

Part 150 Presentation

Highline Forum Meeting

January 26, 2011

Seattle-Tacoma International Airport

Agenda

- ❑ **General Update on Noise Issues**
 - ❑ Update on Runway Use Plan
 - ❑ Long-Range Forecasts
- ❑ **Update on Part 150 Initiatives**
 - ❑ Status of Hush House Evaluation
 - ❑ Update on Public Outreach Efforts

Update on Runway Use Plan

Communicating the Runway Use Plan

- Port and FAA have developed a runway use plan
- Indicates how and under what conditions the runways are expected to be used
- **Acknowledges that wind, weather, and operational conditions will require deviations from the plan**

Update on Runway Use Plan

Communicating the Runway Use Plan

- Port's website has runway use plan and statistics on use of the runways and specifically use of the new 3rd runway
- Goal of the Part 150 is to make this information more available and useful
 - Identify more and better ways to communicate the runway use plan
 - Look for ways to alert the public about runway closures and other conditions that may alter the operation of the airport
 - Port to work with FAA on monitoring the use of the runways and reporting back
 - Work with FAA to gain access to wind/weather/visibility data

Port of Seattle
Daily Runway Use Summary

Date	South Flow Departures			South Flow Arrivals			North Flow Departures			North Flow Arrivals			N31/34L Total Usage	
	16C	16L	16R	16C	16L	16R	34C	34L	34R	34C	34L	34R	Total Departures	Total Arrivals
1/10/2010	17%	80%	1%	0%	22%	22%	0%	0%	100%				1%	22%
1/20/2010	32%	68%	1%	43%	32%	25%							1%	25%
1/30/2010	6%	91%	1%	69%	14%	21%							1%	21%
1/40/2010	11%	80%	0%	31%	12%	58%	0%	0%	100%	100%	0%	0%	0%	58%
1/50/2010	4%	86%	0%	1%	16%	83%	10%	0%	10%	90%	0%	7%	2%	80%
1/60/2010	41%	50%	0%	16%	38%	44%	10%	0%	80%	32%	50%	12%	2%	40%
1/70/2010	19%	80%	1%	39%	29%	30%	50%	0%	50%				1%	30%
1/80/2010	16%	80%	1%	74%	11%	15%							1%	15%
1/90/2010	7%	82%	0%	87%	8%	6%			25%	0%	75%	100%	0%	6%
