

**HACA: Hillsboro Airport Community Advisors
Meeting #6**
Tuesday, March 23, 2021 | 3:00 to 5:00 p.m.
Public Zoom Meeting

Member	Seat	Attendance
Steve Nagy	Hillsboro Airport Manager	Present
Colin Cooper	City of Hillsboro	Absent
Leah Perkins-Hagele	Washington County	Present
Mariana Valenzuela	Culturally-Specific Organization - Centro Cultural	Present
Kimberly Culbertson	Community Member at large	Present
Laura Cattell	Hillsboro Airport Tenant	Present
Travis Reiman	Education/Hillsboro School District	Present
Mike Thomas	Hillsboro Chamber/Real Estate Interest	Absent
In Selection	Community Member at large	Absent
In Selection	Sustainability Interest	Absent

Port of Portland Staff and Panelists	Consultant Staff Present
Jayson Shanafelt – Port	Frances Portillo – Facilitator
Steve Nagy – Port	Sonia Fornoni– Note Taker
David Breen - Port	Portillo Consulting, International
Aaron Ray - Port	
Phil Stenstrom - Sr. Mgr. Airside OPS & Noise	

Attendees	
1. Abhiit Bathe	8. Michael Gallagher
2. Chris Blair	9. Mike Seeber
3. Gary Keller (2)	10. Miki Barnes
4. Greg Fry	11. Mitchell Hooper
5. Guy AlLee	12. Scott Gratsinger
6. James Kirby	13. Veena Rao
7. Jim Thompson	14. William Mccandless

Welcome + Check In

Ms. Portillo welcomed the committee members and attendees, welcomed the committee’s new note taker Sonia Fornoni, and reviewed the agenda.

Time	Topic	Presenter	Materials
3:00 p.m.	Welcome + Check-in	Frances Portillo, Facilitator	
3:10 p.m.	Approve Meeting #5 notes	Frances Portillo	Meeting #5 notes
3:15 p.m.	Hillsboro Airport and PDX Update	Steve Nagy, Port	Slides
3:30 p.m.	Leaded Fuel Discussion	Steve Nagy, Port David Breen, Port	Slides
4:30 p.m.	Public questions/Comments	Frances Portillo	
4:40 p.m.	Discuss upcoming Dates Committee Evaluations + Adjourn	Frances Portillo	Evaluation Form

Ms. Portillo invited panelists to introduce themselves by saying their name and what is something they are looking forward to enjoying when the pandemic is over. 12 panelists gave their answers.

Approve Meeting #5 Notes

Ms. Portillo asked committee members if there were any changes or additions to the minutes and notes from meeting #5. None were voiced and the minutes were approved.

Hillsboro Airport and PDX Update – Steve Nagy, Port of Portland

Steve Nagy, Interim Director of Operations and Hillsboro Airport Manager, gave an update on HIO and PDX.

Hillsboro Airport (HIO)

- Operating at lower levels than in previous years with some activities returning, such as student training and some business aviation. When compared to last fall, many programs have remained steady or have slightly improved, but not to the level of pre-pandemic traffic.
- Taxiway A reconstruction will begin this summer, with no change in size or shape to the runway, rehabilitating 25-year-old pavement. This project will continue each summer until 2023.
- Draft findings for the environmental assessment of the Runway Safety Area project are almost available. This project will bring the area at the north end of the main runway up to current FAA standards. Draft findings will be publicly available for review and comment, with a virtual public hearing on a May 25. Pending approval by the FAA, the plan is to make improvements during summer 2023.
- The Port recently received federal funding approval for capital projects spanning the next five years at HIO, including cross airfield taxiway at the north end, which connects the main runway to the parallel runway. None of these capital projects enhance capacity.

