

Robert L. Miller

MEETING
#7

From: Michael Musca [mmm@ci.portland.me.us]
Sent: Wednesday, January 29, 2003 8:48 AM
To: michael.j.wood@faa.gov
Cc: Robert L. Miller
Subject: Re: Feb 5th Noise meeting (ATCT contact)

Mike (Wood) - Thanks. 6PM in our conference room. Here's the proposed agenda and Bob Miller's notes (HMMH noise study consultant). - Michael Musca

Bob - The acting tower manager is Mike Wood, whose email address is michael.j.wood@faa.gov
Pls contact Mike if you need answers to ATCT questions. His phone is 207.775.0602 (office)
- Michael Musca

AGENDA:

1. Review discussion of major noise concerns
2. Present examples of major concerns, potential mitigation measures, and possible benefits:
 - a. Overflights of South Portland and Cape Elizabeth
 - b. Low altitude flights over the same areas
 - c. Federal Express flights
 - replacement options for 727s
 - rescheduling of night operations
 - d. Other nighttime operations
 - e. Preferential runway enhancements
3. Next meeting -- Future land use and preventative land use strategies
4. Scheduling of first public workshop

>>> "Robert L. Miller" <rmiller@hmmh.com> 01/24 4:47 PM >>>

Hi Michael --

We are working on examples of several mitigation ideas that address some of the "most popular" suggestions that came out of the last meeting. Our approach is to take an issue, find examples in the radar data to illustrate the issue, consider means for altering the existing condition, then re-model the 2007 base case to reflect the difference. As an example, for "low flights over neighborhoods" we are looking at flight tracks for arrivals and departures separately, plotting the tracks to illustrate arrivals and departures over Cape Elizabeth, estimating the frequency of occurrence from the radar data, coming up with a mitigation concept such as a SID or ATC vectoring for departures so that IFR aircraft maintain runway heading for 3 to 4 miles before turning on course, then re-modeling the 2007 base case to eliminate "early" turns by those aircraft.

We are trying to finish 4 to 5 scenarios like this, focusing on flights over S. Portland and Cape Eliz., any "low" altitude activity, Federal Express flights, preferential runway conformance. With each identified problem we are trying to present examples (plots or other forms of data) showing their occurrence, judgment as to whether something can be done about them or not, a revised set of contours and calculations of noise at specific points outside the contours, and a comparison of the new noise to the old noise to determine the degree of improvement or increase.

My intent is to have further conversations with Ed prior to the meeting to see whether any of the ideas have merit from his perspective, and identify what problems he sees.

I will try to send out a more complete agenda on Monday for distribution to the NWG.

As for the S. Portland Noise Ordinance, we are compiling some run-up data from other projects which I am hoping to compare to the limits in the ordinance to determine how onerous they might be. I think we should discuss our findings before I finalize a letter for your approval.

Please consider me as the primary contact going forward, though you might be interested to know that we got Ben Raemer (the person who was originally to have heavy involvement on

the job) to come back and work for us; he's now helping me directly with your project again.

Hope this helps give you an update. I will plan to talk to you directly no later than Tuesday next week.

Bob

Portland International Jetport FAR Part 150 Update

Part 150 Noise Advisory Committee Meeting

5 February 2003

Harris Miller Miller & Hanson Inc.

In association with:

Vanasse Hangen Brustlin, Inc.
Simat, Helliesen & Eichner, Inc.
Innovative Resource Group, Inc.

- **Aircraft Operational Measures**
- **Land Use Measures**
- **Administrative Measures**

Noise Problems Identified During December 4th Meeting



<http://www.hmmh.com/>

Group	Problem	Number of Votes
Air Traffic Control/Procedures	Low Flights Over Neighborhoods	6
Controllable by Operator/Airlines	Federal Express Flights	6
Controllable by Operator/Airlines	Times of Arrivals and Departures (10pm-7am)	6
Controllable by Operator/Airlines	Old Equipment	5
Air Traffic Control/Procedures	Lack of Formal Noise Abatement Program	4
Air Traffic Control/Procedures	Flights Over Islands and Cape Elizabeth	3
Air Traffic Control/Procedures	Short Cuts on Harbor Visual Approach and Departures by Problem Aircraft	3
Air Traffic Control/Procedures	Compliance with Procedures	2
Communication/Education	Lack of Consequences	2
Controllable by Operator/Airlines	Military Operations	2
Air Traffic Control/Procedures	Aircraft Profiles (Routes and Altitudes)	1
Air Traffic Control/Procedures	Inadequate Fanning	1
Air Traffic Control/Procedures	Lack of Use of Harbor Visual Approach During Hours of Darkness	1
Air Traffic Control/Procedures	Safety	1
Communication/Education	Lack of Public Understanding	1
Communication/Education	Management Attitude	1
Controllable by Operator/Airlines	Stakeholder Ambivalence	1
Land Use	Lack of Control of Airport and Residential Development	1
Political and Economic Issues	Lights on 295	1
Political and Economic Issues	Trying to do too many things at Airport (GA, Passenger, Cargo)	1
Air Traffic Control/Procedures	Lack of Use of Preferential Runway	
Communication/Education	Evaluation of Complaints	
Controllable by Operator/Airlines	Delayed Arrivals	
Controllable by Operator/Airlines	Runups -- PreFlight and Maintenance	
Controllable by Operator/Airlines	Seasonal Use of Airport	
Controllable by Operator/Airlines	Use of Thrust Reverse	
Controllable by Operator/Airlines	Vibration	
Land Use	Building Codes	
Land Use	Downtown Airport (location)	
Land Use	On Airport Trucking Facility	
Land Use	Zoning	
Miscellaneous	Health Issues	
Miscellaneous	Lack of Criteria to Judge Effectiveness	
Miscellaneous	Noise Impacts from Unique Topography	
Miscellaneous	Weather	
Political and Economic Issues	Funding for Solutions	
Political and Economic Issues	Impact on Property Values	
Political and Economic Issues	Lack of Contract Review	
Political and Economic Issues	Lack of Political Control	



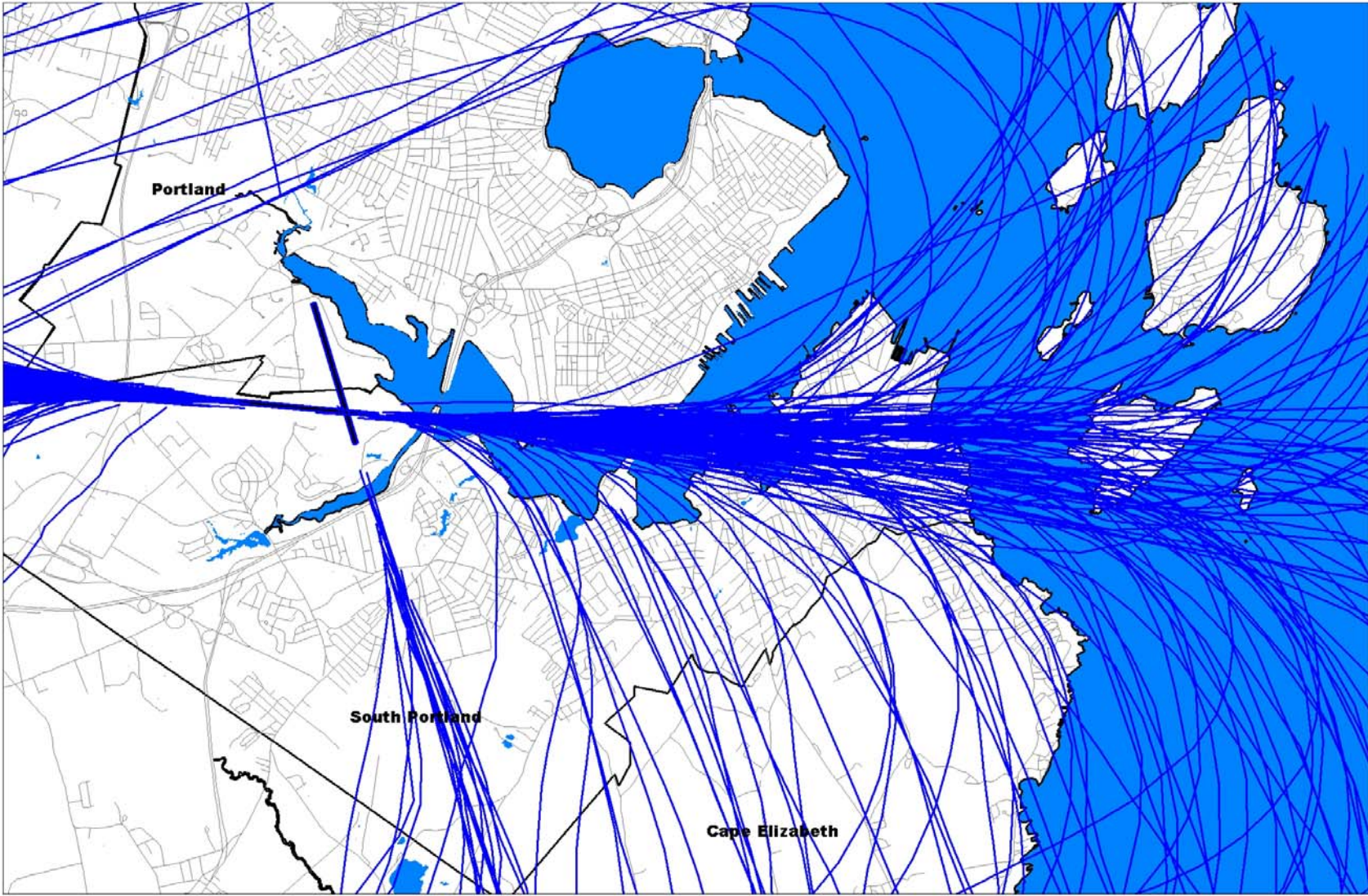
Analyses of Potential Operational Measures

