose was to facilitate the identification of possible fuel candidates and test the fuel(s) with the goal of the FAA being able to issue a "fleet-wide" approval. PAFI testing protocols are employed to this date, and have helped the industry sharpen its testing practices.
- In 2014, of the 17 initial candidate fuels from six offerors, only four fuels made it through initial phase testing program and evaluation, but all of those were not able to successfully meet established and rigorous testing standards.
- Several offerors have gone back to reformulate their offering or have left the program. There are currently two candidate fuels in the PAFI program entering initial testing.
- Other fuel offerors, such as GAMI and Swift Fuels, are pursuing FAA technical approval for their respective unleaded fuels through the Supplemental Type Certificate (STC) pathway and continue to make positive progress.

PUBLIC-PRIVATE INITIATIVE:

The FAA, and hundreds of industry stakeholders representing every corner of aviation and those that have a vested interest in this safe transition, have come together under the public-private EAGLE initiative (which stands for Eliminate Aviation Gasoline Lead Emissions).

I serve as the co-chair of the EAGLE program, along with the FAA's executive director of aircraft certification, and we are laser focused on the goal of removing lead from aviation gasoline by 2030 – if not sooner.

The EAGLE framework is based on a 2021 report by the National Academies of Sciences, Engineering and Medicine (“Options for Reducing Lead Emissions from Piston-Engine Aircraft”). The conclusion of that report

(<https://nap.nationalacademies.org/catalog/26050/options-for-reducing-lead-emissions-from-piston-engine-aircraft>) was that the removal of leaded aviation

gasoline in the United States will require a combination of integrated efforts from industry, government, and Congress. This report marked the first time that an integrated government/industry effort was stated as a need in the effort to remove leaded avgas.

As I stated previously, EAGLE's single mission is to eliminate the use of leaded aviation fuels for piston-engine aircraft in the United States no later than December 31, 2030, hopefully sooner, and without adversely impacting the existing GA fleet.

PATHWAYS TO FINDING A SOLUTION:

Several candidate fuels have been or are being evaluated today through both the Piston Aviation Engine Fuels Initiative and through the Supplemental Type Certificate (STC) pathway. The STC in this particular situation is an FAA technical approval of a fuel for individual makes and models of aircraft.

Last year, the FAA approved hundreds of additional piston aircraft engine models to burn the 100-octane unleaded avgas developed by General Aviation Modifications Inc. (GAMI). Of the more than 1,800 different engines on the market, GAMI received an STC for approximately 611 engines on their FAA's approved make/model list, issued October 28, 2021.

This progress is significant, and GAMI continues to pursue STC's for high compression piston engines that need and use nearly 70% of 100 octane fuel today.

Swift Fuel's 94UL is a positive step forward, and while it is available for many lower compression engines at such airports as Reid-Hillview, the industry's goal is to find a drop-in 100-octane fuel that can be safely used by all piston powered aircraft in the GA fleet. This will also enable airports to avoid the need to use multiple fuel tanks containing different octane levels (and minimize chances for misfuelling).

Also, for reference to the scale of avgas usage in the United States compared to other modes of transportation, the total fuel burned by general aviation aircraft in one year, 180 million gallons, is burned on America's roads and highways in just four hours each day. According to the General Aviation Manufacturers Association, avgas accounts for only 0.1 percent of all transportation fuel burned in the United States.

CONCLUSION:

AOPA and the General Aviation community, including airports, fully support removing lead from aviation gasoline. As we transition, we also need to ensure the safety of pilots and require airports to fulfill Airport Improvement Program (AIP) grant assurances by making 100LL available.

The unfortunate action of Santa Clara County is counter to that focus, and if unchecked, it could have an unfortunate domino effect across the 5,000 public-use airports across this country, thereby posing significant consequences to General Aviation in the United States. By working together, we can achieve our goal of removing lead from aviation gasoline and ensuring a safe and smart transition to get us there.