

Final 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

Briefing for NACAA

December 6, 2023

# Content of the Final Notice

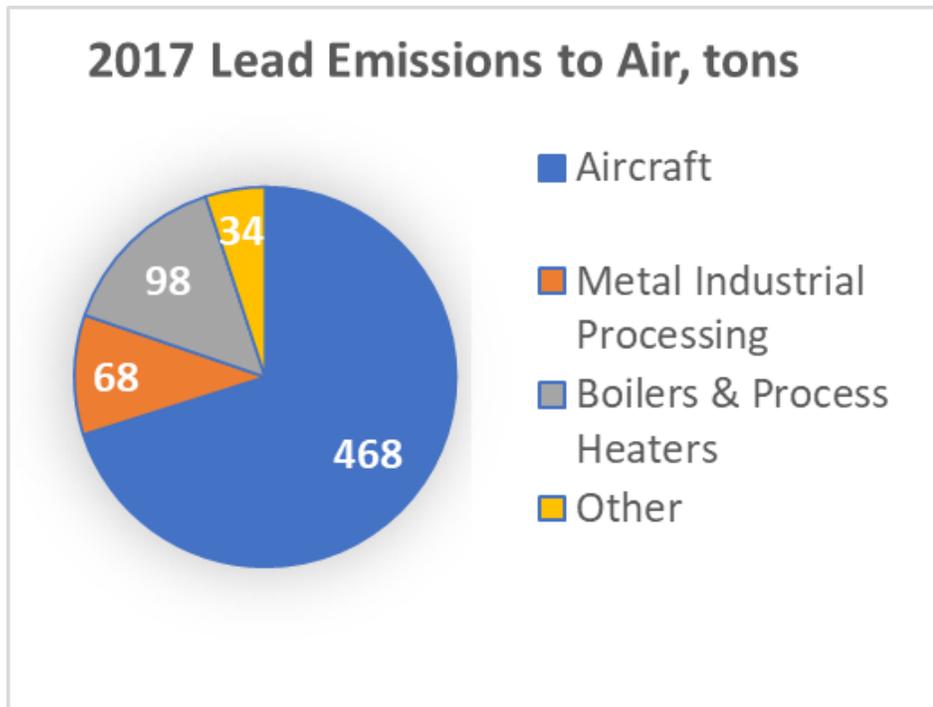
- EPA finds that lead air pollution is reasonably anticipated to endanger the public health and welfare.
- EPA finds that emissions of lead from aircraft operating on leaded fuel cause or contribute to lead air pollution.
- Does not ban or impose restrictions on the use, sale, distribution, dispensing, and general availability of leaded aviation gasoline, nor does it establish any new control measures regarding aircraft lead emissions.
- Does not impose burdens or costs on anyone other than EPA and FAA.
- We coordinated with the FAA on these final findings.

# Covered Aircraft

- Piston-engine aircraft use leaded fuel
  - Aircraft are 45-47 years old, on average
- Lead increases octane, prevents engine “knock” issues during flight
- Piston-engine aircraft in the U.S. are used for general aviation & air taxi
  - Instructional flying, personal transportation
  - Goods and services transport



# Why is EPA making this finding now?



- Protecting children’s health and reducing lead exposure is an EPA priority. EPA has studied this issue for many years.
- In response to petitioners, EPA announced in early 2022 that we were developing a proposal under the Clean Air Act regarding the “endangerment finding.”
- After evaluating comments on the proposal, we announced our final determination.

\* Emissions of lead by engines in piston-powered aircraft constituted 70 percent of the annual emissions of lead in 2017. Source: EPA 2017 NEI. Available at <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>.

# Next Steps

- EPA is now subject to a duty under the Clean Air Act to propose and issue regulatory standards for lead emissions from aircraft engines.
- Under their own authority, the FAA is also now subject to a duty to prescribe standards for the composition or chemical or physical properties of aircraft fuel to control or eliminate aircraft lead emissions.
- Subsequent regulatory action will involve the EPA and the FAA working together and carefully considering technology, cost, lead time, noise and safety in establishing such standards.
  - Any future regulatory standards would include a public comment period and provide for an opportunity for future engagement with stakeholders.

# Next Steps

- EPA and FAA have already begun work to consider regulatory options to address lead emissions from aircraft engines under each agency's respective authority.
  - EPA and FAA will announce regulatory timelines as soon as possible.
- Separate from EPA's endangerment finding, in early 2022, the FAA and industry announced the program "Eliminate Aviation Gasoline Lead Emissions" (EAGLE).
  - This program aims to achieve a lead-free aviation system no later than 2030.
  - See [www.flyeagle.org](http://www.flyeagle.org)
- EPA's Office of Chemical Safety and Pollution Prevention (OCSPP) recently awarded a grant to the CA Department of Public Health as part of their "Pollution Prevention Grant: Environmental Justice in Communities" program
  - Will provide technical assistance to general aviation airports in CA communities with EJ concerns to support the transition from leaded aviation gasoline to unleaded alternatives.

# Appendix

# EPA and FAA Authorities



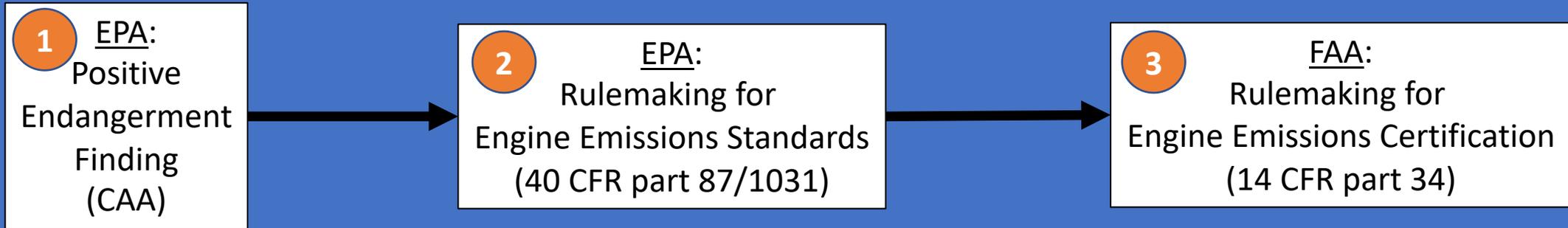
Clean Air Act Section 231(a)(2)(A) provides that: “The Administrator shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.”



- FAA has two separate authorities:
  - CAA section 232, to prescribe regulations to ensure compliance with EPA’s emissions standards.
  - 49 USC §44714, FAA has a statutory mandate 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 the EPA has found endanger public health or welfare.

# EPA & FAA Authorities Regarding Aircraft Lead (Pb) Emissions

-- Clean Air Act requirements --



TBD.\*

4 FAA:  
Regulate  
Fuel Composition  
(49 USC 44714)

\* FAA has never exercised 44714 authority.

- 1 Determine whether aircraft engine Pb emissions cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. A positive finding means EPA becomes obligated to propose and promulgate engine emission standards.
- 2 EPA shall consult with the FAA: Engine emission standards must not cause a significant increase in noise or adversely effect safety and shall take effect after such period as necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period.
- 3 FAA prescribes certification regs to ensure compliance with emission standards EPA promulgates.
- 4 FAA shall address fuel composition for airplanes that use leaded aviation fuels. Will prescribe standards for composition of the fuel(s) and the regs to enforce it. Methodology TBD.