Portland International Airport (PDX)

- Commercial aviation in general has been hit hard by the pandemic.
- The Port has a five-year capital program, and as a result of the 60 percent reduction in passenger volume, the capital building program has been reduced by 50 percent. This is separate from ongoing reconstruction of the main terminal, for which funding is underway.
- PDX project cuts include taxiway or runway rehabilitations and other airport projects that the Port funds through revenue generated from people using airport facilities, parking in the garage, or shopping in the terminal. Due to the sheer loss of revenue over the last 15 months, certain projects have been cut back; the good news is that federal funding allows projects at Hillsboro Airport to remain on track.
- Passenger traffic is increasing, due to Spring Break and more vaccinated people feeling safe to return to some level of travel. This is important because PDX is fully funded by users of the facilities – airport users and passengers – not by taxes.
- Since January, the Port has partnered with OHSU to provide a mass vaccination clinic. The Port is very pleased to be able to provide the Red Economy Lot and coordination service; OHSU is handling the vaccination, with about 60,000 people having been vaccinated to this date. The Port will apply for FEMA reimbursement along with all other entities offering this service; the estimated amount spent so far by the Port is more than \$500,000. This is a very important way that we can contribute to the community during these challenging times.

Leaded Fuel Discussion – David Breen and Steve Nagy, Port of Portland

See slideshow for additional material: https://cdn.portofportland.com/pdfs/HACA_Presentation_6.pdf

Leaded AvGas Overview

Steve Nagy and David Breen, Environmental Air Quality Manager, gave an overview of leaded aviation fuel use in general aviation and at Hillsboro Airport.

Mr. Nagy began the conversation by reviewing what has been done through the years, what had been looked at previously by the Hillsboro Airport Roundtable Exchange (HARE), the predecessor to HACA, and reviewed what has changed since then.

Why is leaded aviation gas (AvGas) used?

- Lead is used in high-compression and low-temperature environments. Fuel used in aircraft engines is regulated by the Environmental Protection Agency (EPA) and by the Federal Aviation Administration (FAA).
- Leaded AvGas is the only fuel currently available that can meet requirements of most piston aircrafts and must be used to prevent sudden engine failure and long-term engine damage.

HACA member Laura Cattell gave a clarification on the safety issues and the importance of specific components of leaded AvGas.

How is Lead Regulated?

- Lead is regulated by EPA and Oregon Department of Environmental Quality (DEQ).
- Environmental laws regulate lead in water, air, soil, paint and wastes. In some cases, there are strict standards; in others, aspirational goals or benchmarks.

How is Lead *Not* Currently Regulated?

- There are currently no federal standards regarding lead in aircraft emissions or fuels.
- The Clean Air Act gives the EPA the sole jurisdiction over aircraft emission standards.
- FAA regulates aviation fuels indirectly through its design approval and airworthiness certification processes.

What are the Health Concerns?

- The Washington County Public Health Agency is the expert on public health.
- Washington County studied the issue of health impacts from lead emissions from the Hillsboro Airport and presented their findings to HARE on June 29, 2016.
- Washington County and the Centers for Disease Control and Prevention (CDC) indicate that there are no safe blood lead levels and presented information on various health effects based on blood levels.
- As the sources of lead in the environment have been reduced, average blood lead levels have decreased over time. The national average lead concentration has been reduced 99 percent between 1980 and 2016.
- According to the FAA, "Avgas emissions have become the largest contributor to the relatively low levels of remaining lead emissions produced in this country."
- Several models were separately conducted by CDM Smith on behalf of the Port, Oregon DEQ, and EPA using aircraft operations data, meteorology data, and airport configuration to estimate lead concentrations outside of the airport fence line. The maximum lead concentrations and findings were very similar, with results in several orders of magnitude below the EPA standard.

Findings and Conclusions

- While there are limitations in the environmental data, the available data about lead emissions from the Hillsboro Airport does not suggest that it presents an environmental health threat to the community adjacent to the airport.

What are unleaded fuel alternatives?

- Despite what you may have heard, an unleaded replacement fuel that meets the needs of the entire general aviation (GA) fleet does not currently exist.
- The FAA has undertaken an initiative known as the Piston Aviation Fuel Initiative (PAFI) to develop a drop-in unleaded replacement fuel that can be used in most aircrafts.
- UL94 is an unleaded fuel that can be used in some aircrafts. UL94, however, is produced only in Indiana and the trucking cost is a problem.
- Any replacement fuel must have supply certainty and be commercially competitive with 100LL.

