



# AVIATION NOISE MANAGEMENT

PORT OF PORTLAND

# 2016 YEAR IN REVIEW

## A SUMMARY OF THE PORT OF PORTLAND'S AVIATION NOISE MANAGEMENT PROGRAM KEY METRICS AND HIGHLIGHTS OF THE YEAR

The Port's mission is to enhance the region's economy and quality of life by providing efficient cargo and air passenger access to markets. In 2016 our Aviation Noise Management Program continued the successful foundation that has balanced regional interests for over 30 years. We thank the members of our volunteer Citizen Noise Advisory Committee and Hillsboro Airport Roundtable Exchange for their contributions and ongoing support.

	PDX	HIO	TTD	Not Airport-Specific	Total
Annual Flight Operations	227,709	197,763	118,263	43,859	587,594
Total Contacts	1,137	456	12	519	2,124
Total Households	143	47	11	104	305
Percentage Of Annual Submissions By Top 5 Households	77%	88%	50%	30%	
Community Outreach Events	22	5	1	-	28
Industry Outreach Events	5	8	1	2	16

Source: Port Aircraft Noise and Operations Monitoring System (ANOMS) and/or Port of Portland Research and Strategic Analysis Department.  
 \*Note: "Not Airport-Specific" counts overflights, operations at non-Port of Portland facilities and submissions that could not be attributed to a specific airport.

**Noise Management Mission**  
 Minimize, to the extent possible, the noise impacts from aircraft utilizing airports operated by the Port of Portland. Encourage cooperation and collaboration with internal and external partners.

**Phil Stenstrom**  
 Port of Portland Noise Manager  
[philip.stenstrom@portofportland.com](mailto:philip.stenstrom@portofportland.com)  
 503.415.6063

For general information or to report a noise event dial: 503.4100.460 or contact us via email: [pdxnoise@portofportland.com](mailto:pdxnoise@portofportland.com).

## PORT DEVELOPS PBN OUTREACH TOOL

Performance-based navigation (PBN) is being deployed across the United States, improving the precision of aircraft navigation, which in turn improves efficiency and safety. In the case of PDX, we're leveraging the benefits of PBN to improve conformance with our noise abatement procedures. PBN helps aircraft fly more precisely over the Columbia River when landing and taking off. Our staff and our community want to understand how PBN use is changing the flight patterns around PDX. With the help of our Geographic Information Systems team, we developed a mapping tool that allows us to graphically display flights on a year by year basis, helping with internal analyses as well as our dialogue with residents.

## SUPPORTING OUR KIDS AND COMMUNITIES

For the third year, our Noise Management Department continued our partnership with the Portland-based 142nd Fighter Wing of the Oregon Air National Guard to provide support for the local STARBASE program (<http://dodstarbase.org>). STARBASE provides science, technology, engineering, and math (STEM) educational opportunities to students in communities surrounding PDX. In 2016, the program expanded to include additional elementary schools with a focus on those in proximity to PDX flight paths.



## AVIATION NOISE MANAGEMENT

PORT OF PORTLAND

### CALM WIND RUNWAY USE POLICY REVIEW

At the January 2016 Citizen Noise Advisory Committee (CNAC) meeting, the committee asked staff to review the standing policy which encourages use of Runways 10L/R (aircraft approaching from the west, and departing to the east) during “calm-wind” conditions. The policy originated in the 1983 Part 150 Airport Noise Compatibility study. After an extensive analysis, it was determined that this policy should remain in effect. The following describe some of the key findings:

1. Calm wind conditions are frequently associated with fog. Runway 10R (south primary runway) is the runway best-equipped for low-visibility instrument landings.
2. More people are exposed to higher noise levels on the west side of the airport.
3. Preferential use of runway operations taking off and landing to the east (called “east flow” leads to an approximately a 50-50 split between east and west flow, balancing overflights and noise exposure on both sides of the airport.

### PDX GROUND RUN-UP ENCLOSURE CONGESTION MONITORING

We launched a yearlong evaluation of congestion in the PDX Ground Run-up Enclosure (GRE). The GRE was built to allow airlines to conduct aircraft-engine maintenance testing activities while minimizing noise impacts in nearby communities. Airlines use the GRE frequently, and situations sporadically arise where the facility is needed but in use by another aircraft. At the end of the study period, the results will be reviewed with CNAC and a long-term policy established. The intent of this study is to determine what if any policy changes need be made regarding use and scheduling of the GRE.

### TRACKING UNMANNED AERIAL SYSTEMS “DRONE” ISSUES

Unmanned Aerial Systems (UAS) use across the U.S. and within the Portland-metro region continues to grow. As an aeronautical use, growth in both recreational and commercial drone operations requires us to develop expertise in this field. Our Noise Management Department role focusses on supporting our community and partners to promote safe flying practices and facilitate communication. We can provide support and expertise to drone operators as well as residents seeking information about drone uses and local laws.

### INDUSTRY INVOLVEMENT IN SUPPORT OF REDUCING NOISE IMPACTS LOCALLY AND GLOBALLY

In addition to working within our local community, we support a number of national programs and working groups to encourage innovation and leadership. Examples from our industry efforts in 2016 include:

- Ongoing support of the NoiseQuest website (<http://www.noisequest.psu.edu/>). NoiseQuest is sponsored by the Federal Administration Aviation and is intended to provide the public with a source of aircraft noise information.
- Support of a number of Committee on Aviation Environmental Protection working groups developing international guidelines on operational strategies for reducing aircraft noise and effective community engagement.
- Participation on the NextGen Advisory Committee PBN Blueprint Community Outreach Task Group which developed recommendations for the FAA and aviation industry for improving community outreach and engagement associated with performance based navigation design and deployment.