

Portland International Jetport FAR Part 150 Update

Part 150 Noise Advisory Committee Meeting

July 16, 2003

Harris Miller Miller & Hanson Inc.

In association with:

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

- **Review public workshop issues**
 - Publicity, location, format
- **Discuss preliminary Noise Abatement Program measures**
 - Operational elements:
 - Modified preferential runway use
 - New FMS/RNAV procedure for departures
 - New FMS/RNAV procedure for arrivals
 - Assignment of procedures to critical aircraft and during nighttime hours
 - Reduce early turns
 - Land use elements:
 - Notifications on subdivision plans
 - Building code revisions

- **Preliminary Noise Abatement Program measures, continued**
 - Administrative measures:
 - Continue meetings with Noise Advisory Committee
 - Conduct periodic sampling of radar data
 - Compute EXP
 - Publish Jeppesen inserts for pilots
- **Report on any updates from FedEx**
- **Steps remaining for project completion**

- **Publicity:**
 - Portland Press Herald
 - ¼-page announcements, Thursday & Sunday
 - The Forecaster
 - Island Times
 - West End News
 - Westbrook
 - Announcements to all email addresses on record
- **Attendance:**
 - 16 total, but only 4 new people
- **Suggestions?**

- **Preferential Runway Use**
 - Continue preferred use of:
 - Runway 29 for early morning departures
 - Runway 11 for late night arrivals
 - Limit use of Runway 18/36 by noise critical aircraft except when crosswinds exceed 15 knots
 - “Noise-critical” defined by certified levels greater than 86.7 EPNdB on takeoff or 94.5 EPNdB on approach
 - Includes 727s, 737-200s, DC-9s, G-III/IIIIs, Lear 24/25s
 - Suggest modified wording for PWM 7110.4, Chg 1; allow exceptions for construction on Runway 11/29, emergencies, etc.

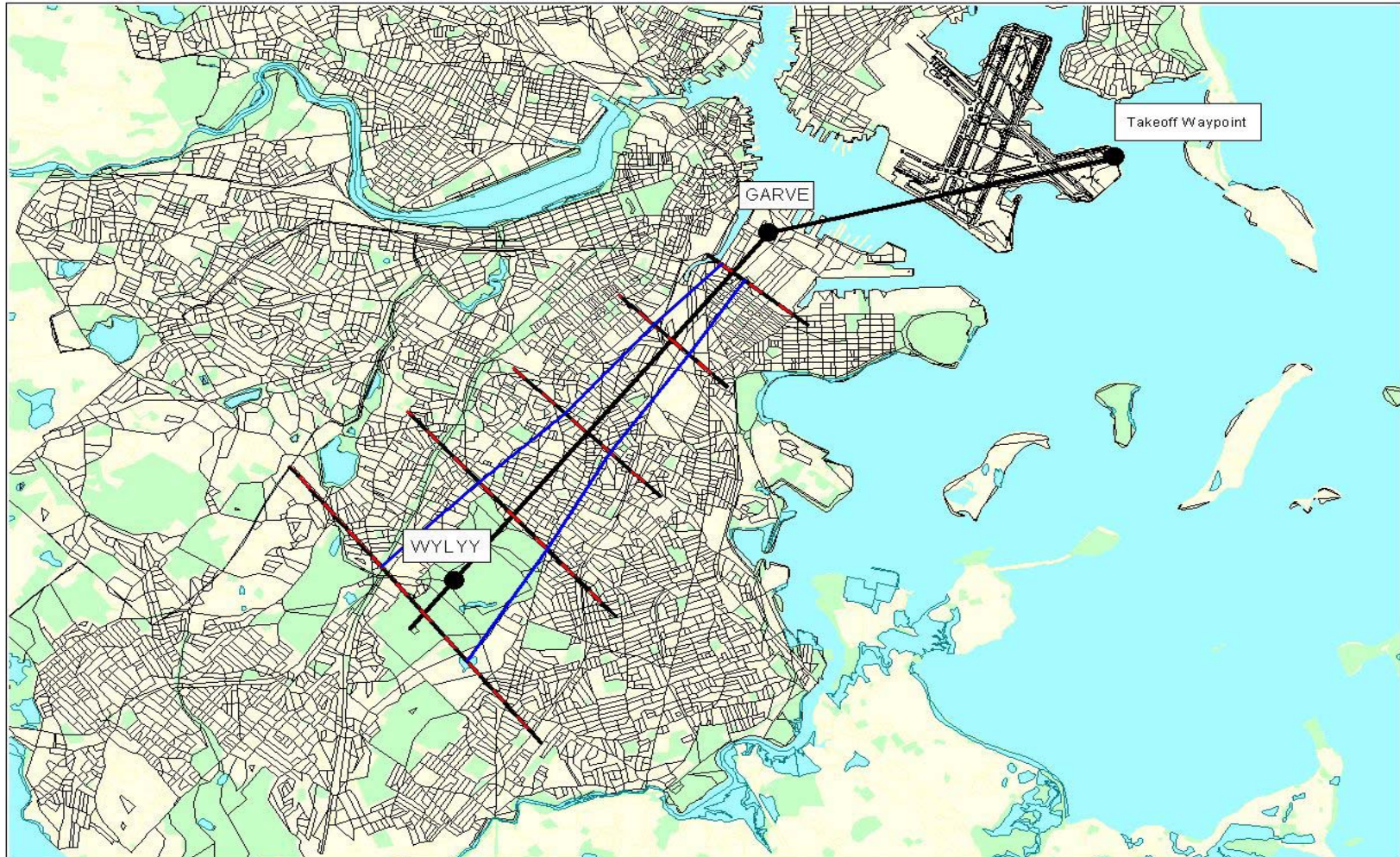
New FMS/RNAV procedure for departures from Runway 11



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

- **Similar to FMS/RNAV procedure from Runway 27 at Logan**
- **Design waypoints for departure over the Fore River**
- **Dispersion will still occur**
- **Only newer aircraft types have appropriate navigational equipment on board; FAA is not likely to require retrofitting of older aircraft**
- **Supplements CASCO TWO SID**

Logan's Runway 27 FMS flight corridor and gates



N 3000 0 3000 Feet

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Data Source: (Land Use, Census Blocks, Towing)
MassGIS, Commonwealth of
Massachusetts Executive Office
of Environmental Affairs