- Automotive gasoline – known as MoGas – that does not contain ethanol may also be used in some types of aircrafts that have a supplemental type certificate for automotive gasoline and because it is a pre-blended gasoline, it is more widely available.
- In 2014, the Port and HARE commissioned a study by a firm who is leader in aviation environmental assessment and remediation, KB Environmental (KBE), to look at opportunities to use unleaded MoGas at HIO.
- As part of their study, KBE looked at where MoGas was being offered and identified a small market share that included two airports in Oregon.
- Using specific information from aircraft affiliated with HIO, KBE determined that 8.5 percent of the aircrafts affiliated with HIO could use MoGas and another 21 percent “likely” could use MoGas.
- KBE also conducted a pilot survey, and of the 350 pilots who responded, 63 percent of those who could use MoGas had used it and 80 percent indicated they would consider using it at a price of \$4.99.
- Separate storage and dispensing infrastructure would be required, so as a result of this study, the Port spent approximately \$20,000 to upgrade an existing storage tank for Fixed Based Operator (FBOs) to use and store unleaded MoGas. So far, none of the FBO’s at the airport have provided the unleaded MoGas for sale at the airport due to maintenance and liability concerns.

Update – What Has Changed?

- In their 2021 report, the Transportation Research Board (TRB) provided a lot of good, yet not new, information. This includes a table of potential mitigation strategies, such as operational and alternative fuels. The TRB talks about evaluating the separation of run-up and take-off areas to reduce lead hot spots; HIO does already have a separation between the two. It also referenced two alternative fuels, one of which is a 100 octane very low lead fuel, but it is not being made, and the other is the UL94 referenced above.
- The TRB seems to suggest that it will take a nudge from the EPA, who has sole regulatory authority over aircraft emissions, to force a transition to an unleaded fuel.
- The FAA’s efforts to find a replacement unleaded fuel that can be used by most aircrafts have been wrought with problems and delays.

Opportunities for HIO

- To understand the opportunities for the Hillsboro Airport to facilitate unleaded fuels, we must be clear on roles: The airport doesn’t regulate market, sell, or consume fuel.

Ms. Portillo opened the floor for questions posted and explained the etiquette rules.

Questions and Answers box

Members of the public were asked to enter their questions in the Q&A box. The majority of answers occurred verbally during the presentation.

Several questions asked: Is there an alternative product available in the market?

Steve Nagy: There are no easily available substitutes in the market or providers to bring it into our market. We have done what is needed on our side; we have not found an FBO willing to bring it in. Political subjects are beyond our control. We are focusing on when and if a product is available and we are ready for it.

David Breen: Confirmed that to answer most of the questions, we do make the resources available and are ready for when a product is approved.

Jim Thompson 03:42 PM Is lead in the air currently monitored by any agency? If so, are the data publicly available? Particulates are, but so far as I know chemical contents are not.

Guy AlLee 03:43 PM The long-term solution is to transition to electric airplanes. What is the Port of Portland doing to provide the Electric grid infrastructure?

Guy AlLee 03:43 PM The training fleet is especially well positioned, as they are built around ~1 hour lessons and create the bulk of lead emissions overall. What is the Port doing to mandate or incent the transition of the training fleet to electric airplanes?

Steve Nagy: We are seeing them coming into the market and are encouraging those schools to make changes.

Jane Wilson 03:18 PM Are representatives from Clean Water Services and TSWCD on the environmental assessment team?

Discuss Upcoming Dates

Ms. Portillo informed everyone about the upcoming meeting dates:

- HACA Meeting #7 Tuesday, June 29, 2021
- Hillsboro Airport Air Fair TBD
- HACA Meeting #8 Tuesday, October 26, 2021

Ms. Portillo thanked everyone for their participation, interest, knowledge and passion and reminded the committee to send in the evaluations previously emailed to them.

Evaluations + Adjourn

Evaluations were sent earlier by email. One response was received.

Please rank the following:

- Overall Meeting Quality: Excellent (1)
- Presentations: Excellent (1)
- Meeting Materials: Excellent (1)
- Discussion: Excellent (1)
- Pacing: Just right (1)

What was the most useful? (1)

- *The technical information was delivered in a way that us, non-pilots were able to understand*

What was the least useful? (1)

- *Some aggressive comments on the chat that are not conducive to solutions.*

What topics related to Hillsboro Airport would you suggest for future agendas? (1)

- *I believe we need to keep working on the issue of lead.*

Comments, suggestions or questions? (1)

- *Great meeting as always*

Appendix A: Chat Box

From Michael Gallagher to Everyone: 03:11 PM Most Zoom sessions allow sending a private message to a specific individual. Can you activate that now?