- **Identify examples of stated noise issues**
 - Use radar data when possible
 - Quantify occurrences when possible
- **Develop potential mitigation concept(s)**
- **Model effectiveness of each measure**
- **Report results in terms of:**
 - DNL contours
 - DNL values at specific points
 - Single event noise levels at specific points

Issue: Departures Over Cape Elizabeth and Islands

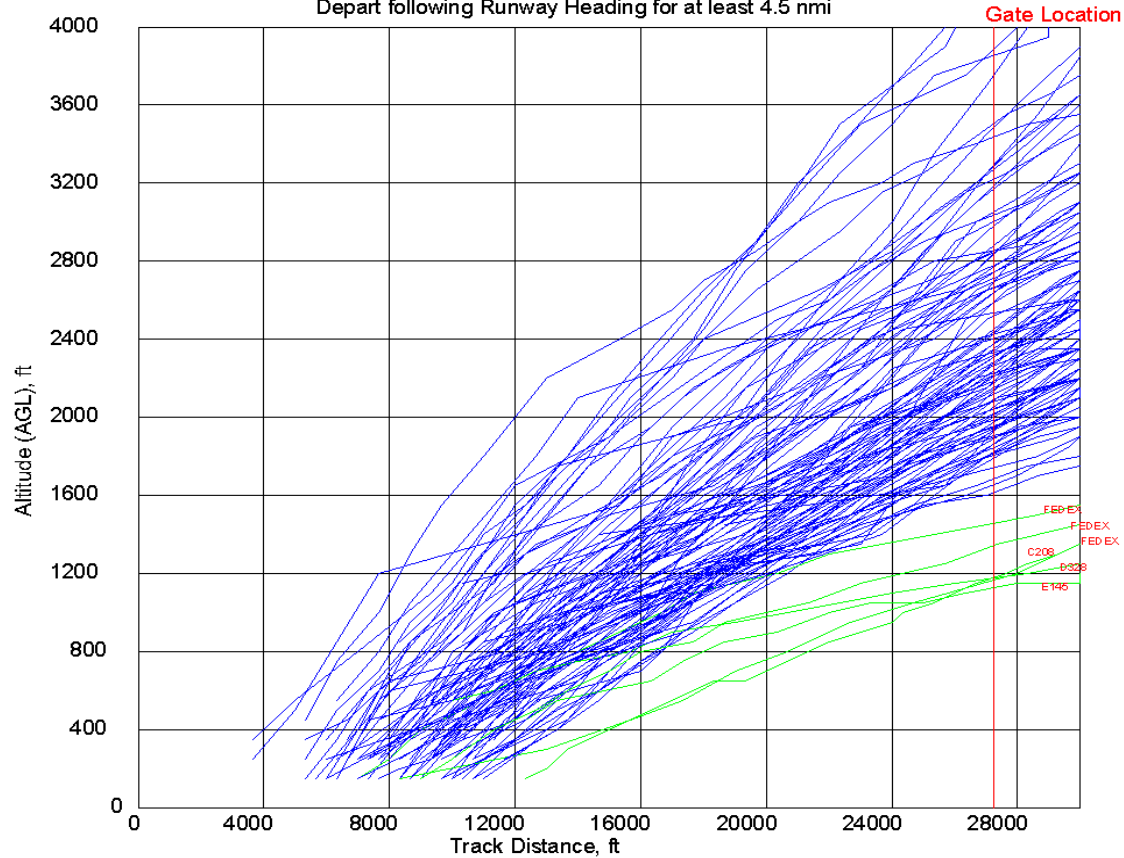


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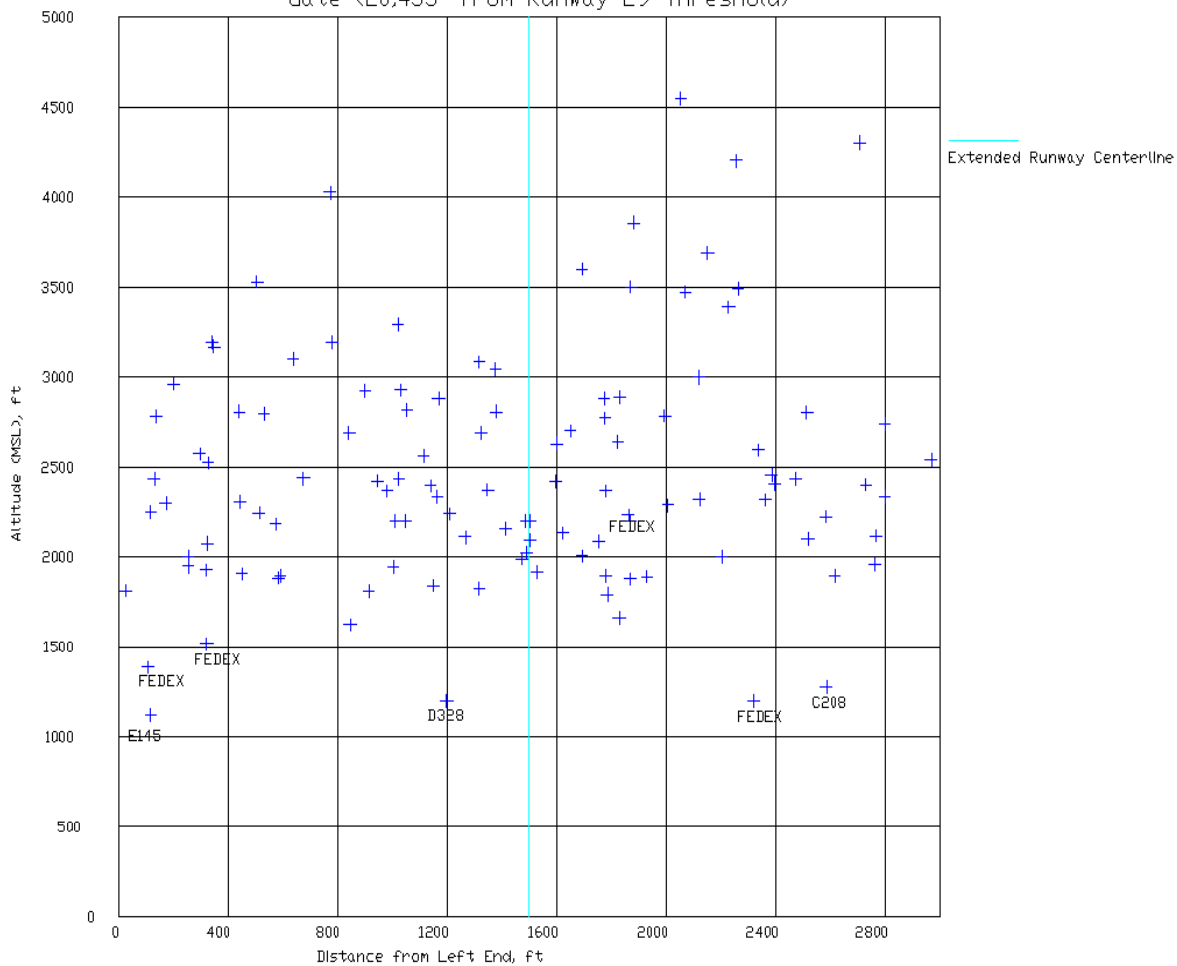
Related Issue: Low Flights Over Neighborhoods

Commercial Departures from Runway 11
Depart following Runway Heading for at least 4.5 nmi