1/100/2010	6%	80%	0%	80%	11%	9%			0%	0%	100%	0%	0%	9%
1/110/2010	8%	91%	0%	71%	14%	15%	0%	0%	100%	100%	0%	0%	0%	15%
1/120/2010	17%	82%	1%	59%	21%	20%	0%	0%	100%	100%	0%	0%	1%	20%
1/130/2010	28%	76%	1%	21%	32%	48%	100%	0%	0%	78%	0%	28%	1%	44%
1/140/2010	22%	79%	1%	59%	22%	22%							2%	22%
1/150/2010	20%	79%	2%	44%	25%	31%							2%	31%
1/160/2010	5%	85%	0%	32%	17%	50%	0	0%	100%				0%	50%
1/170/2010	6%	80%	1%	81%	11%	7%			0%	0%	100%		1%	7%
1/180/2010	13%	85%	1%	64%	23%	13%	19%	3%	78%	84%	7%	0%	1%	11%
1/190/2010	6%	84%	0%	70%	11%	14%							0%	14%
1/200/2010	24%	75%	1%	37%	29%	34%	3%	3%	64%	64%	13%	3%	1%	32%
1/210/2010	20%	77%	1%	47%	31%	21%							1%	21%
1/220/2010	6%	84%	0%	74%	13%	13%	21%	2%	77%	52%	37%	11%	1%	24%
1/230/2010	0%	84%	1%	80%	8%	1%			17%	100%			0%	1%
1/240/2010	14%	80%	1%	61%	20%	18%							1%	18%
1/250/2010	10%	85%	0%	71%	15%	14%							0%	14%
1/260/2010	16%	82%	1%	62%	21%	17%			18%	2%	80%	72%	10%	17%
1/270/2010	14%	85%	0%	42%	29%	39%	0%	100%	0%				1%	39%
1/280/2010	12%	88%	0%	71%	14%	15%							0%	15%
1/290/2010	0%	84%	0%	85%	8%	7%	100%	0%	0%	0%	0%	0%	0%	7%
1/300/2010	13%	80%	0%	73%	11%	19%							0%	19%
1/310/2010	18%	84%	0%	69%	17%	14%	0%	0%	100%				0%	14%
2/10/2010	21%	79%	1%	50%	29%	24%	0%	0%	100%	0%	0%	100%	1%	21%
2/20/2010	16%	83%	1%	66%	12%	21%							1%	21%
2/30/2010	5%	85%	0%	39%	14%	49%	0%	0%	100%				0%	49%
2/40/2010	14%	80%	1%	69%	16%	17%							1%	17%
2/50/2010	6%	80%	1%	74%	12%	18%	50%	0%	50%	0%	50%	0%	1%	18%
2/60/2010	6%	82%	0%	82%	0%	17%							0%	17%
2/70/2010	0%	81%	1%	8%	45%	41%	0%	0%	100%				1%	41%
2/80/2010	27%	79%	1%	6%	41%	61%							1%	61%
2/90/2010	12%	80%	1%	52%	12%	36%	0%	0%	100%				1%	36%
2/100/2010	28%	71%	1%	49%	28%	27%							2%	27%
2/110/2010	7%	82%	1%	87%	6%	7%							1%	7%
2/120/2010	24%	75%	1%	21%	22%	27%							1%	27%
2/130/2010	16%	82%	1%	72%	16%	12%	0%	100%	0%	0%	0%	100%	1%	12%
2/140/2010	11%	80%	1%	67%	21%	23%							1%	23%
2/150/2010	6%	87%	3%	78%	11%	11%							2%	11%