From Mike Seeber to All Panelists: 03:25 PM Steve Nagy fibbed a bit by saying the airport is not using taxpayer dollars.

From Gary Keller to All Panelists: 03:27 PM You're off your timeframe

From Mike Seeber to All Panelists: 03:32 PM Lead is highly toxic. Use of lead sprayed into the skies is horrible and should be stopped immediately.

From Mike Seeber to All Panelists: 03:32 PM FAA has stalled on this issue since the 1970s. Bogus argument.

From Gary Keller to All Panelists: 03:33 PM 75% of general aviation aircraft can use an unleaded UL94 fuel. It has been available for years.

From Mike Seeber to All Panelists: 03:34 PM Lead fuel is not needed for safety. Bogus argument.

From Michael Gallagher to Everyone: 03:34 PM Detonation is just what you CANNOT have in an engine. The speaker is wrong.

From Gary Keller to All Panelists: 03:34 PM Why are you not using it at your airport?

From Jim Thompson to All Panelists: 03:34 PM Michael is correct.

From Mike Seeber to All Panelists: 03:35 PM Us non-pilots understand just fine Laure.

From Gary Keller to All Panelists: 03:38 PM Unleaded UI94 has been certified by the FAA for years

From Mike Seeber to All Panelists: 03:38 PM Oregon can slap a \$10 per gallon tax on Lead fuel to discourage use and pay for cleanup.

From Gary Keller to All Panelists: 03:42 PM Washington Health Dept does not recognize lead emissions from general aviation aircraft. This chart is due to taking lead out of gasoline in cars. What about general aviation aircraft?

From Kimberly Culbertson to All Panelists: 03:45 PM Just a note, the 2016 report to HARE is based on 2014 data. HIO has since become the 6th busiest General Aviation (GA) Airport in the US, according to General Aviation News. In 2019, HIO had 243,642 total GA operations, 66% of which were local.

From Gary Keller to All Panelists: 03:46 PM It is because they do not test the children.

From Mike Seeber to All Panelists: 03:47 PM 476 TONS of lead emitted by propeller airplanes every year in the US. Big Problem.

From Gary Keller to All Panelists: 03:47 PM Those 17 airports tested for lead are now being looked at more closely.

From Mike Seeber to All Panelists: 03:49 PM Retire the aircraft that can't use the new fuel. RED HERRING!

From Gary Keller to All Panelists: 03:50 PM There is a drop in available. The FAA refuses to certify it. Swift fuels made it. Swift 100R

From Kimberly Culbertson to All Panelists: 03:51 PM This study is also a 2014 result.

From Mike Seeber to All Panelists: 03:51 PM Calling 100LL "low lead" is deceptive. Your "low lead" has FOUR times the lead that was outlawed for auto gas 30 plus years ago.

From Gary Keller to All Panelists: 03:53 PM MoGas will no longer be available. Recent studies by the NAS have recommended it no longer be used.

From Miki Barnes to All Panelists: 03:54 PM The Hare Field monitor is 1.3 miles SW of the airport. The EPA by contrast recommends monitoring downwind of the airport runways. This never occurred at HIO. The DEQ claimed that the Hare Field monitor was not positioned in such a way as to accurately measure HIO lead emissions. It is disingenuous to now claim that these readings accurately reflect lead emissions at this airport. A far more responsible approach would involve performing a study at HIO specific to location of runways, wind direction, etc. The EPA study of 17 airports specified how they went about measuring lead at the individual airports involved.

From Mike Seeber to All Panelists: 03:54 PM Aviation is big business that pollutes with lead because it's easier for them I guess.

From Gary Keller to All Panelists: 03:55 PM Not true. UL94 is available anywhere in the US. 75% of all GA aircraft can use 94UL

From Mike Seeber to All Panelists: 03:55 PM \$500,000 dollar airplane owner worries about the cost of fuel?

From Gary Keller to All Panelists: 03:57 PM UL94 is available anywhere in the US. Unleaded UL94 costs less than leaded AvGas

From Jim Thompson to Everyone: 03:58 PM Could someone explain what is wrong with ethanol?

