

Date: December 2, 2022

To: Thomas B. Modica, City Manager 

From: Cynthia Guidry, Director, Long Beach Airport 

For: Mayor and Members of the City Council

Subject: **Unleaded Aviation Fuel at Long Beach Airport**

On October 18, 2022, the City Council approved a recommendation directing the City Manager to work with the Long Beach Airport (Airport or LGB) and its stakeholders to establish a plan to reduce lead emissions and implement programs to transition to unleaded aviation fuels. This memorandum serves to provide an update on the Airport's efforts in this regard.

Fuel Operations at the Airport

The Airport Department does not participate in the direct procurement and sale of aviation fuel at LGB. Fixed Base Operators (FBOs) at LGB provide various aviation services to LGB-based and transiting aircraft, including the sale of aviation gasoline (AvGas). The most common and reliable type of AvGas, used primarily by small piston-engine airplanes, is 100 octane Low Lead, also known as 100LL. Jet aircraft, including business jets and large commercial aircraft, use Jet A fuel, which does not contain lead.

Consumer pricing for aviation fuel sales fluctuates like other forms of fuel sales and is directly affected by supply and demand, and local, regional, and national economic and supply chain or transportation factors. The Airport receives revenue from AvGas based on a fee per gallon of fuel supplied for sale at LGB. The current fee is \$0.06 per gallon. AvGas represents ten percent of annual fuel deliveries to LGB.

Transition to Unleaded Aviation Fuel

In February 2022, the Federal Aviation Administration (FAA) announced the formation of the Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative to safely eliminate the use of leaded aviation fuel by the end of 2030. EAGLE is a government-industry partnership that also encompasses fuel producers and distributors, airport operators, and environmental experts. EAGLE references 2030 for the approval certifications, production, and nationwide distribution and use of unleaded fuel that serves the entire general aviation network. EAGLE addresses a broader timeline for lead-free fuel to account for the time required for production and supply of a new fuel, policies, distribution, and infrastructure across the country. There are currently four individual fuel developers in the evaluation and testing process with the FAA for the "fleetwide" 100-octane unleaded replacement of leaded fuel, either through the Supplement Type Certificate (STC) program or the established FAA Piston Aviation Fuel Initiative (PAFI) program. These fuel developers include General Aviation Modifications, Inc. (GAMI), Swift Fuels (Swift), Afton Chemical/Phillips 66, and LyondellBasell/VP Racing.

A significant milestone in the effort to eliminate the use of leaded AvGas was achieved on September 1, 2022, when the FAA approved the use of an unleaded AvGas developed by GAMI to be used in a broad portion of the spark-ignition piston-aircraft fleet. The approval follows more than a decade of testing by the FAA to ensure a safe unleaded fuel for all general aviation. The production and wide availability of GAMI's unleaded AvGas will take time to manage the infrastructure including manufacturing and nationwide distribution.

Airport Efforts to Accelerate the Transition to Unleaded Fuel

As the industry awaits the broader availability of a "fleetwide" replacement to leaded AvGas, Swift already provides an alternative FAA-approved fuel, UL94, that is "drop-in ready" and currently available and capable of servicing approximately 75 percent of the nation's piston powered fleet, using 30-50 percent of the volume of aviation gasoline for general aviation aircraft. Swift's UL94 is now available locally at Van Nuys and Santa Monica airports. Airport staff have initiated discussions with Swift and with FBOs to facilitate the near-term availability at LGB to bridge the transition to any qualified unleaded fuels approved by the FAA and properly endorsed by the industry.

Numerous aviation industry organizations including the National Air Transportation Association (NATA), the Aircraft Owners and Pilots Association (AOPA), the General Aviation Manufacturers Association (GAMA), the Helicopter Association International (HAI), the National Business Aviation Association (NBAA), the American Petroleum Institute (API), the Experimental Aircraft Association (EAA), and the American Association of Airport Executives (AAAE) are working collectively and with their members to increase awareness and education on the transition to unleaded fuel. The Airport is committed to working with these industry organizations to facilitate participation for its FBOs and LGB-based pilots in industry discussions and question/answer sessions. In late January 2023, the Airport will participate in a nationwide webinar hosted by NATA, including individuals from EAGLE and Swift, to provide updates and information on the types of conversion considerations airports and aviation fuel providers will need to make when transitioning from leaded to unleaded AvGas.

The transition to unleaded AvGas will require fuel providers to have the necessary infrastructure and/or equipment to provide both leaded and unleaded fuel. This may necessitate additional expenses for the FBOs in preparation for the sale of unleaded AvGas. On December 6, 2022, the Airport will seek City Council approval to waive fuel flowage fees for unleaded AvGas for the three-year period from January 1, 2023 through December 31, 2025. The elimination of these fees will help in lowering the startup costs associated with the sale of unleaded AvGas and incentivize an early transition to the availability of unleaded AvGas at LGB. A similar action was adopted on July 7, 2022, by Los Angeles World Airports for unleaded fuel at Van Nuys Airport.

Regulatory Agency Efforts to Propose Standards

On October 7, 2022, the United States Environmental Protection Agency (EPA) [announced a proposed determination](#) that lead emissions from aircraft operating on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. The public comment period for the proposed endangerment finding ends on January

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17, 2023. The EPA plans to issue a final endangerment finding in 2023, which will subsequently allow the agency to propose regulatory standards for lead emissions from aircraft engines.

The FAA has been working closely with critical government and industry partners to reduce and ultimately eliminate lead from fuel for general aviation aircraft. The FAA's approval of an unleaded fuel for most general aviation aircraft is a pivotal step in the complete elimination of leaded AvGas at airports across the country. The FAA also continues to support other fuel developers and applicants seeking approval for additional unleaded AvGas products. The Long Beach Airport is an annual recipient of federal funding from the FAA to ensure the safety and security of its airfield as part of the nation's critical aviation infrastructure.

The Airport will continue to engage with aviation industry organizations to support the local and national efforts to eliminate lead emissions from general aviation aircraft operations. The Airport has also worked with the City to recommend changes to the 2023 Federal and State Legislative Agendas to reflect support for the transition to unleaded aviation fuel. Additionally, LGB tenants are actively involved with local, regional, and national efforts in support of a safe transition. Staff will provide pertinent updates as they become available.

Should you have any questions, please contact me at (562) 570-2605.

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