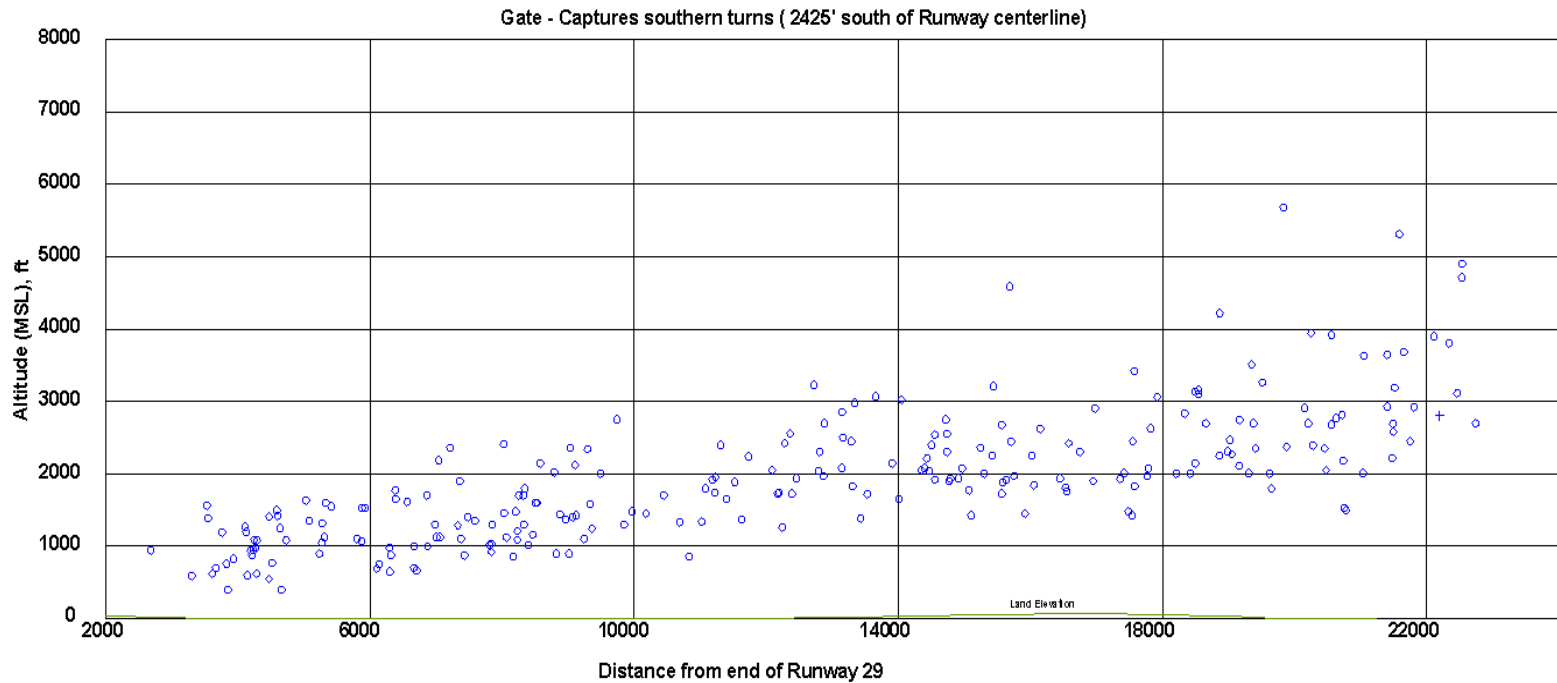


Runway 11 Departures Through Extended Centerline Gate

All Commercial Departures from Runway 11
Gate (20,433' from Runway 29 Threshold)



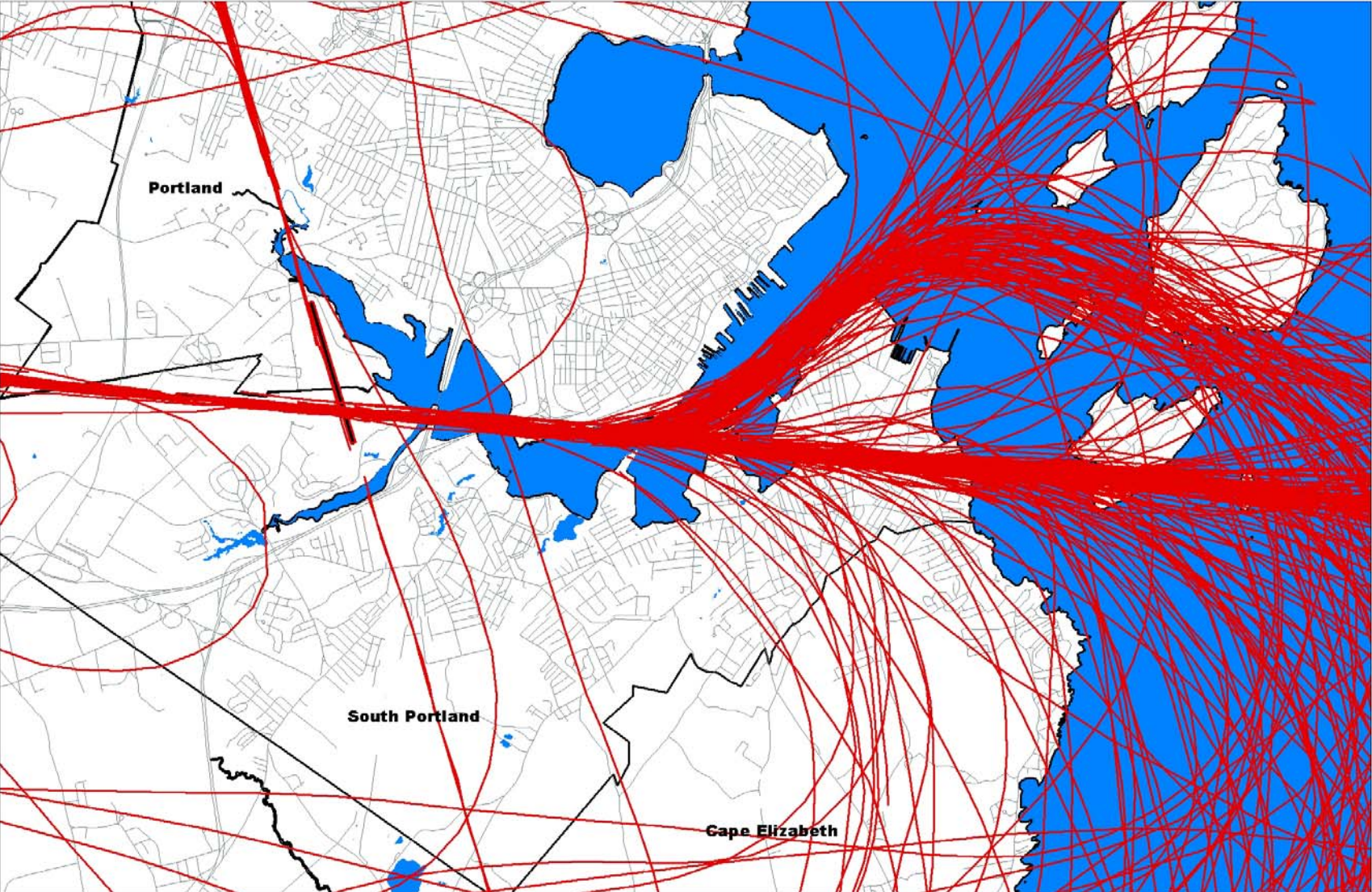
Runway 11 Departures Making Right Turns After Takeoff