From Kimberly Culbertson to All Panelists: 03:58 PM Infrastructure is necessary. BTW, one of Oregon's US Representatives is the Chair of the Transportation and Infrastructure Committee of Congress, Peter DeFazio.

From Mike Seeber to Everyone: 03:58 PM Asking pilots not pollute with lead fuel? They just need to be told and bear the cost. What about the rest of us getting polluted upon?

From Miki Barnes to All Panelists: 04:00 PM There are significant research findings by Marie Miranda et al and Sammy Zahran et al that found increased blood lead levels in children living within 2/3 mile of an airport. HIO would be well advised to hire researchers of this caliber to address this issue.

From Gary Keller to All Panelists: 04:02 PM Nonsense. The cost is worth the cost to sop putting lead into the environment. Untrue. UL94 is easily available.

From Mike Seeber to Everyone: 04:02 PM There will be infrastructure when it is mandated. Poor argument.

From Kimberly Culbertson to Mike Seeber, All Panelists: 04:03 PM I agree with you.

From Miki Barnes to Everyone: 04:04 PM The Hare Field monitor is 1.3 miles SW of the airport. The EPA by contrast recommends monitoring downwind of the airport runways. This never occurred at HIO. The DEQ claimed that the Hare Field monitor was not positioned in such a way as to accurately measure HIO lead emissions. It is disingenuous to now claim that these readings accurately reflect lead emissions at this airport. A far more responsible approach would involve performing a study at HIO specific to location of runways, wind direction, etc. The EPA study of 17 airports specified how they went about measuring lead at the individual airports involved.

From Michael Gallagher to Everyone: 04:04 PM The bottom line is that automotive fuel without ethanol is available in the local area and could be made available TODAY at HIO if the Port wanted to get behind the effort to reduce lead emissions. For example use of a single truck to transport fuel from the supplier and to also deliver to aircraft would cut the cost substantially. It is important to recognize that the FAA substitute fuel effort has hit a brick wall with no promise of future success.

From Miki Barnes to Everyone: 04:04 PM There are significant research findings by Marie Miranda et al and Sammy Zahran et al that found increased blood lead levels in children living within 2/3 mile of an airport. HIO would be well advised to hire researchers of this caliber to address this issue.

From Gary Keller to All Panelists: 04:10 PM Jet fuel has plenty of product in it. And Swift fuel now has 100R. It was December of 2018. Get up to date. Mogas is out.

From Jim Thompson to Everyone: 04:10 PM Fuel aging? Just add more xylene.

From Gary Keller to All Panelists: 04:13 PM Hillsborough is number 11th in lead emissions in the US. So this is a good reason to continue putting lead emissions into the environment?

From Gary Keller to All Panelists: 04:14 PM FBOs were the ones sued in California for supplying leaded fuel to the airports.

From Greg Fry to Everyone: 04:14 PM Who do I talk with about being a provider of MoGas at HIO?

From Gary Keller to All Panelists: 04:15 PM You're not trying to solve it.

From Greg Fry to Everyone: 04:16 PM I've already talked with local petroleum product manufacturer / distributor that would be more than willing to sell MoGas at airports.

From Miki Barnes to Everyone: 04:16 PM Nonetheless, the 1/4 of one percent of the population certified to fly in the U.S. are releasing an estimated 468 tons or more of lead into the air every single year.

From Gary Keller to All Panelists: 04:21 PM only one airport in california provide UL94. Not true. UL94 can easily be brought to your location. Call CEO Chris A'costa at Swift fuel. Who is not willing to bring them into the market??? What purpose do you have as a group? Absolutely false!

From Jim Thompson to Everyone: 04:37 PM Thanks for the answer about ethanol. I knew the answer but it was important to hear it said. And you said it.

From Scott Gratsinger to All Panelists: 04:37 PM Are there any issues that prevent the installation of a self-serve fueling facility at HIO? There are a number of towered airports in the state of Oregon that offer self-serve on their fields. Would a self-serve MoGas facility be the solution?

From Miki Barnes to Everyone: 04:40 PM Twin engine aircraft are extremely loud, disruptive, and polluting.

From Greg Fry to All Panelists: 04:41 PM Thank you