

Air Traffic Organization (ATO) Environmental Policy, Practices and Processes

Presented to: Boston-Logan Airport Runway 4L
Meeting Participants

By: Ms. Terry English, Environmental Protection
Specialist, ATO

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Federal Aviation
Administration



Agenda

- **National Environmental Policy Act (NEPA) Overview**
- **FAA / ATO Environmental Process Overview**
- **Status of Environmental Review for Runway 4L RNAV Approaches**



National Environmental Policy Act (NEPA)

- Declares a national policy which will encourage productive and enjoyable harmony between man and his environment and establishes the Council on Environmental Quality (CEQ)
- Requires all Federal agencies to prepare a detailed statement for major federal actions “significantly” affecting the quality of the human environment
- Requires consideration of the environment in decision making, consultation and coordination with federal, state and local agencies, and public disclosure of impacts
- Mandates a process; does not dictate a particular result



Council on Environmental Quality (CEQ) Implementing Regulations for NEPA

- In 1978 CEQ issued regulations for implementing the procedural provisions of NEPA [CFR Title 40 Parts 1500-1508]
- Defines NEPA terms such as: federal action, significantly, human environment and cumulative impacts
- Provides more specific content and a processes for an Environmental Impact Statement (EIS) and introduces and defines other levels of NEPA review / documents such as an Environmental Assessment (EA) and a Categorical Exclusion (CATEX)
- Requires federal agencies to adopt their own procedures to supplement the CEQ regulations

CEQ Implementing Regulations for NEPA – Key Definitions

- **Federal Action** – Activities including projects and programs entirely or partly financed, assisted, conducted, regulated or approved by federal agencies [1508.18]
- **Significantly** – Describes context (local vs. national) and intensity (severity of the impact), but does not establish significant impact thresholds [1508.27]
- **Cumulative Impact** – The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. [1508.7]



CEQ Implementing Regulations for NEPA – Key Definitions)


- **EIS – A detailed written statement as required by NEPA and shall be prepared for any major Federal action significantly affecting the quality of the human environment [1508.11,1508.18 & 1508.27]**
- **EA – A concise public document that briefly provides sufficient evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact [1508.9 & 1508.13]**
- **CATEX – A category of actions which do not individually or cumulatively have a significant effect on the human environment and do not require either an EA or an EIS. CATEXes shall provide for extraordinary circumstances in which a normally excluded activity may have significant impacts [1508.4]**

FAA Environmental Order

FAA Order 1050.1E

Environmental Impacts: Policies and Procedures

- Describes how the FAA is to implement NEPA specifically for FAA actions
- Describes the various environmental processes, and the kinds of impacts that need to be analyzed
- Defines impact categories that require analysis. Noise and air quality impacts are the primary issues associated with air traffic actions.

	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION National Policy	ORDER 1050.1E, CHG 1
Effective Date: March 20, 2006		
SUBJ: Environmental Impacts: Policies and Procedures		
<p>This order updates the FAA agency-wide policies and procedures for compliance with the National Environmental Policy Act (NEPA) and implementing regulations issued by the Council on Environmental Quality (40 CFR parts 1500-1508). The provisions of this order and the CEQ regulations apply to actions directly undertaken by the FAA and where the FAA has sufficient control and responsibility to condition the license or project approval of a non-Federal entity. The requirements in this order apply to, but are not limited to, the following: all grants, loans, contracts, leases, construction, research activities, rulemaking and regulatory actions, certifications, licensing, permits, plans submitted to the FAA by state and local agencies which require FAA approval, and legislation proposed by the FAA. The order was last revised in 2004.</p> <p>The draft order was published in the Federal Register for public comment. The final order incorporates changes resulting from comments received from the public and during the internal FAA clearance procedure. The changes are annotated in the text with a bold line to the left of the paragraph containing the changed language. The change page can be found at the end of this document. The final order was published in the Federal Register and is available on the Internet at http://www.faa.gov/regulations_policies/orders_notices/.</p>		
Marion C. Blakey Administrator Federal Aviation Administration		
Distribution: electronic		Initiated By: AEE-200

