

**Hillsboro Airport Compatibility Study Technical Conference**  
**Airport Operations Technical Advisory Group Meeting #1**  
June 23, 2005-Hillsboro Civic Center

**Attendees:**

Group Members:

|                  |   |
|------------------|---|
| Franz Bergtold   | Hillsboro Aviation                      |
| Wink Brooks      | City of Hillsboro                       |
| Don Cline        | FAA- Hillsboro Tower                    |
| Bob Flansburg    | Citizen chosen by the City of Hillsboro |
| Brian Lockhart   | Global Aviation                         |
| Karen Oberg      | Citizen chosen by the Port of Portland  |
| Henry Oberhelman | Citizen chosen by Washington County     |
| J.F. Vallee      | Airport User                            |

Not in attendance:

|                |                            |
|----------------|----------------------------|
| Brian Lockhart | Fixed Base Operator at HIO |
| Jeff Tobolski  | HABA                       |
| Andrea Vanelli | Washington County          |
| Steve Walti    | Citizen/Airport User       |

Non-group Members:

|               |                          |
|---------------|--------------------------|
| Jim Harris    | Coffman Associates       |
| Chris Hugunin | Coffman Associates       |
| Duane Decker  | Port of Portland         |
| Daren Griffin | Port of Portland         |
| Peggy McNeese | Port of Portland         |
| Steve Nagy    | Port of Portland         |
| Ryan Parker   | Port of Portland         |
| Andy Priebe   | Port of Portland         |
| Brooke Satern | Port of Portland         |
| Kama Simonds  | Port of Portland         |
| Bob Turner    | Port of Portland         |
| Vaughn Brown  | Jeanne Lawson Associates |
| Amy Nehl      | Jeanne Lawson Associates |

**Introduction**

Vaughn welcomed the group and thanked them for coming. He explained to the group that this meeting was to discuss the Hillsboro Airport Compatibility Study and how to minimize negative impacts to surrounding areas due to operations at the airport.

**Compatibility Study Components- Chris Hugunin**

Chris reviewed the mailed materials and handouts describing draft compatibility study components and explained what each represented. He explained to the group that the previously mailed chapters 2 and 3 are currently only about half done and that the purpose of the meetings being held today is to get input and guidance that will help complete those chapters.

Chris explained to the group the study work flow chart and described the study area that is being examined. The 65 DNL contour – the affected noise area – is well within the study area. The 55 DNL map shows the area that the Port is attempting to include in the study even though it is not specifically required to do so.

Chris discussed the Aircraft Noise & Capacity Act (ANCA) with the group. He explained that the ANCA limits how airports can manage noise. This is the one reason older jet aircraft were phased out. This act also grandfathered all airport restrictions that were put in place prior to 1990 and encourages voluntary agreements between the airport and other agencies. Chris informed the group that ANCA prohibits this study from considering nighttime curfews, landing fees, airport capacity, or noise budgets as compatibility measures.

### **Noise Abatement Techniques**

Chris reviewed the following items currently on the measures list:

#### **Aircraft Operating Procedures**

One option that the study will consider is a reduced thrust option. This option would require pilots to not use full power taking off. Generally pilots like to use full power for their initial climb, especially larger, heavier aircraft. Currently the standard procedure is to make a cutback at 1,000 feet. This procedure would require pilots to initiate the cutback at 500 feet.

With maximum climb departures there are no cutbacks but there is a noise impact to property near the airport. With minimum approach you can control aircraft coming in, however they may have to extend farther on their incoming approach. The trade off to this option is the noise increases further away but is reduced closer in.

Noise abatement approach procedures include minimal use of flaps to reduce power settings and increasing the approach angles (two-stage). The practicality of this option has been difficult because it changes how pilots are trained to control their aircraft.

The reverse thrust option is used to slow turbojet aircraft immediately after touchdown. This method is typically used on short runways.

#### **Runway Use**

New touch and go limitations are prohibited by ANCA however they are currently not authorized between 10:00pm and 6:00am. With the new runway in place the restriction would still exist. A group member asked if the touch and go could be shifted to all hours of the night, and the answer is that it likely could be.

The study will also consider helicopter patterns. The number one priority is to put up to three in Charlie and either one in Alpha or one in Bravo at the same time. An agreement recently signed by the FAA, the airport's current helicopter operators and the Port states that never will there be any more than four (4) helicopters operating in the air at any one given time. It may take some time before the rotational use strategy reaches its full potential.

Departure turns allow planes to gain more altitude before making their turns. Right now they are making turns over residential areas. One consideration is standard departure procedure that requires a certain altitude before proceeding to turn. According to the group's observations, it is the small aircraft that are typically turning early.

According to a group member, there are noise abatement procedures that the jets must follow, but the Port should be able to change the protocol on procedures and once that is done the jets will follow the new guidelines.

One group member reminded the others that jet pilots follow the FAR's quite faithfully, in order to change the turning pattern, you will need to make changes to the FAR's. There was also a comment that it is not the jets that are flying over the residential areas -- it is the smaller planes and it is the smaller planes that create some of the more intrusive noise. A couple suggestions to solve these issues were; going two miles further out before initiating the turns, or you could make a half rate turn instead of a standard rate turn. Chris reported that it is possible to go out 2 miles and make the turn (however during the summer you may be mixing aircraft with glider operations).