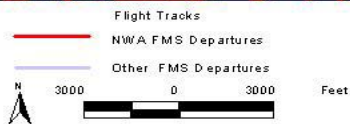
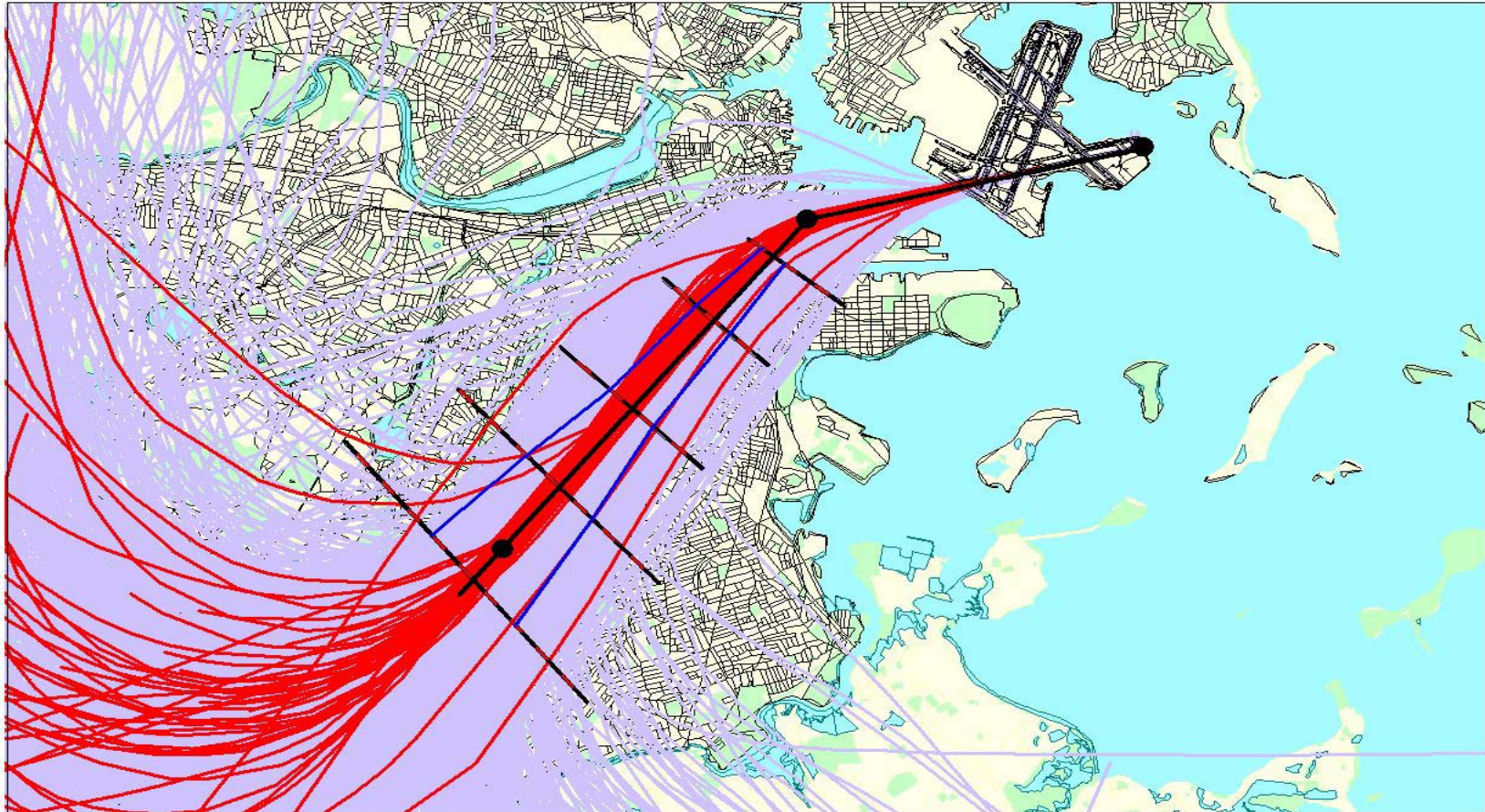


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Consultants in Noise and Vibration Control

Logan Runway 27 ARTS data comparison FMS v. SID departures



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



Runway 27 FMS Flight Corridor with ARTS Data for "December 1999 through February 2000"



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Data Source: (Land Use, Census Blocks, Towns): MassGIS, Commonwealth of Massachusetts, Executive Office of Environmental Affairs