Issue: Arrivals Over Cape Elizabeth and Islands

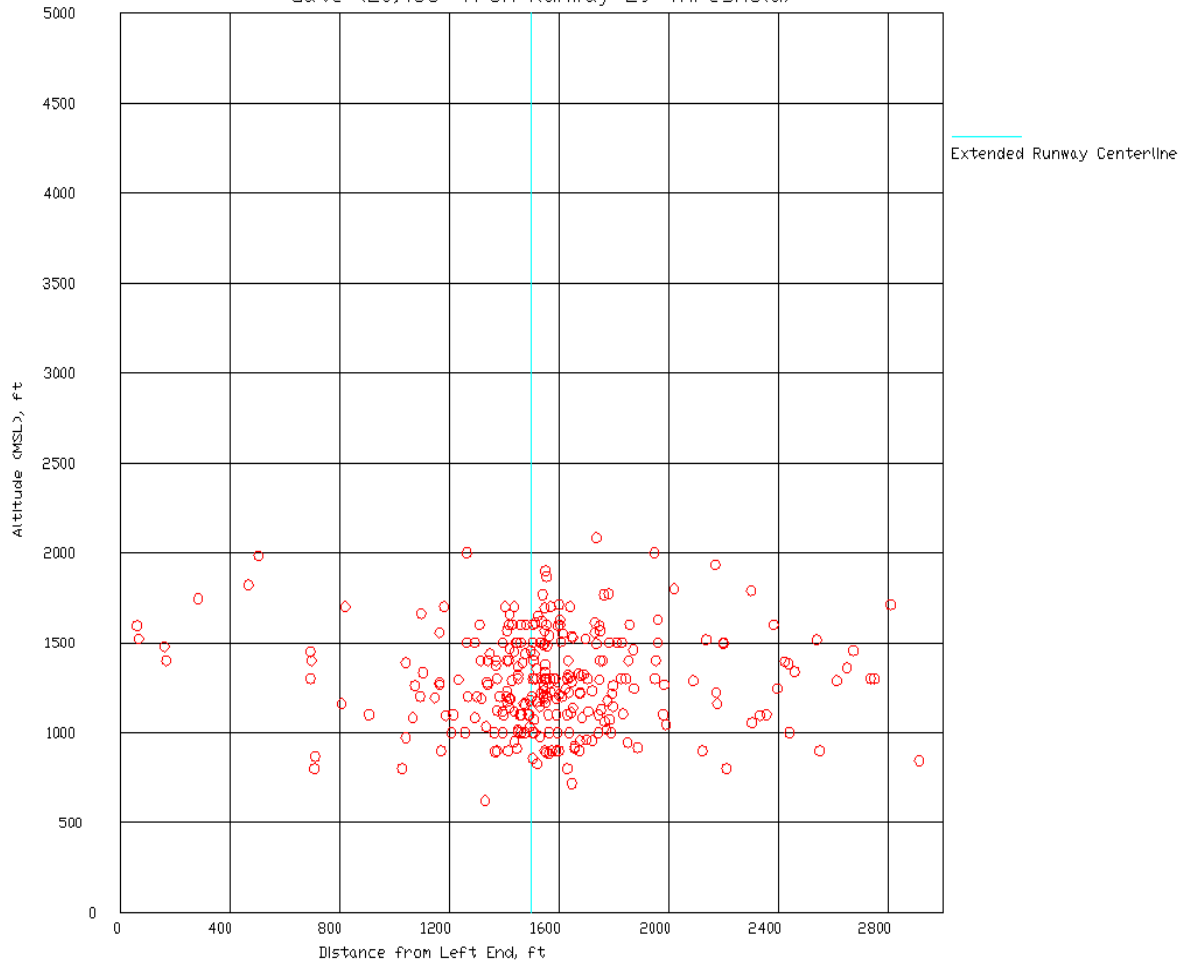


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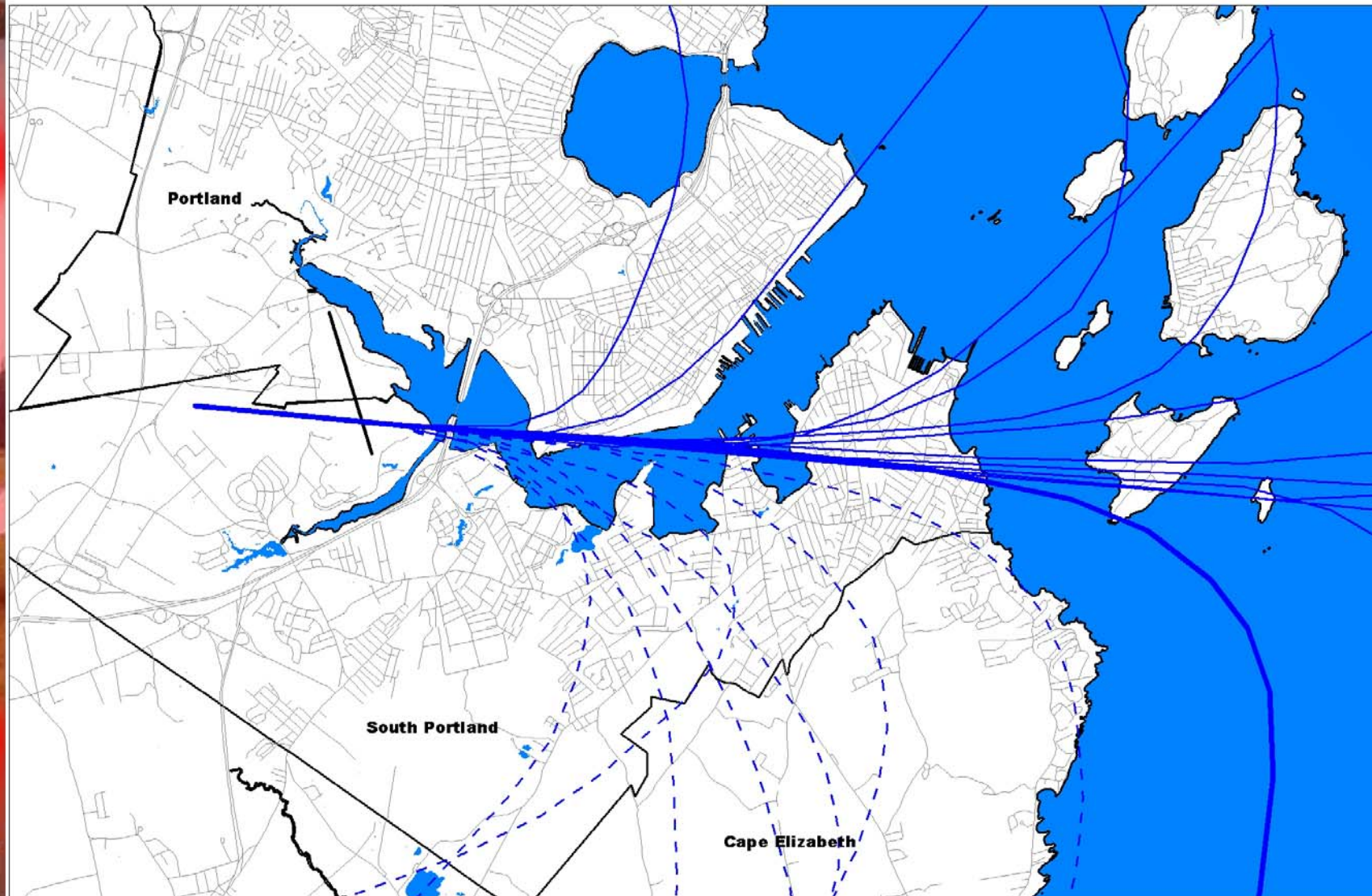


Runway 29 Arrivals Through Extended Centerline Gate

All Commercial Arrivals to Runway 29
Gate (20,433' from Runway 29 Threshold)



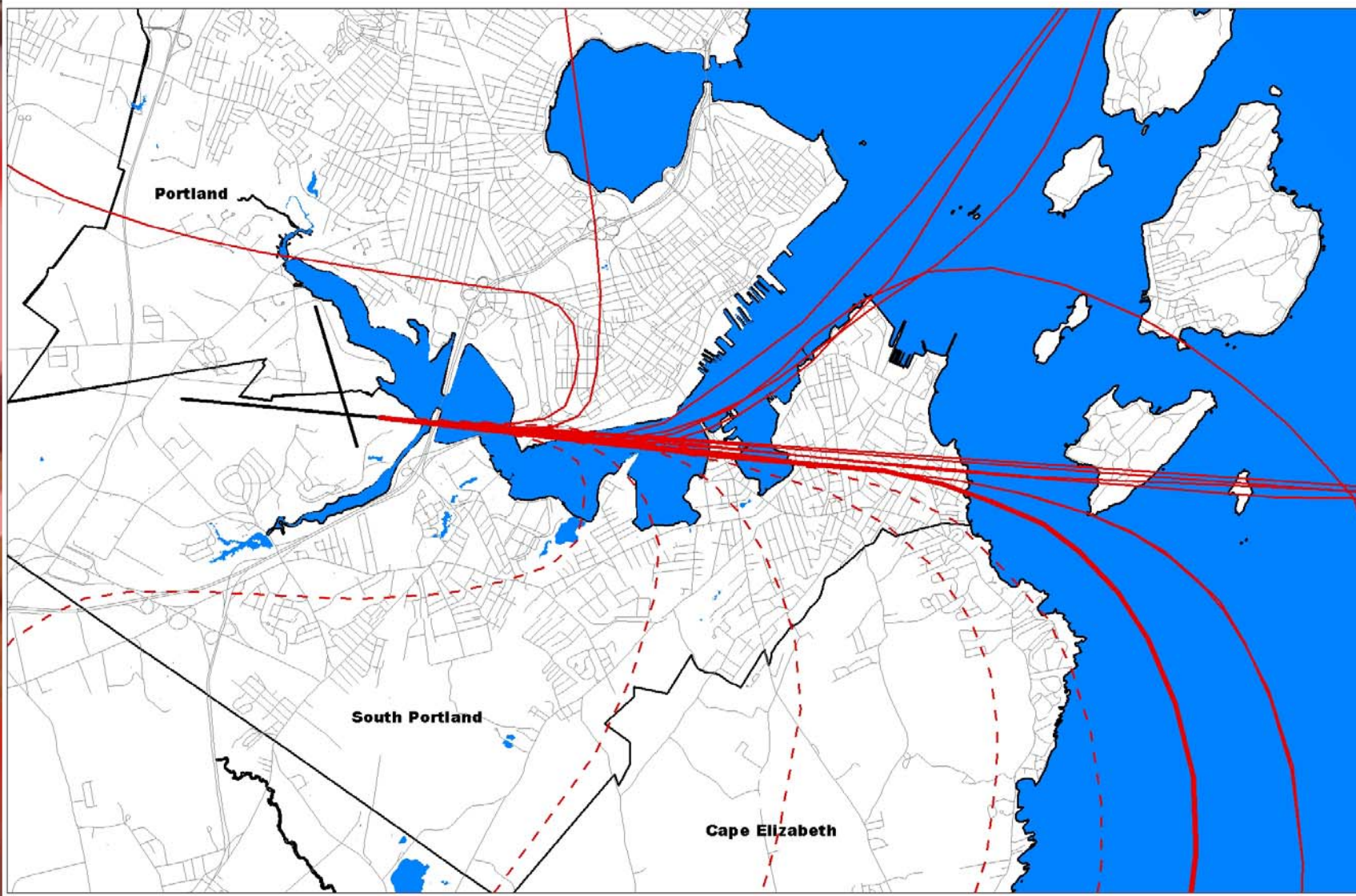
Potential SID or RNAV Departure Procedure from Runway 11