The group asked how the airport regulates who is making the turns early. The Port recognized that right now it is difficult to regulate due to the lack of radar in the FAA tower and the best short term way to minimize noise is through a procedural approach.

### **Instrument and Visual Approaches**

The Master Plan talks about different approaches and provides the ability to change some approach patterns. The FAA will need to approve such changes. Ultimately, a high tech GPS system will determine aircraft approaches. However, this technology is not anticipated to be widely available until after 2015.

Currently Runway 30 is not preferred because of Cooper Mountain. The group wanted to know if a study has been done for a GPS to look at different approaches. The Port has not conducted one yet currently -- the approaches come directly over town.

According to one group member, if all pilots had a GPS system, it would be easier to determine their approach. This would result in less time in the air because the planes could approach from the east. Right now planes currently travel up I-5 and turn over town. According to the representative from the FAA, they have looked at different non-precision GPS technologies. The Port could map out non-precision approaches if we had the technology.

A member of the group added that corporate jets rarely use reduced thrust takeoffs due to the short runways (the engines are already D-rated). Smaller aircraft don't have the same problems with reduced thrust; students often don't use reduced thrust because of safety issues. Many of the jets currently using Hillsboro Airport have reduced thrust capability already built-in.

Currently very few people in the local communities know about the procedures already in place. It was important to the group that the Port is aware of any option to limit overflights of the city. The goal of the Port is to avoid residential over-flights with voluntary procedures. The big constraints with this approach are safety and economics.

According to the group, maximum climb departures do not work very well for large aircraft. It is especially difficult in the summer when aircraft are heavier.

### **Helicopter Activity**

In regard to helicopter patterns a group member asked if there was information on activity from both the Phoenix and Chandler airports. The Port will make contact information available so the questions can be answered.

According to one group member, when the current Charlie pattern was created, there was no public involvement on the design. The group would like to revisit the plan for the Charlie pattern.

A rotation system might work but sequencing would also have to be added to the plan. The group was concerned that the noise measurements and contours for the Alpha pattern are not accurate. It was clarified that DNL is a cumulative measure of the impact of noise and it may not be the noise you hear on an individual basis.

There are four noise monitors permanently installed in the community established to compare their measurements with what the computer model shows. For the most part the two are very close. The Port recognized that many people were concerned with the accuracy of the modeling and undertook the comparative assessment to ground truth the model results early in the Master Planning effort.

A member stated that the monitors are not able to measure the high frequency noise and that there are not thresholds established for these frequencies. The group likes the permanent noise monitors and hopes their readings will continue to be used to verify that the computer calculations are correct.

There was also discussion about helicopter activity being conducted at a remote facility. There would be a new site in a distant area for training. The problem with this is the Port could not force anyone to use it. Currently not all helicopter training is done at the Hillsboro Airport and with some such training currently taking place at other area airports.

### **Facilities Development**

Over time the runways will need upgrading. The master plan shows the projected runway and taxiway improvements.

### **Displaced Thresholds**

This measure requires aircraft to land further down the runway. The problem for larger jets is that this option reduces landing distance and increases safety issues, and the noise increases.

### **Acoustical Barriers**

Chris explained that barriers lose their effectiveness the farther away from the noise source they are. Palm Springs was cited as an example of an airport that has a barrier some distance away from the departure area making it less effective. The group wanted to verify if there would be room for a barrier. There is room. Another problem with barriers is blocking visual contact means one can hear but not necessarily know what is going on.

Placing effective barriers at run-up areas was suggested. The group feels that the existing run-up area noise berm is ineffective due to the height.

In run-up areas the Port can specify when and where run-ups can occur. The city also has some authority especially after 10:00pm. In the Master Plan, a new location was proposed on the NE side of the airport for such activities to occur.

The GRE (Ground Run-up Enclosure) at PDX is currently used for maintenance when other methods don't work. The GRE is generally used for overnight maintenance.

### **Fly Friendly**

A component of the fly friendly program are pilot guides that show pilots in graphical form the noise abatement procedures for the airport..

### **Group Discussion of Measures**

A member of the group asked, in regard to the master plan and delay, how do we capture the issues? The answer is that a parallel runway would be for small planes, thus changing how the north-south runway is used. The group thinks that the parallel runway is a good idea because it causes fewer delays.

The issue of complaint tracking was raised. Currently the Hillsboro Airport does not have the radar needed to do complaint tracking. If and when the FAA approves the technology for Hillsboro, the Port will be able to track complaints more efficiently.

The group wanted to know the status of getting radar at the airport. Obtaining a new piece of technology is really a budget issue. The Hillsboro Airport is currently on the priority list for this budget but it is a long procedure that could take years. The equipment would either be placed at Mulino or Hillsboro. The radar would make noise monitoring more affective as well as increase safety because currently the West Hills block coverage from the PDX radar.