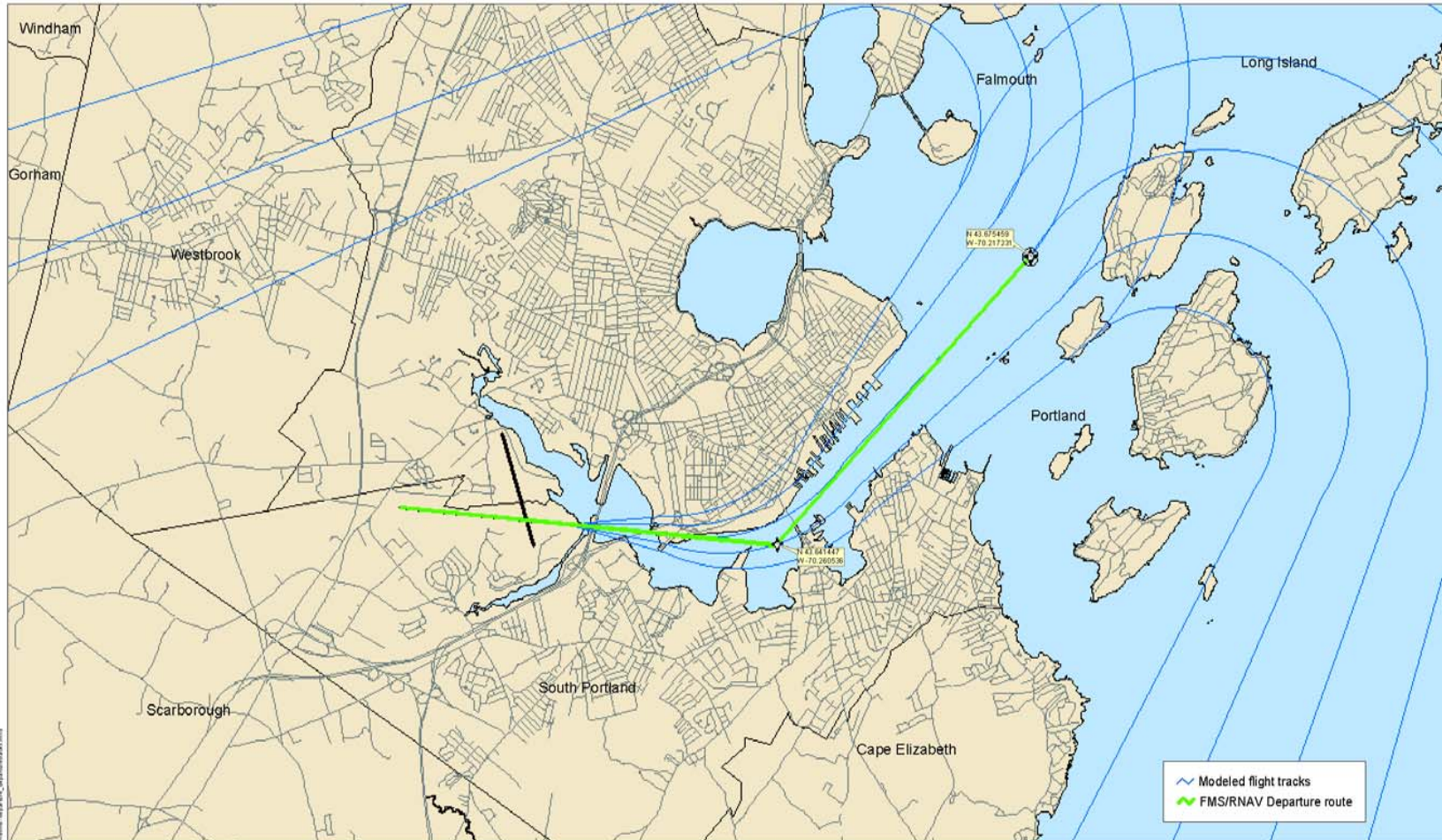


Logan Runway 27, 1/24/01, 10/24/00, 8/24/00

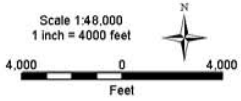
Proposed waypoints for new FMS/RNAV procedure at PWM



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

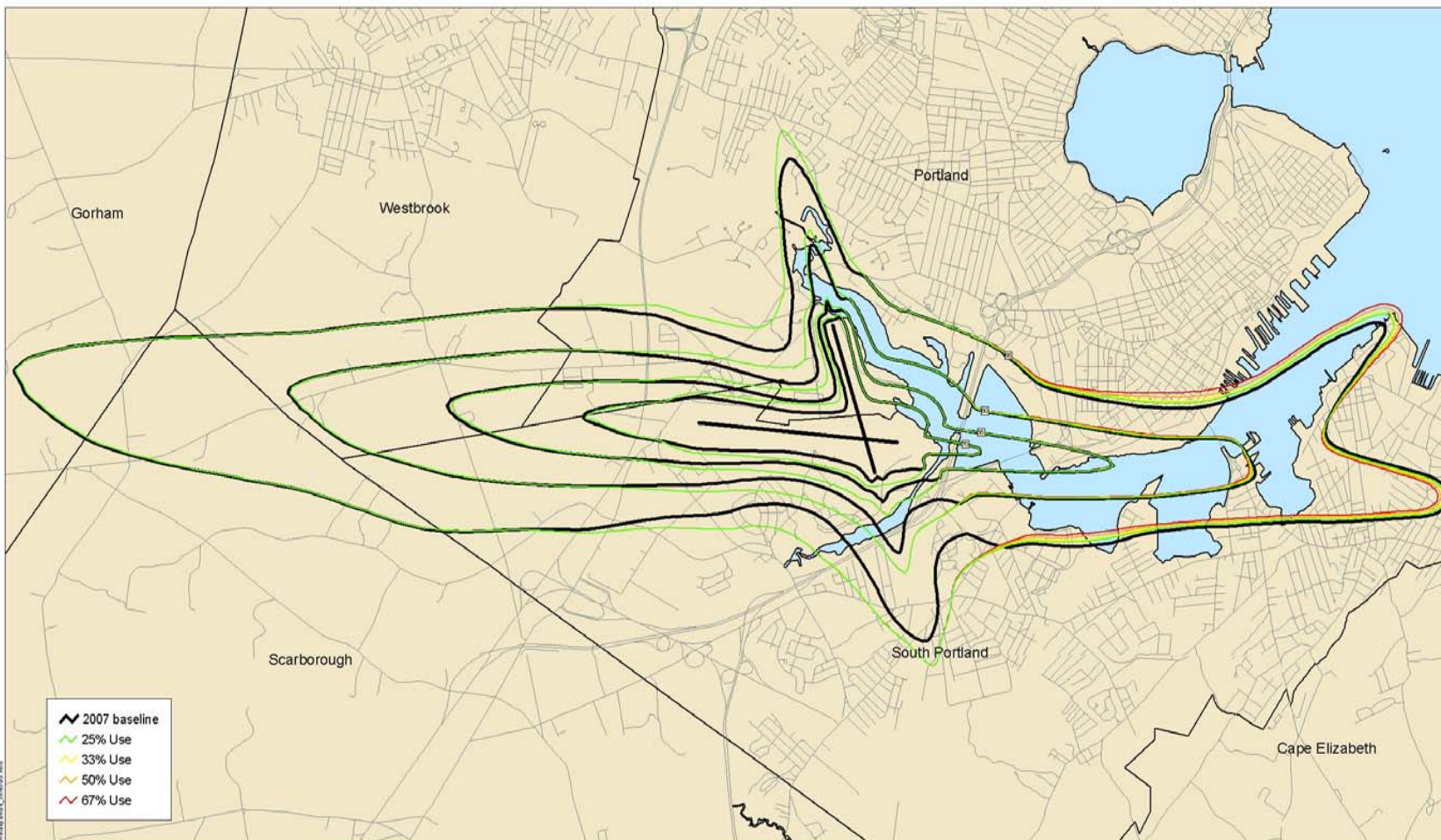


11/15/2016 15:45:00 2016/11/15 15:45:00 2016/11/15 15:45:00 2016/11/15 15:45:00 2016/11/15 15:45:00