Potential RNAV Approach to Runway 29



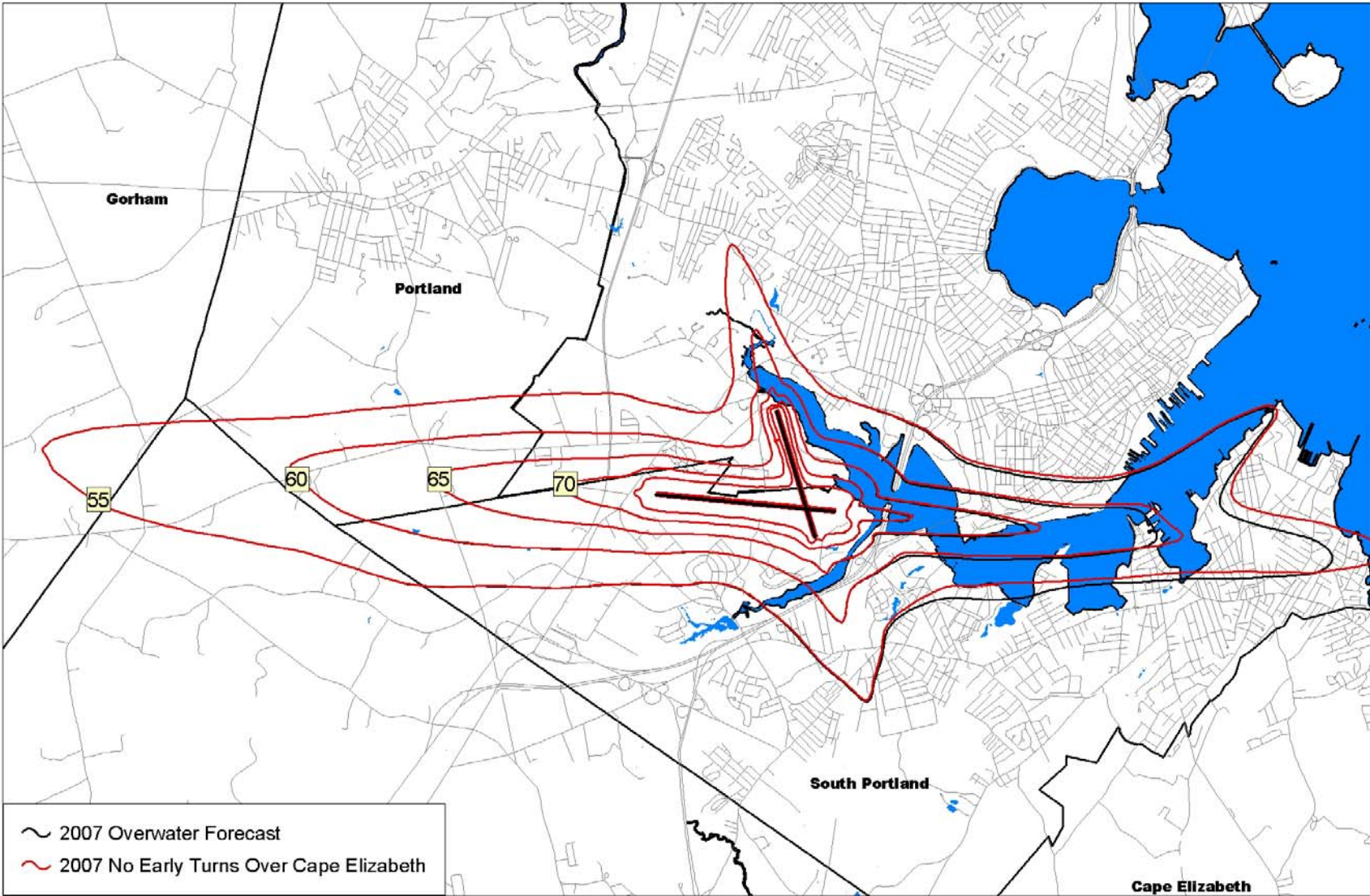
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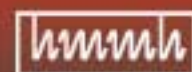
DNL Contours with No Early Turns Over Cape Elizabeth



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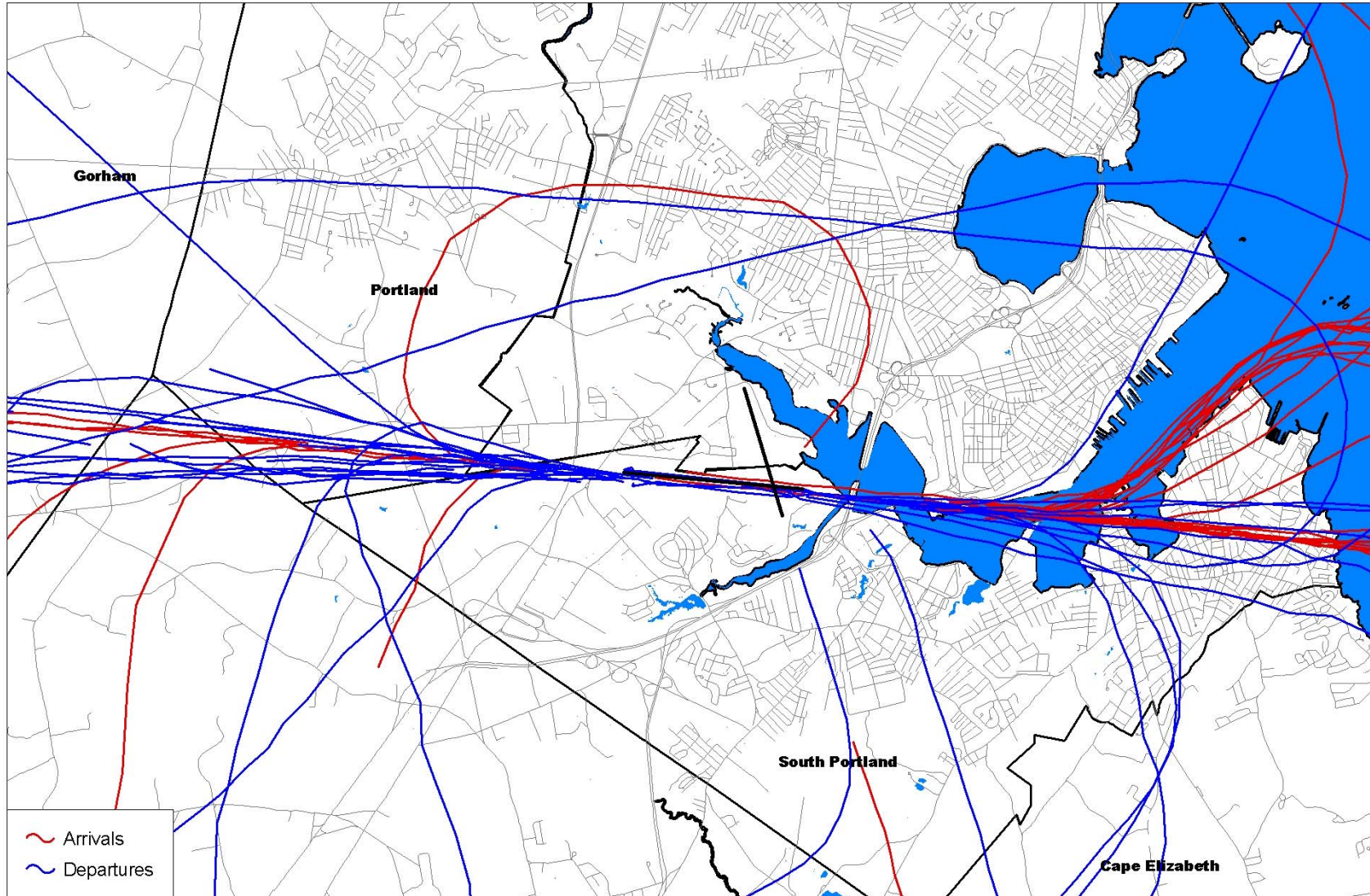
Specific Points for Noise Analyses



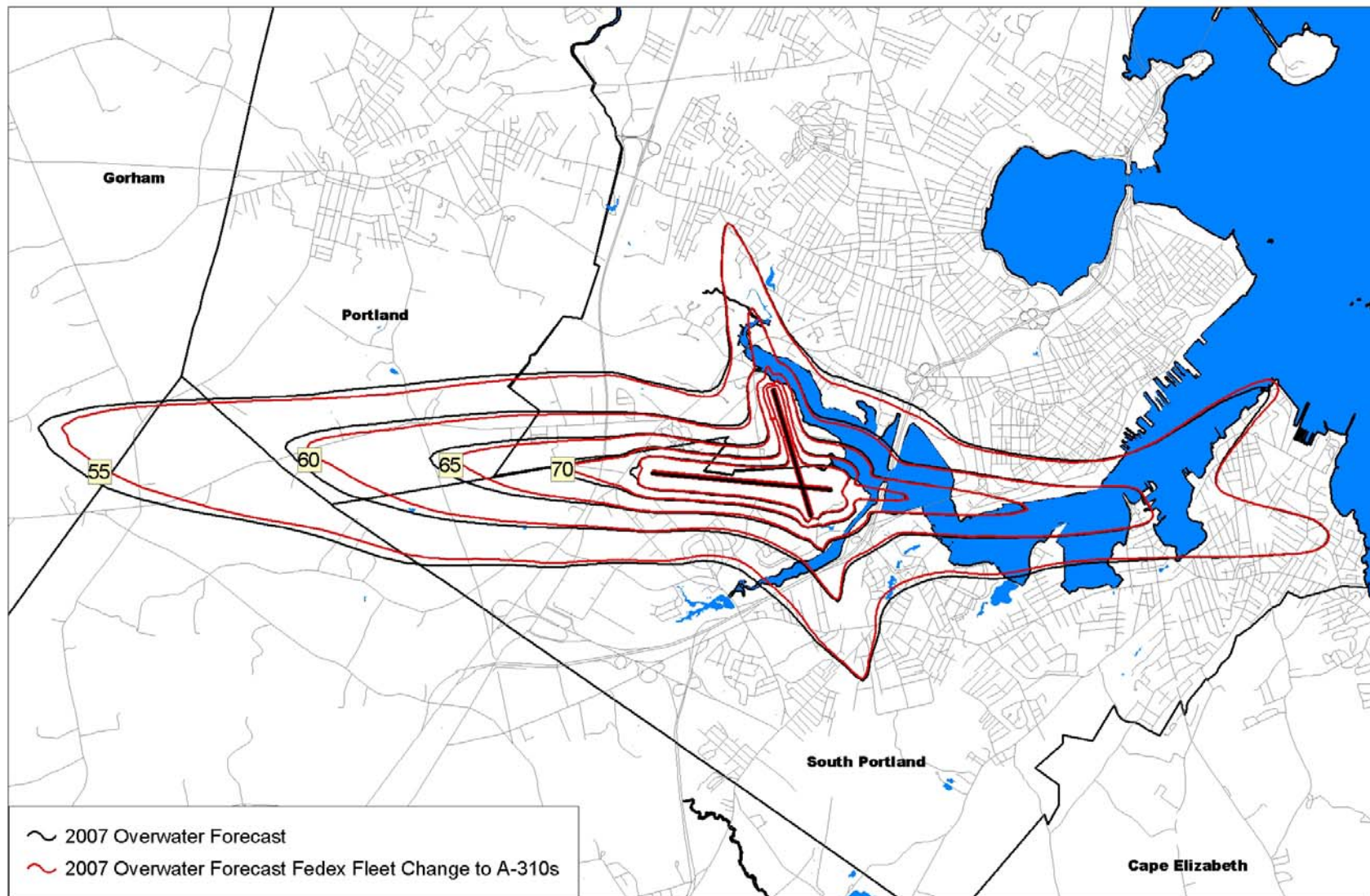
Changes in Noise at Specific Points (No Early Turns to East)