A group member asked if the radar would affect operating costs and the FAA does not think that it will cause them to rise. There are less expensive radars available but the FAA wants to make sure only the best, most affective system is used. The equipment must be integrated and interchangeable, especially when considering safety.

The question was asked if improved radar would decrease the likelihood of an incident. The Port responded that, in some cases, yes. Right now there are inefficiencies due to having to go by time measurements because of the lack of radar. The radar would definitely help capacity issues.

The group wanted to know if departing at Runway 12 was looked at. It was but it has been difficult to find a compatible corridor. Right now Runway 12 is used only when wind conditions warrant.

The group suggested looking at the best option for departures on Runway 12. They suggested that the Port compare a straight departure path to turning south.

According to the group it is important that the airport come up with the best departure scheme for departures on all runways (including the planned short parallel runway).

#### **Criteria-Measure Evaluation Criteria Sheet**

The group reviewed the criteria input from the morning's Land Use Technical Advisory Group. Balancing all community needs was the main focus of the discussion. The group added community impacts to the criteria. After some discussion the group agreed that the list was complete with that addition.

The group then reviewed the airport operations measure list (see attachment). The measures were screened to determine their priority and to establish if they seemed to be implementable in the short-, medium- or long-term.

Generally it was indicated that all the airport operations measures play a role. They expressed a need to develop a compatibility strategy that encompasses all of the goals. The group agreed that each of the options needed to be maintained as a consideration.

The group would like the Port to look at all options but really focus on noise abatement, the Fly Friendly Program, and obtaining an instrument for visual approaches.

#### **Not Practical**

Further discussion of the measures followed.

A member stated that the reduced thrust option is not practical. High performance jets will not comply due to safety concerns. It was suggested that one could make this a voluntary procedure especially for smaller aircraft. A midfield departure is also impractical. Departure turns could be a part of the Fly Friendly program.

The group agreed that the options need to be divided between general aviation and the larger jets. They agreed that a Fly Friendly program should be created for each group as well as for helicopters. They see value in labeling diagrams just like Troutdale. They would also like a noise abatement section added to the Fly Friendly Program.

The group feels it is important to track points for inbound and departing helicopters (not training) to get them in and out in the least obtrusive manner. The Port needs to establish tracking points especially for helicopters and fixed wing patterns. The FAA needs to study flight patterns as well.

The group feels that displacements do not have a place here; however a parallel runway is a demand. Currently the run-up cannot be changed because of the imaginary airport operating surfaces which overshadow the existing location.

#### **Further Questions for the Port**

The group asked the Port to clarify what was considered a remote airport for helicopters. The Port suggested Scappoose or Apple Valley.

Group members also wanted to know if anything could be done to speed up the process for obtaining radar. The FAA representative suggested talking to local officials and local politicians. The demand will be clearly stated in the compatibility study. Eastern Oregon will most likely get radar before Hillsboro does.

The Port asked the group if they thought they would need more discussion before bringing the study back to the PAC in late September. The group agreed that they would like to meet one last time to review the summary from this meeting. There will be a draft email sent to review before the next meeting. The group agreed to meet again after the document is sent and suggested structuring the project team meeting so that members of this group could attend and present.

The Port thanked everyone for attending and for bringing such insightful information to the table.

## **Attachment: Hillsboro Airport MP Compatibility Study-Operations Meeting**

### **Input on Measures**

#### **Aircraft Operating Procedures Measures**

- Reduced thrust takeoffs – impractical for Jets, quick fix for light aircraft
- Thrust cutbacks after takeoff – Fly Friendly Program (FFP), short term
- Maximum climb departures – no advantage for runway 12 north, possible benefit for southward takeoffs
- Noise abatement approach procedures-FFP, short term
- Limitations on use of reverse thrust during landings-FFP jets, short term

#### **Runway Use and Flight Route Measures**

- Runway Use Programs – short term
- Rotational Use of Helicopter Patterns – direct pattern use, dispersion technique, longer term to change procedure when 2<sup>nd</sup> runway is in use, medium term
- Departure Turns – visual, short term
- Instrument and Visual Approaches FFP, visual approach, short term
- Midfield Departures (impractical)
- Determine best noise abatement for Runway 12 – southbound, FFP, short term

#### **Facilities Development Measures**

- Runway (5yr) Extensions and New Runways – medium term
- Remote Helicopter Operating Area – investigate off airport patterns, long term
- Displaced and Relocated Thresholds – impractical
- Acoustical Barriers
- Run-up Areas and Enclosures – potential rules for how run-ups are conducted, long-term
- Parallel Runway – addresses delay, holding reductions
- Continue to push for radar through FAA

#### **Implementation Strategy Measures**

- Monitor Noise Abatement – measure compliance, more monitoring sites (no radar to improve enforcement)
- Tracking and Responding to Noise Complaints – radar, medium term
- Fly Friendly Program- for helicopters, beef up and promote more aggressively, one for jets, one for prop/piston, short term
- Revisit MOA's on helicopter patterns
- Establish tracking points for helicopters and fixed wing – FFP, short term