Representative FMS/RNAV Departure Procedure and Modeled Flight Tracks with Normal Dispersion (39%, 24%, 6.5%)

DNL contours for varying degrees of conformance

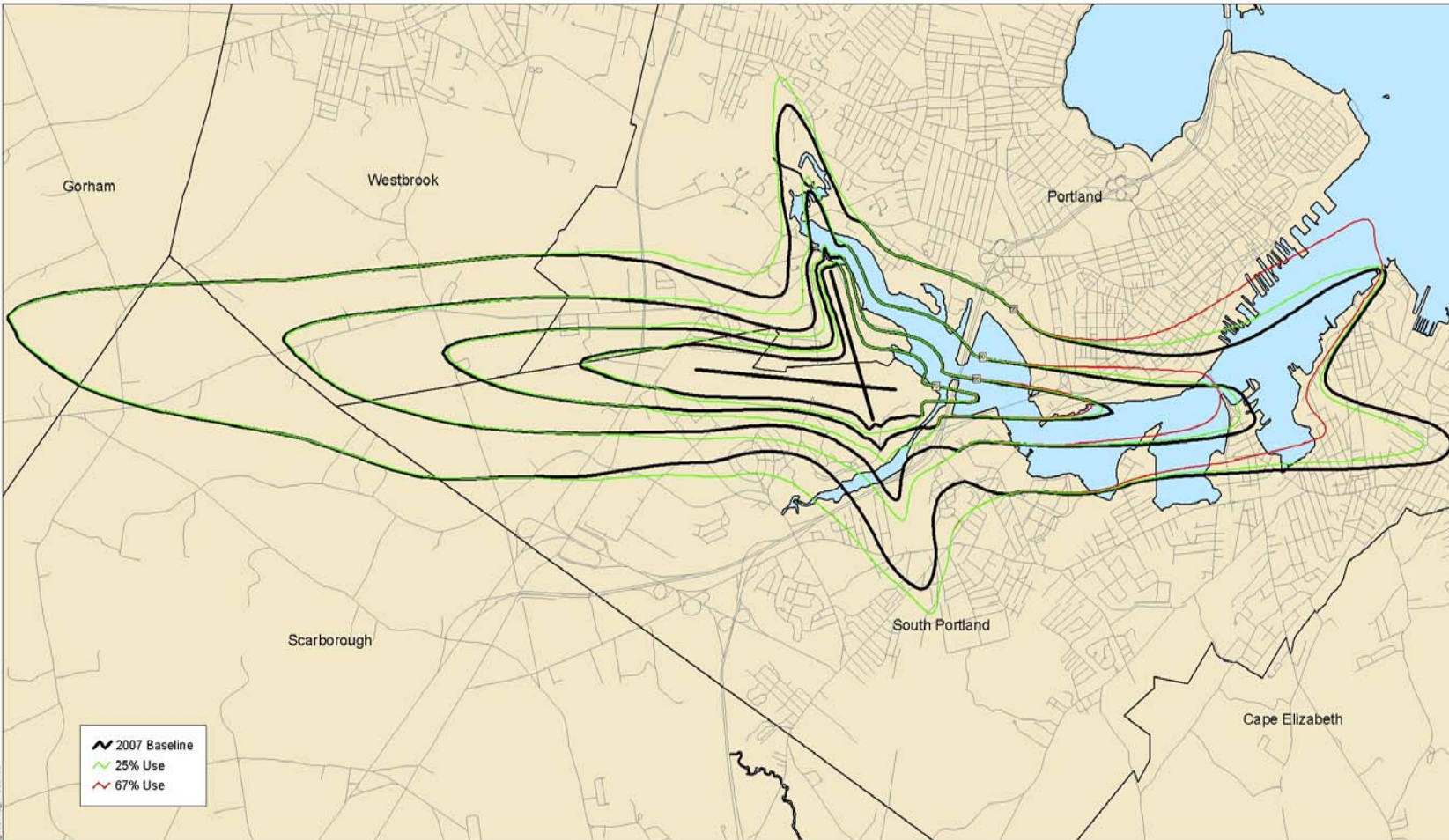


W:\Projects\2007\20070505\20070505_dnlcontours.pdf

New FMS/RNAV procedure for arrivals to Runway 29



- **Waypoints are similar to departures points from Runway 11; traffic is routed along the Fore River**
- **Less conducive to implementation due to tight maneuvering on final approach**
- **Dispersion will still occur**
- **Only newer aircraft types have appropriate navigational equipment on board**
- **Supplements HARBOR VISUAL APPROACH in poor weather**

DNL contours for varying degrees of conformance to new arrival route



2007 Baseline
25% Use
67% Use

Scale 1:36,000
1 inch = 3000 feet



3,000 0 3,000
Feet

DNL Contours for 2007 Operations
with New FMS/RNAV Arrival Procedure
(Contours Adjusted for Overwater Propagation)

Increase assignment of CASCO TWO Standard Instrument Departure

- **SID already exists as an abatement measure, and all IFR-equipped aircraft can fly the procedure**
- **Radar data indicate the CASCO TWO is rarely used**
- **FAA's Boston Center has already agreed to issue the CASCO TWO to aircraft departing Runway 11 at night when ATCT is closed**
- **The tower, itself, should also issue the SID more often; CASCO TWO or new FMS/RNAV procedure should be assigned to all noise-critical aircraft departing Runway 11, day or night**

CASCO TWO Departure

02276 CASCO TWO DEPARTURE 290 SL-329 (FAA) PORTLAND INTL JETPORT (P.W.M) PORTLAND, MAINE

ATIS * 119.05
CLNC DEL 123.975
GND CON 121.9
PORTLAND TOWER * 120.9 (CTAF) 257.8

NORTH DEPARTURE FREQ 125.5 381.2

BANGOR 114.8 BGR
Chan 95
N44°50.51'-W68°52.44'
L-26, H-3

This SID is a noise abatement procedure and applies only to turbojet aircraft and turboprop aircraft capable of 210 knots. All aircraft must be DME equipped.