CATEXes for Airspace and Procedural Actions (FAA Order 1050.1E, section 311)

- 311a.** Rulemaking actions - 14 CFR part 71, "Designation of Class A, Class B, Class C, Class D, and Class E Airspace Areas; Airways; Routes; and Reporting Points"
- 311b.** Actions - 14 CFR 71.75-Federal airways; ADIZs; 14 CFR part 99, "Security Control of Air Traffic"; 14 CFR part 101, "Moored Balloons, Kites, Unmanned Rockets and Unmanned Free Balloons"); and 14 CFR part 105, "Parachute Operations").
- 311c.** SUA returned to the NAS
- 311d.** SUA "administrative" changes
- 311e.** Controlled firing areas
- 311g.** GPS-based overlays of existing procedures
- 311h.** Helicopter routes over major thoroughfares
- 311i.** Air traffic control procedures conducted at or above 3,000 feet AGL; below 3,000 feet AGL over non-noise sensitive areas; below 3,000 feet AGL without significant noise increase over noise sensitive areas; and increases in minimum altitudes and landing minima
- 311j.** Procedures to respond to emergency situations
- 311k.** "Administrative" changes
- 311l.** Removal of displaced runway threshold
- 311m.** Short-term change below 3,000 feet AGL for construction
- 311n.** Tests below 3,000 feet AGL not exceeding six months
- 311o.** Tests to determine the effectiveness of new technology
- 311p.** Procedures over non-noise sensitive areas

Extraordinary Circumstances

Extraordinary Circumstances exist when it (1) involves one of the following circumstances and (2) may have a significant effect.

- **Adverse affect on cultural properties**
- **Impact on Dept. of Transportation Act, Section 4(f) properties**
- **Impact on natural, ecological, or scenic resources of significance, including wetlands, floodplains**
- **Impact on air quality**
- **Impact on water quality**
- **Cause a division or disruption of communities**

Extraordinary Circumstances (cont.)

- **Cause an increase in surface congestion**
- **Likelihood project is inconsistent with Federal, state, or local environmental law**
- **Likely to directly, indirectly, or cumulatively create a significant impact**
- **Impact on noise levels in a noise sensitive area**
- **Effects are likely to be highly controversial on environmental grounds**
 - **Reasonable disagreement over the risk of environmental harm**

When to prepare an EA?*

EA

- **Action does not qualify for a CATEX (i.e. not on the list or on this list but has extraordinary circumstance(s) and may have a significant effect**
- **Action is identified in FAA Order 1050.1 as an action that normally requires an EA**

*** If an EA identifies significant environmental effects, then those effects must be mitigated below the level of significance or an EIS must be prepared.**

When to prepare an EIS?

- **When there are significant impacts**
- **FAA Order 1050.1E Appendix A lists environmental impact categories and analysis of significant impacts**

Impact Categories

(11 of 20 possible impact categories more specific to air traffic procedure changes)

- **Noise**
- **Compatible Land Use**
- **Department of Transportation Act Section 4(f) Resources**
- **Historic, Architectural, Archaeological, and Cultural Resources (Historic and Cultural only)**
- **Natural Resources and Energy Supply (Energy Supply only)**
- **Climate Change**
- **Fish, Wildlife, and Plants (Avian and Bat Species only)**
- **Socioeconomic Impact, Environmental Justice, Children's Environmental Health and Safety Risks (Env. Justice only)**
- **Air Quality [only if there are changes below 3,000 feet AGL]**
- **Light Emissions and Visual Conditions (Visual only)**
- **Past, Present, and Reasonably Foreseeable Actions**