COMPARISON OF DNL AND SEL NOISE METRICS FOR DIFFERENT MITIGATION MEASURES							
Area	Site No.	DNL for 2007			Maximum SEL for 2007		
		Baseline	No Early Turns to East	Change in DNL	Baseline	No Early Turns to East	Change in SEL
Westbrook	33	57.2	57.2	0.0	102.0	102.0	0.0
Stroudwater	12	60.0	60.0	0.0	105.2	105.2	0.0
Western Promenade	18	57.5	58.1	0.6	104.6	105.2	0.6
Ferry Village	27	55.4	55.6	0.2	100.2	100.6	0.4
Peaks Island	36	46.5	47.1	0.6	92.0	92.9	0.9
Fort Williams Park	37	44.1	40.7	-3.4	91.1	88.1	-3.0
Cape Elizabeth	29	46.3	43.6	-2.7	93.7	90.9	-2.8
Courtland Court	38	65.9	65.9	0.0	111.6	111.6	0.0

Issue: FedEx Flights



DNL Contours for FedEx Fleet Change

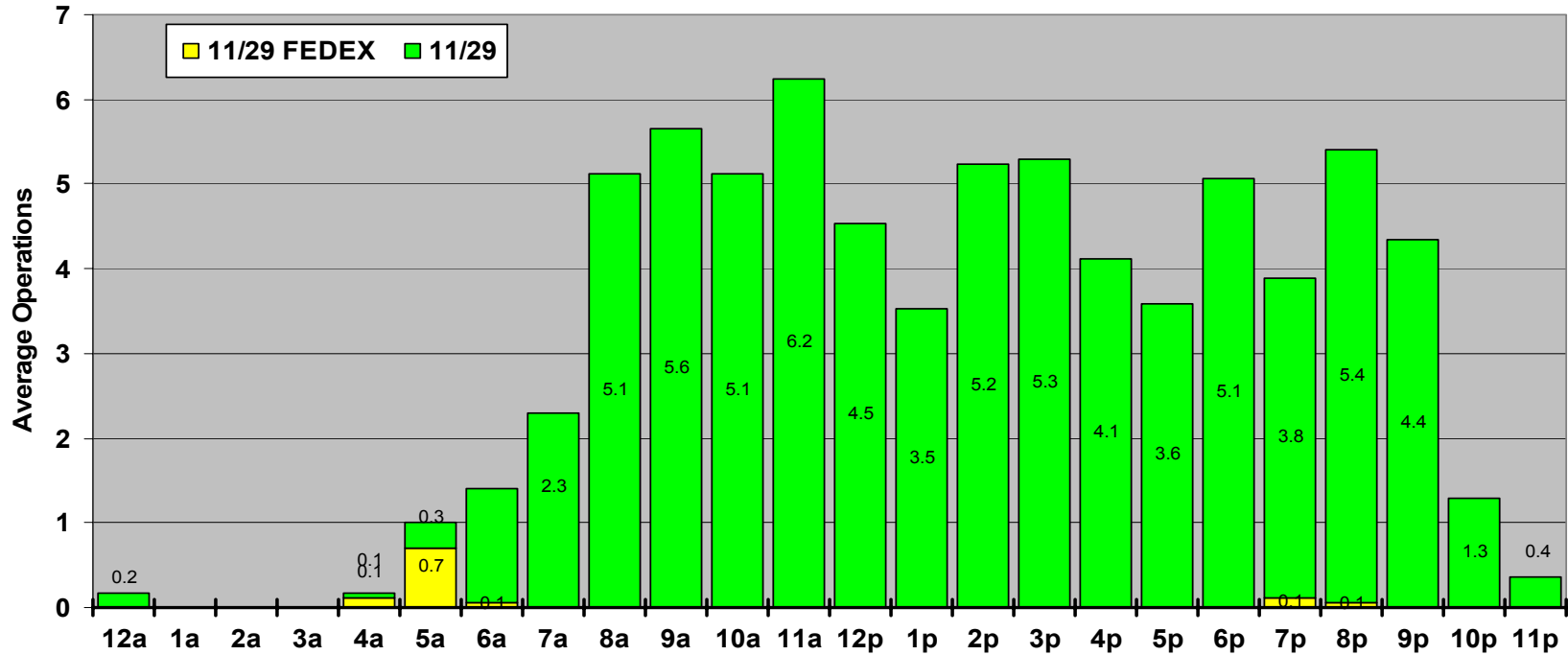


Changes in Noise at Specific Points (FedEx Fleet Change)

COMPARISON OF DNL AND SEL NOISE METRICS FOR DIFFERENT MITIGATION MEASURES							
Area	Site No.	DNL for 2007			Maximum SEL for 2007		
		Baseline	FedEx A-310s	Change in DNL	Baseline	FedEx A-310s	Change in SEL
Westbrook	33	57.2	56.4	-0.8	102.0	101.1	-0.9
Stroudwater	12	60.0	60.0	0.0	105.2	105.2	0.0
Western Promenade	18	57.5	57.1	-0.4	104.6	103.9	-0.7
Ferry Village	27	55.4	55.6	0.2	100.2	100.2	0.0
Peaks Island	36	46.5	46.2	-0.3	92.0	91.7	-0.3
Fort Williams Park	37	44.1	43.8	-0.3	91.1	90.6	-0.5
Cape Elizabeth	29	46.3	46.1	-0.2	93.7	93.5	-0.2
Courtland Court	38	65.9	65.1	-0.8	111.6	110.7	-0.9

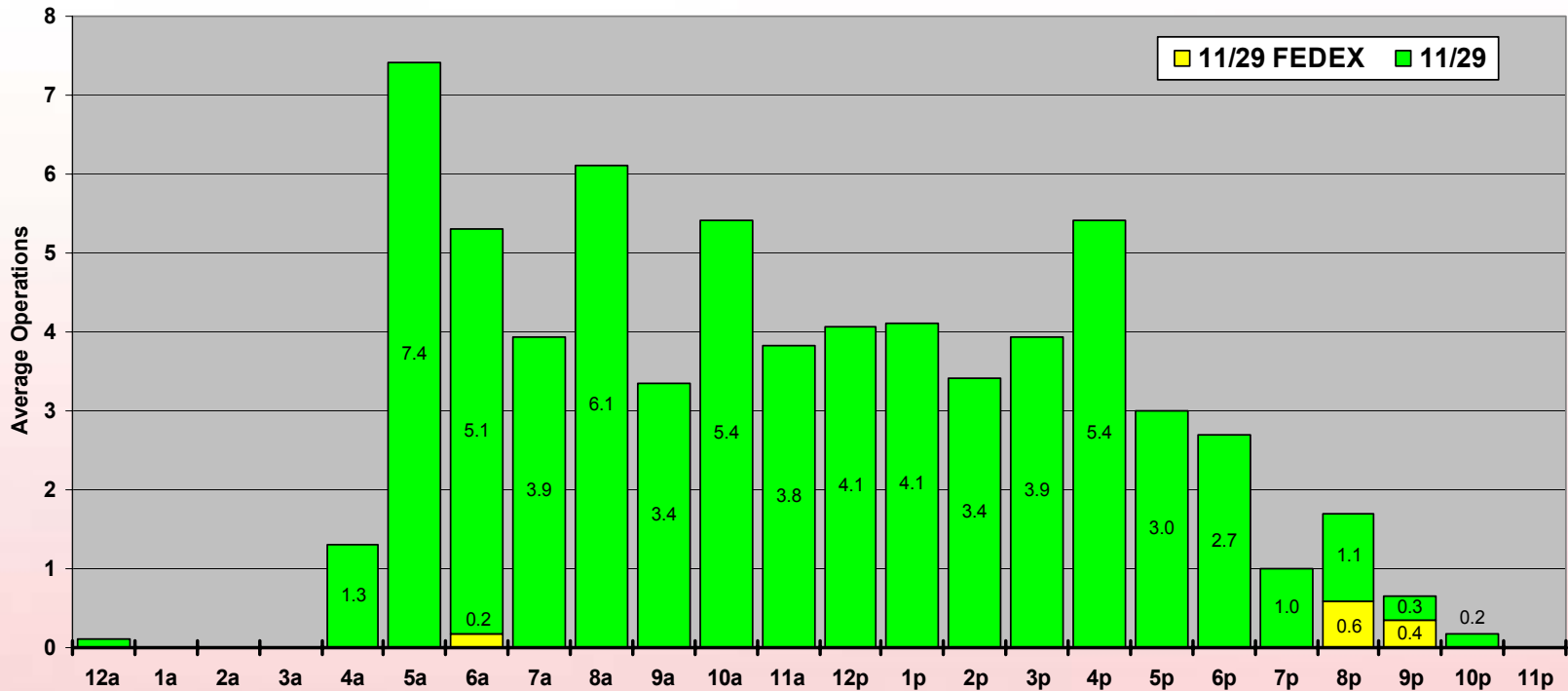
Related Issue: FedEx Times of Operation (Arrivals)