AUGUSTA 111.4 AUG
Chan 51
N44°19.20'-W69°47.79'
L-26

BURLINGTON 117.5 BTV
Chan 122
N44°23.83'-W73°10.96'
L-26, H-3

LOW ORHAM 394 PW
N43°39.14'-W70°26.46'
L-25-26

LOCALIZER 109.9 I-PWM
Chan 36

SYRACUSE 117.0 SYR
Chan 117
N43°09.63'-W76°12.27'
L-12-25-26, H-3-6

CONCORD 112.9 CON
Chan 76
N43°13.19'-W71°34.53'
L-25-26

BRUNSWICK Chan 99 NHZ
N43°54.14'-W69°56.71'
L-26

MANCHESTER 114.4 MHT
Chan 91
N42°52.11'-W71°22.17'
L-25-26

PEASE 116.5 PSM
Chan 112
N43°05.01'-W70°49.92'
L-25-26

KENNEBUNK 117.1 ENE

BOSTON 112.7 BOS
Chan 74
N42°21.45'-W70°59.37'
L-25-28, H-3-6

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

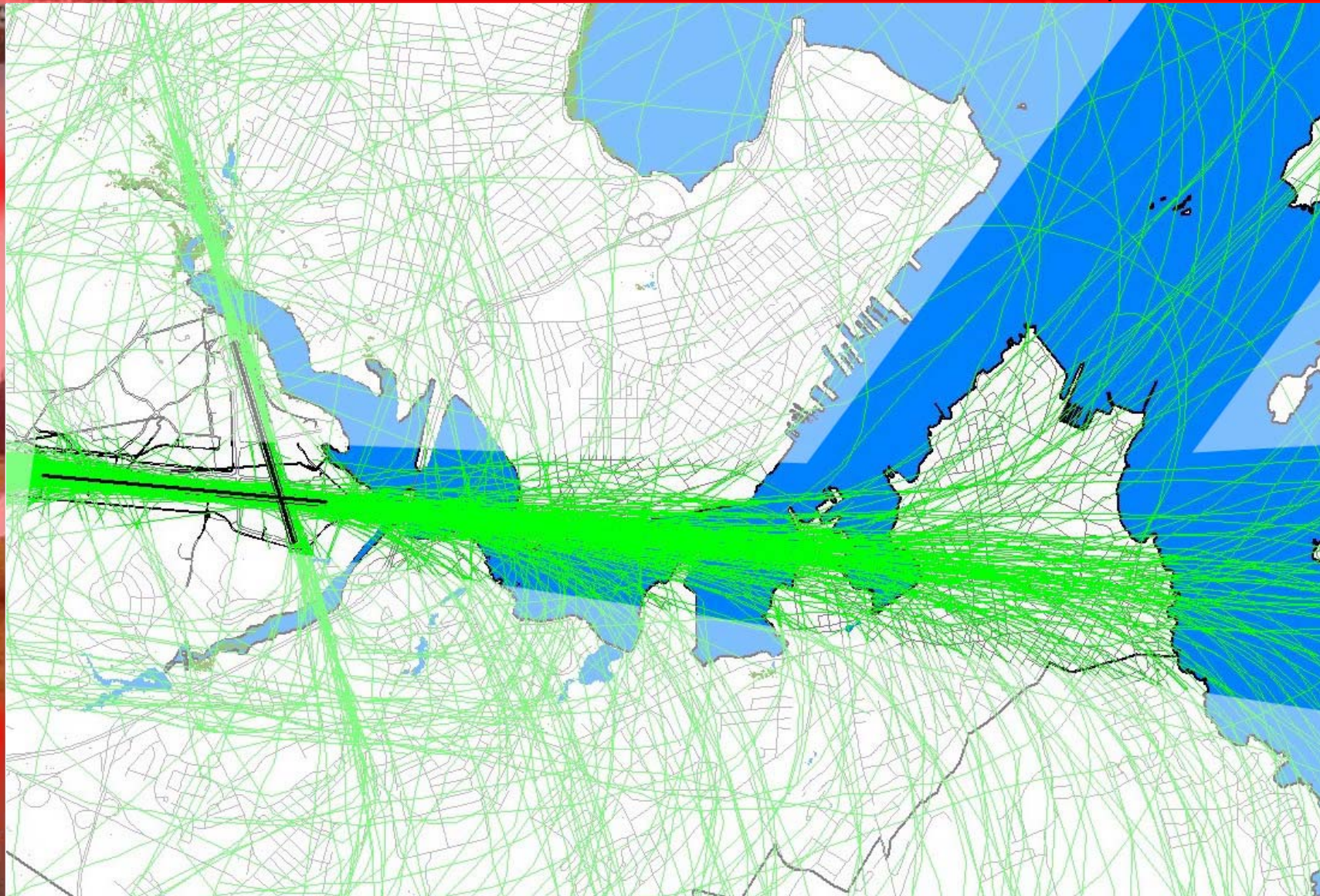
TAKE-OFF RUNWAY 11: Fly runway heading to I-PWM 2.6 DME, then turn left heading 060° maintain 3000 feet. Expect vectors to filed route or depicted NAVAID. Expect further clearance to requested altitude/flight level 5 minutes after departure.