Aircraft Noise

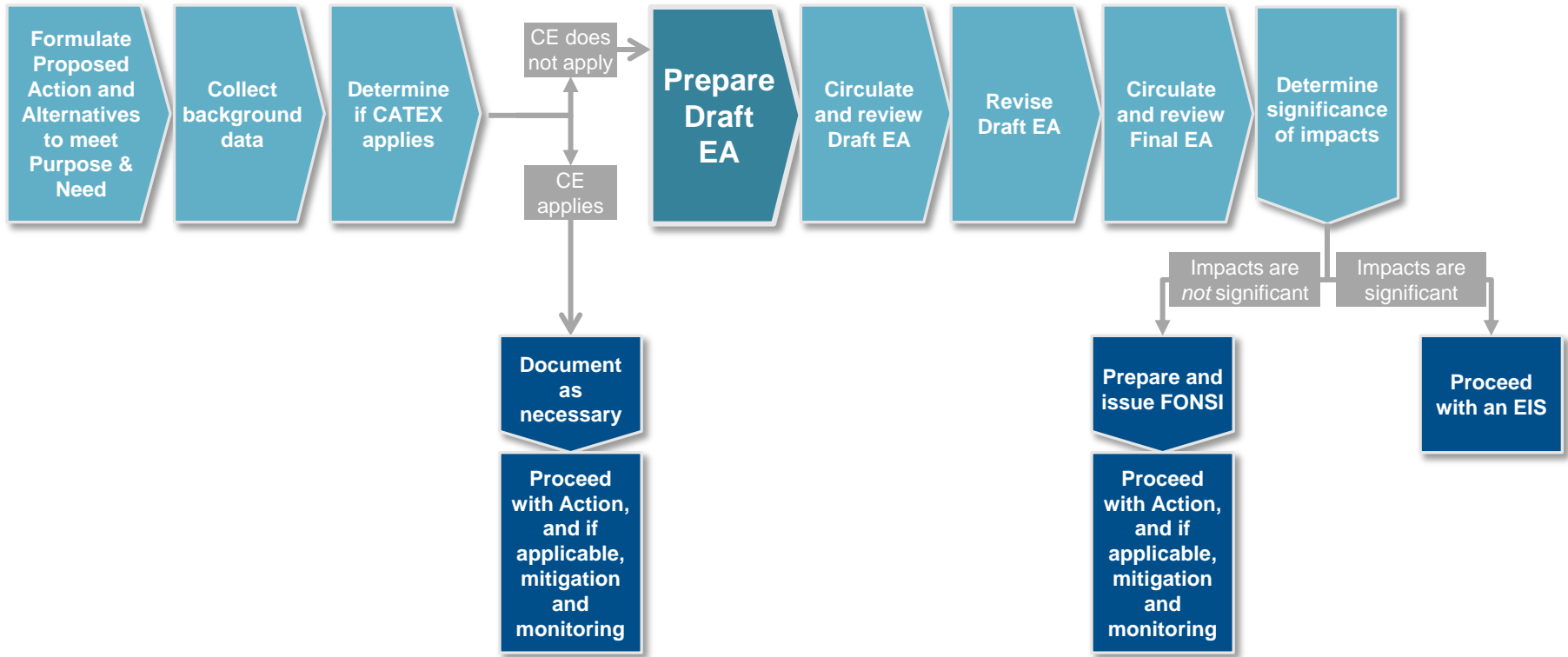
How we measure it and assess its impact

- **Assessed in units of A-weighted decibels (dBA)**
- **Day-Night Average Sound Level (DNL)**
 - Based on an Average Annual Day (AAD)
 - Weights noise events between 10:00 p.m. to 6:59 a.m. by 10 dB increase – represents highly-annoyed time period
- **Community Annoyance**
- **Noise Compatibility Guidelines**
 - Most land uses are considered to be compatible with DNLs that do not exceed 65 dB

Aircraft Noise – Impacts

- **SIGNIFICANT:** DNL 1.5 dB or higher change over noise sensitive areas exposed to the Proposed Action at the DNL 65 dB or higher noise level.
- **REPORTABLE:** DNL 3 dB or higher increase between DNL 60 and 65 dB. DNL 5 dB or higher increase between DNL 45 and 60 dB.