Average Arrivals Per Hour

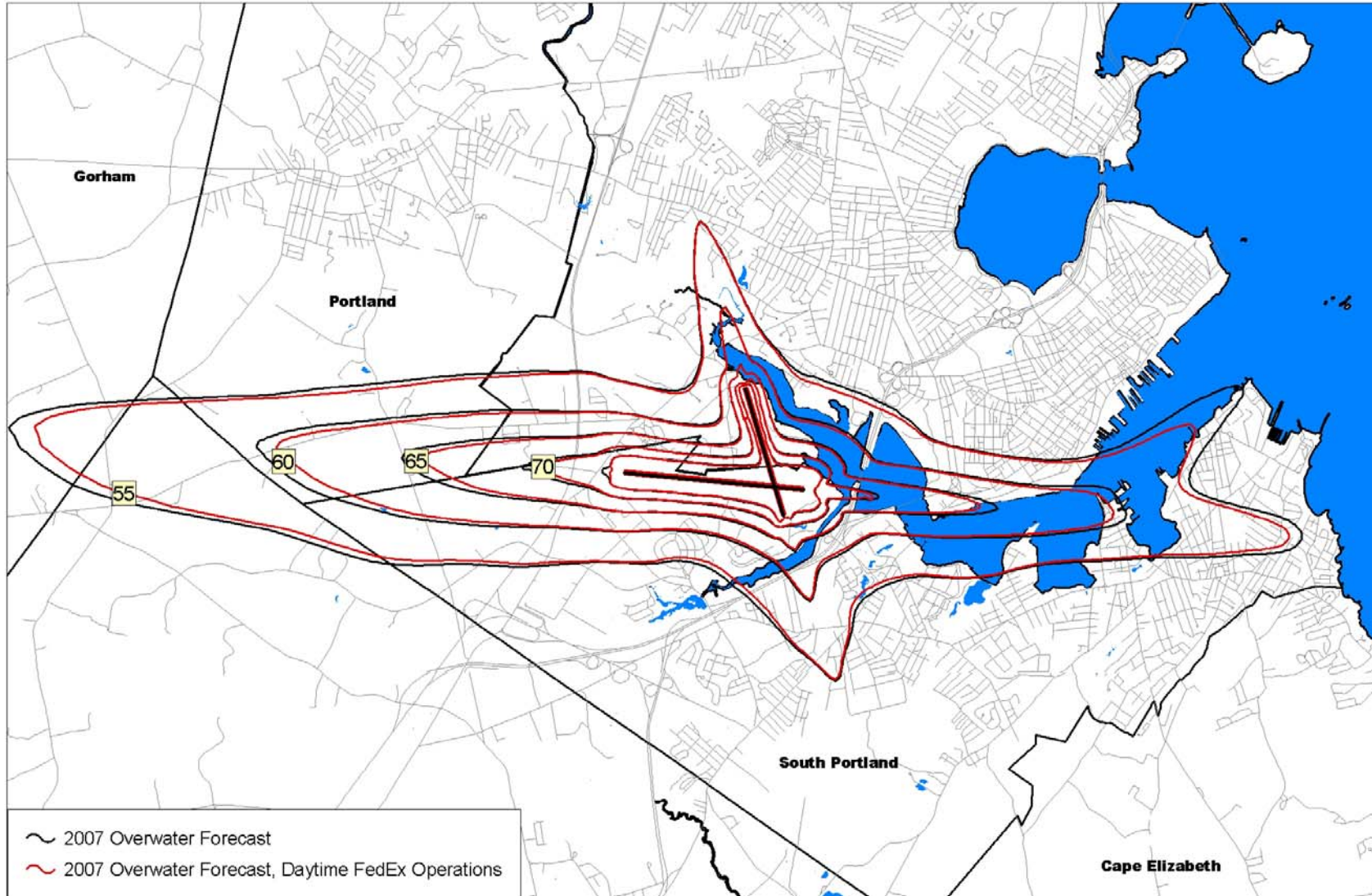


Related Issue: FedEx Times of Operation (Departures)

Average Departures Per Hour



DNL Contours for Rescheduled FedEx Operations



Changes in Noise at Specific Points (Rescheduled FedEx Flights)

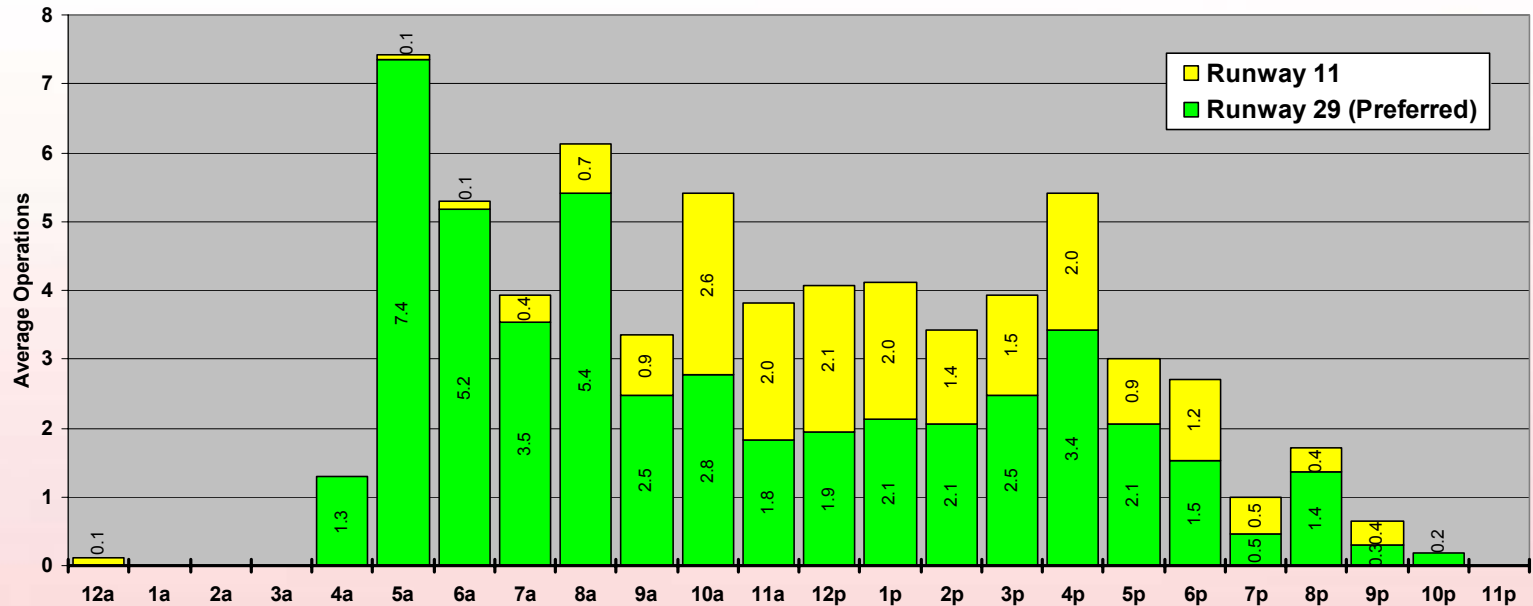
COMPARISON OF DNL AND SEL NOISE METRICS FOR DIFFERENT MITIGATION MEASURES							
Area	Site No.	DNL for 2007			Maximum SEL for 2007		
		Baseline	No Nighttime FedEx Flights	Change in DNL	Baseline	No Nighttime FedEx Flights	Change in SEL
Westbrook	33	57.2	56.6	-0.6	102.0	101.9	-0.1
Stroudwater	12	60.0	60.0	0.0	105.2	105.2	0.0
Western Promenade	18	57.5	57.3	-0.2	104.6	104.6	0.0
Ferry Village	27	55.4	54.3	-1.1	100.2	100.1	-0.1
Peaks Island	36	46.5	45.3	-1.2	92.0	91.9	-0.1
Fort Williams Park	37	44.1	43.9	-0.2	91.1	91.2	0.1
Cape Elizabeth	29	46.3	46.2	-0.1	93.7	93.8	0.1
Courtland Court	38	65.9	65.5	-0.4	111.6	111.6	0.0

Issue: Night Operations by Other Operators

- **14 to 16 other night flights, including landing by Airborne Express hushkitted DC-9**
- **Except for Airborne Express, aircraft types include new Stage 3 737s, regional jets, and business jets, as well as small turboprops and props**
- **Most night flights are takeoffs from 5 to 7 a.m.**
- **The airport cannot prohibit this activity**

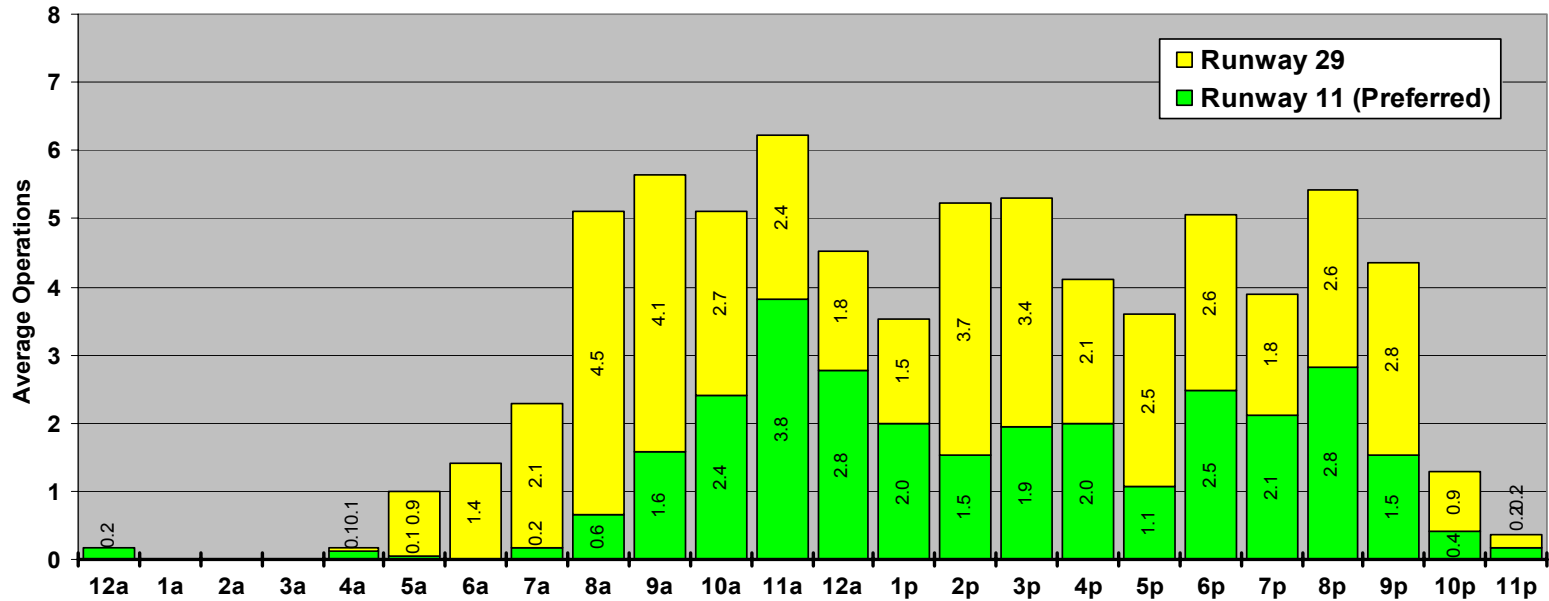
Issue: Lack of Use of Preferential Runway 29