DEPARTURE ROUTE DESCRIPTION

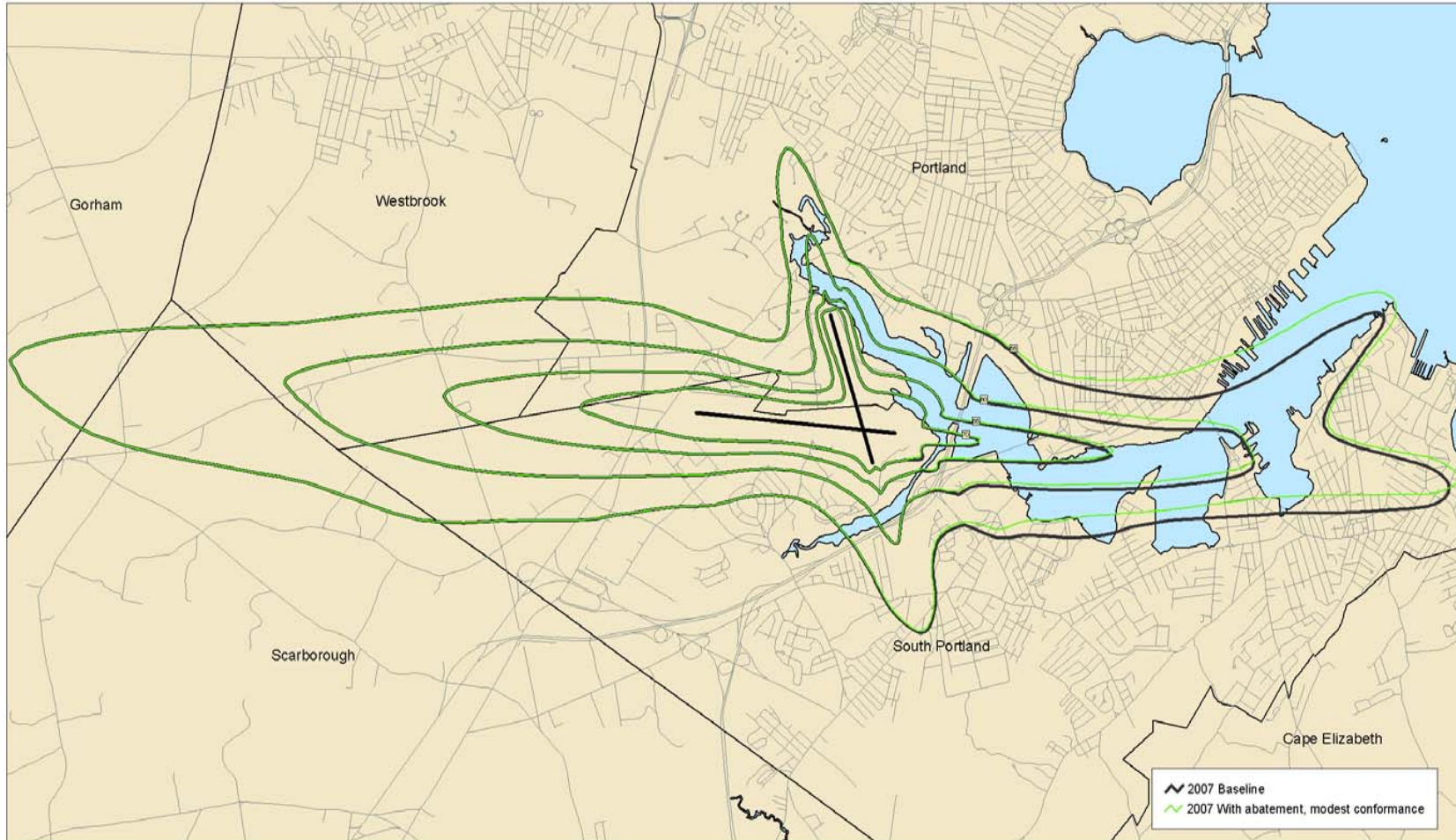
TAKE-OFF RUNWAY 11: Fly runway heading to I-PWM 2.6 DME, then turn left heading 060° maintain 3000 feet. Expect vectors to filed route or depicted NAVAID. Expect further clearance to requested altitude/flight level 5 minutes after departure.

LOST COMMUNICATIONS: If radio contact not established within 2 minutes after departure, proceed on course and climb to requested altitude or 10,000 feet, whichever is lower.

Radar traces showing minimal use of CASCO TWO SID

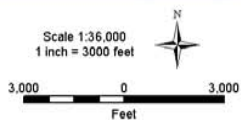
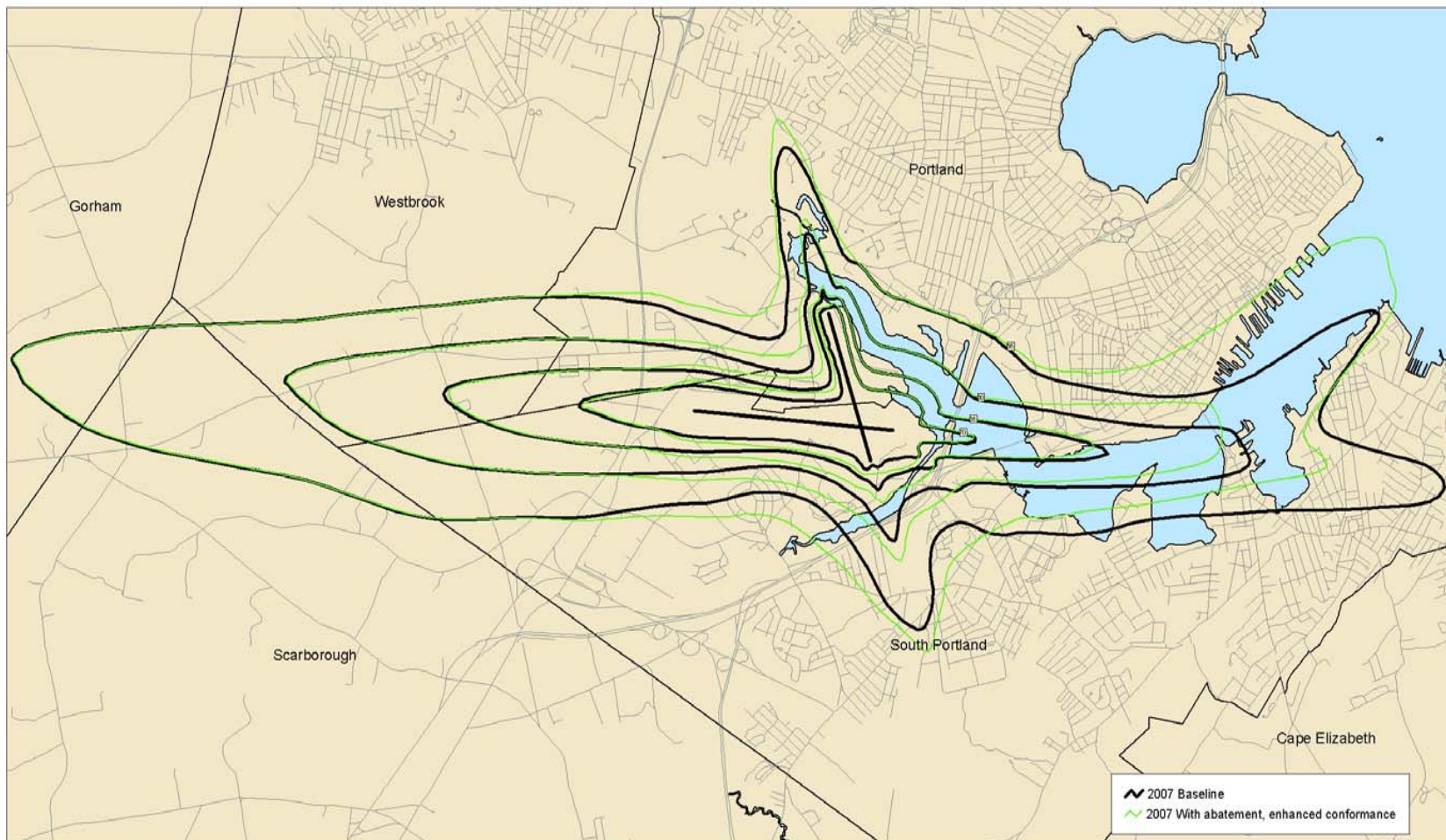