* limited data available due to unforeseen technical difficulties

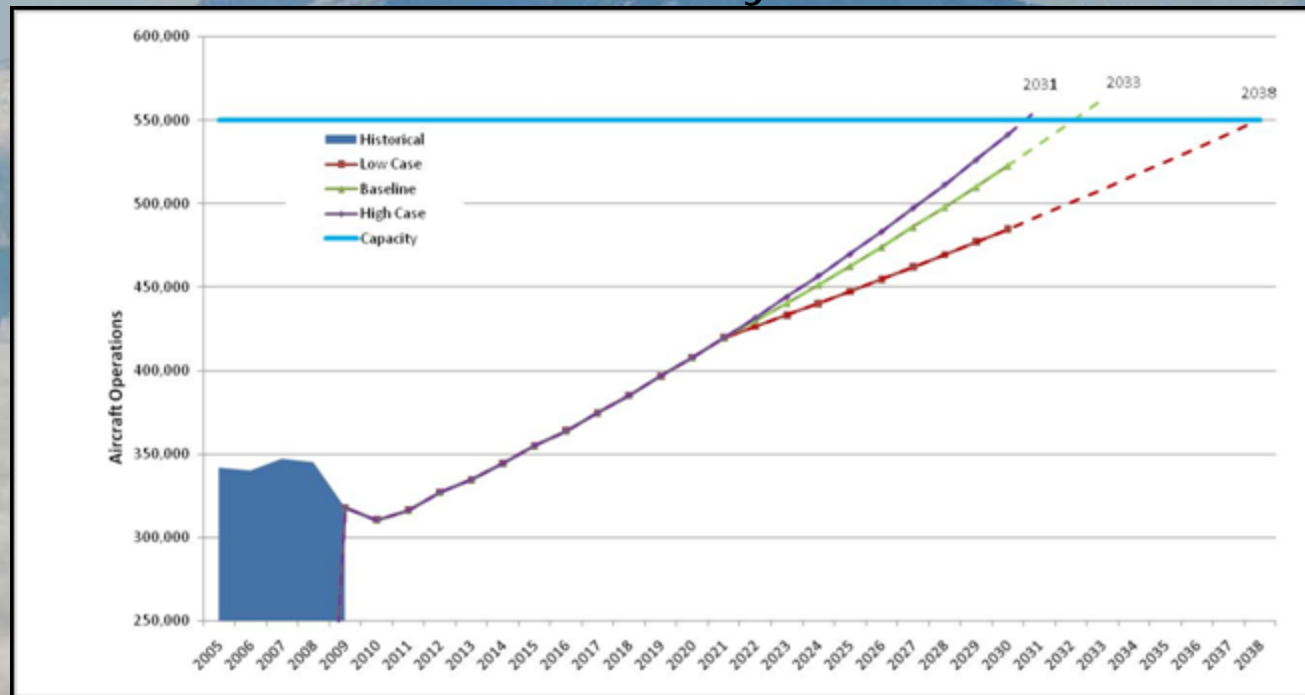
Long-Range Forecasts

- Requests have been made to look at long-range (>10 years) noise levels and operating levels
- This work is being done outside the scope of the Part 150 study because the Port recognizes the value in providing this information
- **Forecast scenarios for 2030**
 1. Positive economic situation for airlines
 - Increased operations
 - Newer aircraft
 2. Less positive economic situation for airlines
 - Fewer operations
 - Airlines defer purchasing newer aircraft
 3. Under each of these conditions, when does the airport reach 550,000 operations?

Long-Range Forecasts

Forecasting and Noise Analysis for 2030

- **Noise analysis**
 - Reflect changes in operating levels and fleet mix
 - Will assume no changes in the airfield
 - Can help to inform the long-term land use planning efforts in the Part 150 study



Hush House Evaluation

- Hush House Facts:
 - A Hush House is a term used for an enclosed, noise suppressed, aircraft engine test facility
 - Typically consists of 3 walls that deflect jet blast
 - Hush House will typically reduce single event noise by 15-20 dB



Hush House Evaluation

- Hush House Facts:
 - Typical Hush Houses cost \$3 - \$6 million
 - Site factors determine exact costs
 - Number of factors to consider when siting a Hush House
 - What aircraft are you designing for (size/height)
 - Orientation (based on prevailing wind)
 - Accessibility
 - Cost for site prep
 - Jet blast/other object free surfaces