Average Departures Per Hour



Issue: Lack of Use of Preferential Runway 11

Average Arrivals Per Hour



Preferential Runway Improvements

- **Radar data indicate preferred runways ARE being used effectively**
- **Any improvements are likely have minimal noise benefits**
- **ATCT Standard Operating Procedures and/or Tower Bulletins to be reviewed for possible refinements**

Other Operational Issues to be Addressed

- **Fanning:**
 - Is there a preference to increase or to decrease fanning?
- **Military flights:**
 - Should there be voluntary curtailment?
 - Should there be voluntary limits on times of day?
- **Run-up activities:**
 - South Portland is adopting Noise Ordinance that may affect new general aviation ramp area

- **Noise Advisory Committee:**
 - Future land use
 - Preliminary land use recommendations
 - Late-March
- **Public Workshop:**
 - Existing and forecast noise exposure and land use
 - Preliminary operational and land use elements of plan
 - Early-April
- **Draft Noise Exposure Map**
 - Immediately following Public Workshop



**Portland International Jetport Part 150 Noise Advisory Committee
Meeting 5
February 5, 2003 @ 6:00PM
Portland Jetport Conference Room**

I. Introductions

The meeting began at 6:10pm with sixteen (16) people present.

Name:	Organization Represented:
Anne Pringle	Western Promenade Neighborhood Association
Benjamin Raemer	HMMH
Bob Miller	HMMH
Darrell Rogers	City of South Portland
Dick Armstrong	Cape Elizabeth
Edchen Ferguson	Loveitt's Field, South Portland
Jeff Monroe	PDOT
Jeff Schultes	PWM
John Silva	FAA New England Region
Linda Boudreau	City Councilor, South Portland
Michael Musca	PWM
Michael Wood	(FAA) PWM Tower
Nathan Smith	City Councilor, City of Portland
Paul Ouellette	Portland
Peter Stanton	Loveitt's Field resident
Richard Doucette	FAA New England Region

II. Presentation and Discussion

Michael Musca started the meeting by handing out the meeting's agenda to all present participants. Bob Miller, (HMMH) started with his presentation on Future Mitigation Measures, which spurred the night's discussion topics.

Anne Pringle: Can we vector the aircraft from the south, around the airport at high altitude so they approach from the north? What is the percentage of different traffic directions?

Michael Wood: Concern with the amount of radar data used. 30 days is not enough to represent all of the airport operations through the different seasons, i.e. runway use and air carrier scheduling differences.

There was some group confusion over the HMMH “gate” graphics.

Group: Discussion of what SIDs (Standard Instrument Departures) are being used at this time. Why are aircraft turning to the south when taking off on runway 11, instead of going straight out, as the SID instructs?

Group to Michael Wood: How much control does PWM ATC have over the general traffic flow into PWM from Manchester/Concord/Boston?

Answer to above: BOSTON CENTER controls the airspace surrounding the Jetport. The Jetport is an uncontrolled airport from 12 AM to 545 AM. BGR (Bangor) Flight Service provides advisory services during these hours. Aircraft call 120.9 and communicate to BGR AFSS stating their clearance request. BGR AFSS calls Boston Center forwarding the pilot's request. Boston Center tells BGR AFSS what clearance to issue. BOSTON CENTER IS THE CONTROLLING FACILITY.

Anne Pringle: How do aircraft get clearance to take off when the ATC tower is closed?

Michael Wood: Explains the procedure to the above question.

Group: Can Boston Center issue a SID in the normal departure clearance to aircraft departing after the tower is closed? Why don't they do this now?

John Silva: Explained to group how the after-hours departure clearances work. (PDR)

Nathan Smith: Can we get Boston Center to change the PDR for PWM to include a SID? How do we get this done?

Edchen Ferguson: What is the minimum change in DNL that a community can detect? (Bob Miller explains; approximately 3dB)

Anne Pringle: Should we begin testing the procedures recommended by HMMH for mitigation?

Peter Stanton: When sitting in a home office over a 24-hour period total exposure (DNL) becomes easier to detect. SELs are not as important as in homes where people are in and out all day.

Anne Pringle: What would contour look like if only FedEx was used? Can we represent partial DNL? Would like an explanation of the FedEx schedule. Can FedEx schedule be altered?

Group: What is the noise difference between a Boeing 727 used by FedEx presently, and an Airbus A310 substituted in the HMMH mitigation case?

Peter Stanton: Would high or low frequency noise be harder to mitigate? (Bob Miller says low frequency is much harder to mitigate.)

John Silva: Explains the difference between high and low frequency noise to group.

Group: regarding the HMMH mitigation suggestion of changing the FedEx fleet “Are we dealing with both arrivals and departures, or just one?”

Nathan Smith: Thrust = Noise. What is the relationship; if one goes up does the other necessarily go up?

Anne Pringle: There was talk about FedEx moving to Sanford, ME Airport. Update as to that situation? When was the last FedEx land lease signed? (How about Operator Agreement?)

Jeff Monroe: Answered to the above question. Explained the FedEx lease situation. (Jeff Schultes helped in giving specific lease dates.)

Anne Pringle: What can be done about extremely low flights over neighborhoods at very early times (2am), which have been caused by bad weather? Why can't aircraft wait until storm clears, or an appropriate time comes?

Group: Can we use incentive to Mitigate noise? (Peak-hour pricing?)

Jeff Monroe: Explained PWM's stance on the incentives, and where they stand on the regions effort in the noise mitigation measure i.e. Boston.

John Silva: Explained the FAA stance on pricing for environmental mitigation. Is this considered a use restriction? (Part 161: can this be done?)

Anne Pringle: What about discounts, instead of price increases? Can we adjust layover times for environmental mitigation?

Peter Stanton: If fanning is reduced to mitigate noise can sound insulation be used to mitigate the noise?

Nathan Smith: We need a process to deal with fanning. (Discussion with Pros and Cons.) Is it better to subject a wider range of people to fewer over-flights, than have fewer people subjected to a concentration over a smaller area?

Group: Moving noise is not the solution. We should try and mitigate the noise we have first.

Peter Stanton: Can PWM get money from another source, cutting out the regulations imposed by the FAA for using AIP money?

Jeff Schultes: Can we come up with another “low density” corridor to help flights who can't use the “Harbor Visual?” (Alternate visual path...possibly from south)

Anne Pringle: Are aircraft deviating from their intended flight path when weather is not an issue? Are aircraft actually trying to reduce their environmental impact?

Bob Miller: Explained to group how thrust/flap or level-off procedures work, and are they effective in mitigating noise.

Edchen Ferguson: Asked for an explanation of the South Portland noise ordinance.

Linda Boudreau: Gave group an explanation of South Portland Noise Ordinance, and gave an update on the progress of the Ordinance in the Portland city council.

Dick Armstrong: Boeing 727, Boeing 737-200, and MD-80 are the reason we are here. (Noise Critical Aircraft) We should focus on these aircraft.

Nathan Smith: Has anyone met with military command to adjust military flight paths?

Jeff Schultes: Explained prior meetings with military command, and relationship PWM has with them.

Michael Wood: Explained to group the aircraft and procedures the military use. Also, the P-3 touch-n-go pattern. (Can not go below 500')

Anne Pringle: We should have every military flight flowing the Harbor Visual.

Paul Ouellette: Can other run-up activities be altered to reduce noise?

Paul Ouellette: There has been lots of talk about lateral mitigation. What can be done about vertical adjustment of aircraft?

III. Next Meeting

The next Noise Advisory Committee meeting is scheduled for **March 19, 2003 at 6 p.m.** in the Portland International Jetport Conference Room.

IV. Public Workshop Discussion

There was a brief discussion on the date and format of the contracted public workshop. The discussion focused on if the workshop should be held on a weekday or weekend, and which format should be used. A consensus (with one objection) was made that the workshop should be held on a weekday. Jeff Schultes assured the committee that proper steps to advertise the workshop would be taken. (TV, Newspaper)

The PWM Part 150 Study Public Workshop will be held on **April 9, 2003**, times TBA, at a location TBA. (Most likely at the airport hotel, but will be posted as soon as a final decision is made.)

IV. Meeting Ends

Nathan Smith ends meeting at approximately 9:30pm