DNL contours for combined abatement measures, assuming 25% conformance



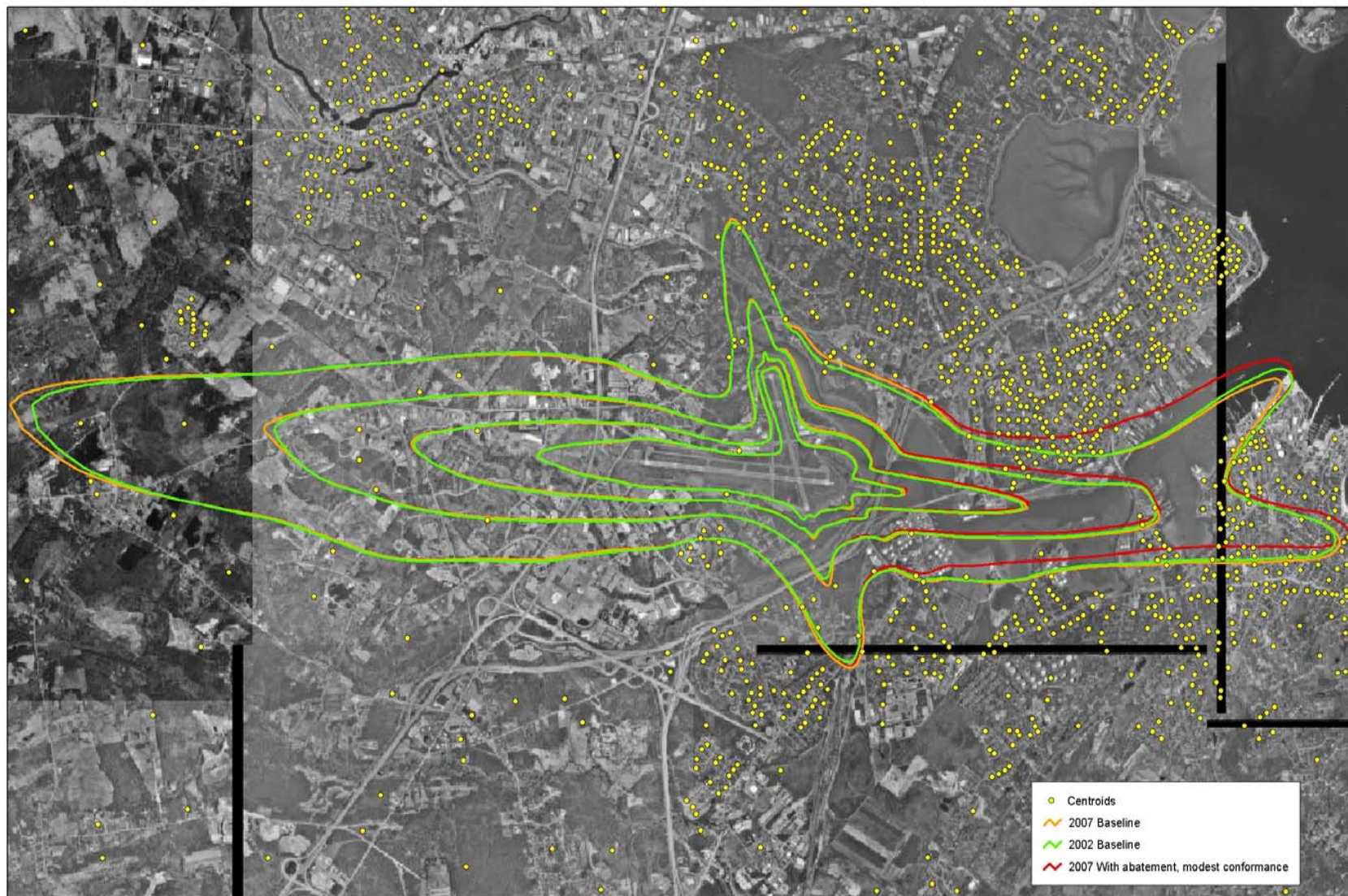
2007 New Abatement Program
(Modest Conformance)

DNL contours for combined abatement measures, assuming 67% conformance



2007 New Abatement Program
(Enhanced Conformance)

Population Affected by Abatement Plan



- **VHB held meetings with planning departments from the four cities/towns surrounding PWM**
- **All observed aircraft noise has decreased in recent years**
- **As a result, they had a general interest only in:**
 - Noise notices on subdivision plans
 - Building code revisions
- **VHB is drafting language for inclusion in the Part 150 report.**

- **Conduct periodic sampling of radar data**
 - Check conformance with CASCO TWO DEPARTURE and new FMS/RNAV procedures if/when implemented
 - Check for reduced early turns by noise-critical aircraft
 - Check preferential runway use, especially by noise-critical aircraft
- **Compute new EXP(posure) metric**
 - Track changes in fleet noise exposure
 - Compute annually, when new entrant requests to operate, when any operator increases scheduled activity in a hushkitted aircraft or during nighttime hours, etc.
- **Publish/publicize Noise Abatement Program for aviation community**
 - Jeppesen insert for pilots
 - Revisions to Tower Order PWM 7110.4
 - ATIS announcement
 - Signs

- **Continue open dialog with Noise Abatement Committee**
 - Meet quarterly
 - Report results of ARTS radar sampling
 - Report changes in EXP
 - Summarize complaints
 - Announce construction plans and other factors that will affect traffic
 - Discuss new issues

- **Complete documentation for Committee review**
 - Include detailed descriptions of proposed noise abatement program elements
 - Include additional data on single event levels for various alternatives
 - Address new measures that Committee may suggest
 - Send draft document to Committee for review
- **Hold final meeting in September**
- **Final Public Meeting (?)**
- **Submit documentation to FAA for final review**



Portland International Jetport Part 150 Noise Advisory Committee Meeting
Wednesday, July 16, 2003 @ 6:00PM
Portland International Jetport Conference Room

I. Introductions

The meeting began at 6:15pm with sixteen (16) people present.