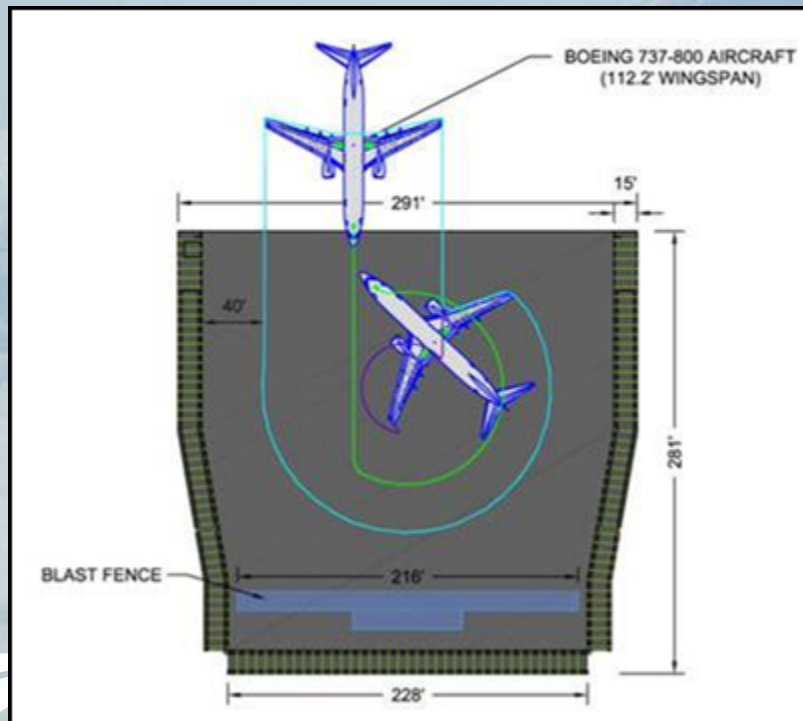
Hush House Evaluation

- Assumptions:
 - Prevailing winds from south/southwest
 - The design aircraft is the Boeing 737-800
 - Would accommodate 96% of engine run ups
 - User preference is to allow aircraft to power in/out
 - Height would be approximately 35 - 45 feet

- Evaluations:
 - 2 types of hush house facilities
 - Typical 3-sided
 - Circular (only one in operation)
 - Evaluated 6 sites on airfield
 - Detailed noise evaluation still being completed

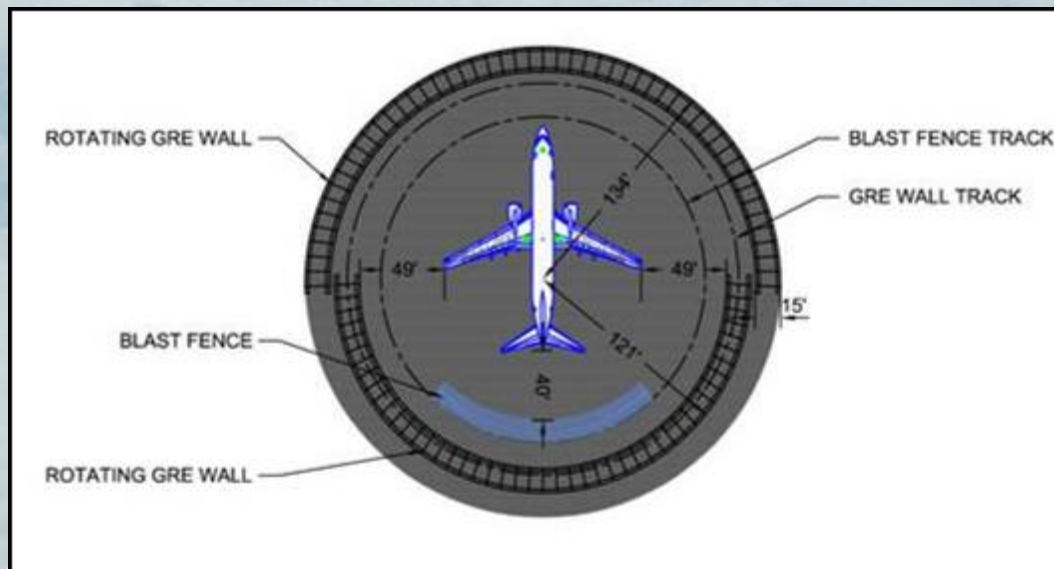
Hush House Evaluation

- 3-Sided Facility
 - Fixed orientation with the wind
 - SEA-TAC facility would need to open to the south so that aircraft would face the south during run up
 - Slightly larger footprint than circular
 - Popular design (Portland, Chicago, Indianapolis...)



Hush House Evaluation

- Circular Facility
 - Allows for operation with any wind direction
 - Smaller physical footprint than 3-sided facility
 - Requires clear areas on two sides for aircraft to pass through or a tug operation
 - Only one built (in France for the A380)
 - Costs for maintenance are higher than 3-sided facility



Hush House Evaluation



Update on Public Outreach

□ Next Public Workshop:

- *Saturday, March 19, 2011* (tentative)
- SEA-TAC Airport – Arrivals Hall
- 10:00 am – 4:00 pm
- Open house format with topic-based stations
- Airport tours

Questions/Answers