Name:	Organization Represented:
Michael Musca	PWM
Terry Flieger	FAA New England Region
Doug Booth	FAA/PWM Air Traffic Control Tower
Bill Dobrowolski	Stroudwater Neighborhood Assoc.
Paul Ouellette	Portland
Nathan Smith	City of Portland
Paul Ferguson	Loveitt's Field, South Portland
Edchen Ferguson	Loveitt's Field, South Portland
Anne Pringle	Western Promenade Neighborhood Association
Tom Ainsworth	Stroudwater
Peter Stanton	Loveitt's Field resident
Jeff Monroe	PDOT
Jeff Schultes	PWM
Linda Boudreau	South Portland
Liz Landrigan	HMMH
Bob Miller	HMMH

II. Presentation and Discussion

In the initial absence of Nathan Smith, Linda Boudreau started the meeting, handing the floor over to Mr. Bob Miller, (HMMH) who started by leading a discussion of the poor attendance at the public workshop on June 11th and possible ways to improve attendance at the final workshop/hearing.

Bob noted that there were only four people, other than Jetport personnel and members of the Advisory Committee who showed up despite announcements in four newspapers, emails to the Jetport's mailing list, and notices sent out by several neighborhood associations. After a brief discussion of the expense involved in preparing for a meeting with such low attendance,

members of the Advisory Committee suggested that HMMH investigate the possibility of creating a videotape suitable for broadcast on local access TV, with a comment period for viewers to call or write.

Mr. Jeff Munroe suggested that the taping could be done at the local access studio immediately adjacent to the Jetport. There also was general agreement that the video broadcast should include an announcement of the public hearing date. Mr. Munroe also indicated that in the past, he has met directly with individual neighborhood associations and would be pleased to do that again if that would help get more people interested in the Part 150 program.

Ms. Anne Pringle raised a question about HMMH's budget and whether there was any money available to do such a videotaping, but Mr. Miller indicated that he had no provision for it. HMMH had completed several out-of-scope tasks such as an extra week of noise monitoring, and preparation for and attendance at now 10 meetings, while the project was intended to have 8 total, and it appeared there would still have to be one or two more, in addition to the final hearing. The remaining budget was very tight.

Given budget constraints, the Committee also discussed the possibility of simply producing a PowerPoint presentation, presenting that on public television with a voiceover. Other ideas included taking greater advantage of the press – the Portland Press Herald, 2 radio stations, 3 TV channels. Give the press an article kicking off a public access program, and then once the public has heard about the issue for several weeks, have the final public meeting.

Ms. Boudreau asked what was the desired purpose of a public meeting. Mr. Tom Ainsworth said he thought it was:

- To get information to the public
- To succinctly state the problem
- To succinctly state the proposed solutions
- To explain what can and cannot be done
- To explain the long-term prognosis.

One Committee member suggested that a good video presentation might also be used to suggest to the FAA additional areas of research or that it might be utilized by the FAA as an exemplary means of generating public involvement. Mr. Miller indicated, and Ms Terry Fliieger concurred, that the FAA was unlikely to consider either of those outcomes. Ms. Boudreau concluded the discussion asking Mr. Miller to put together an outline of the video and send it to the committee.

Mr. Miller then continued with his presentation of proposed noise mitigation plan elements following the PowerPoint presentation and associated handouts given to the Committee at the start of the meeting. Several measures generated questions or comments from Committee members:

- Regarding refinement of the Preferential Runway Use Program addressing noisy aircraft, there was discussion as to whether helicopters could be included and what types might be considered noisy, especially if they became more frequent in the future. Bob pointed out that a program based on noisiness of the aircraft or helicopter must be kept simple; Air Traffic Controllers are not going to be willing to check lists and decide on a case-by-case basis what can or cannot use a runway.
- Mr. Doug Booth, Manager of the FAA's Air Traffic Control Tower, indicated that the CASCO TWO SID has been used more heavily in recent months. The Committee expressed interest in seeing whether recent radar data confirmed that.

Mr. Booth indicated he would try to pull some data from a recent week as a representative sample.

- Mr. Miller indicated that preliminary contours reflecting possible changes to arrival routings to Runway 29 and departure routings from Runway 11 caused an increase in exposure over the Western Promenade, and that unless he could improve on the refinement of the procedures, he would not propose them as part of the final mitigation plan.
- The Committee suggested that as a deliverable, HMMH should produce an orthophoto showing noise-sensitive areas around PWM, so that GA pilots could be better informed as to noise problems in the vicinity of the Jetport.
- The Committee also indicated a desire to see EXP data both for 2002 and for the 2007 forecast year to see how it was expected to change.
- Mr. Peter Stanton commented that military flights are conspicuously absent, and wanted to know if this is going to be addressed. Mr. Jeff Schultes indicated that military aircraft would not use the river approach because it is a visual approach procedure and they are coming to PWM to practice instrument approaches instead. Ms. Pringle questioned why they fly directly over the Western Prom. Mr. Booth explained that they are probably flying a circling approach maneuver. Several Committee members expressed continuing complaints about military aircraft.

III. Next Meeting

The next Noise Advisory Committee meeting is scheduled for **September 24th at 6 p.m.** in the Portland International Jetport Conference Room.

IV. Meeting Ends

Ms. Boudreau adjourned the meeting at approximately 8:30 p.m.

Reminder: These meeting notes and the HMMH presentation will be posted on our website --- www.portlandjetport.org