Typical ATO Environmental Process



Source: U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1E, *Environmental Impacts: Policies and Procedures*, adapted from Figure 4-1, "Environmental Process for a Typical Action," June 8, 2004.

Public and Community Involvement

1995 FAA Community Involvement Policy Statement

- Documents FAA's commitment to community involvement
- Is included in FAA Order 7400.2K Procedures for Handling Airspace Matters

NEPA Requirements

- CATEXes - Not required, however, CEQ encourages agencies to determine the circumstances for notifying the public of the decision to issue a CATEX for an action
- EAs - Not required, but provided for to the extent practicable
- EISs - Required notice with specifics clearly outlined in FAA Order 1050.1E

Boston Logan Airport Noise Study (BLANS)


- 2002 FAA Record of Decision and subsequent BLANS requires a collaborative effort between the FAA, Massport and the Logan Airport Community Advisory Committee (CAC)

Air Traffic Environmental Order

FAA Order 7400.2K (Chg. 1) Procedures for Handling Airspace Matters

Chapter 32 - Environmental Matters

- Includes guidance, policy, and procedures to assist air traffic personnel in meeting requirements of FAA Order 1050.1E
- Defines roles and responsibilities

 <p>U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION Air Traffic Organization Policy</p> <p>ORDER JO 7400.2K</p> <p>Effective Date: April 3, 2014</p> <p>SUBJ: Procedures for Handling Airspace Matters</p> <p>This order specifies procedures for use by all personnel in the joint administration of the airspace program. The guidance and procedures herein incorporate into one publication as many orders, notices, and directives of the affected services as possible. Although every effort has been made to prescribe complete procedures for the management of the different airspace programs, it is impossible to cover every circumstance. Therefore, any procedure covered in this order, personnel must follow the order.</p> <p>The order consists of six parts:</p> <ul style="list-style-type: none">a. Part 1 addresses general procedures applicable to all airspace.b. Part 2 addresses policy and procedures unique to Class A airspace.c. Part 3 addresses policy and procedures unique to Class B airspace.d. Part 4 addresses policy and procedures unique to Class C airspace.e. Part 5 addresses policy and procedures unique to Class D airspace.f. Part 6 addresses policy and procedures unique to High Intensity Light Operations, and integrated with the National Airspace System. <p><i>Elizabeth L. Ray</i> Elizabeth L. Ray Vice President, Mission Support Services Air Traffic Organization</p> <p>FFR 1 9 2014</p> <p>Date: _____</p> <p>Distribution: ZAT-740 (ALL)</p>	<p>CHANGE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION Air Traffic Organization Policy</p> <p>JO 7400.2K CHG 1</p> <p>Effective Date: July 24, 2014</p> <p>SUBJ: Procedures for Handling Airspace Matters</p> <ol style="list-style-type: none">1. Purpose of This Change. This change transmits revised pages to Federal Aviation Administration Order JO 7400.2K, Procedures for Handling Airspace Matters.2. Audience. This change applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives. This order also applies to all regional, service area, and field organizational elements involved in rulemaking and nonrulemaking actions associated with airspace allocation and utilization, obstruction evaluation, obstruction marking and lighting, airport airspace analysis, and the management of air navigation aids.3. Where Can I Find This Change? This change is available on the FAA Web site at http://faa.gov/air_traffic/publications and https://employees.faa.gov/tools_resources/orders_notices/.4. Explanation of Policy Change. See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures.5. Distribution. This change is distributed to select offices in Washington headquarters; the Office of Commercial Space Transportation; regional Flight Standards; Airports Divisions; service area offices; the William J. Hughes Technical Center; the Mike Mouroney Aeronautical Center; Technical Operations Aviation System Standards; all field facilities; international aviation field offices; and interested aviation public.6. Disposition of Transmittal. Retain this transmittal until superseded by a new basic order.7. Page Control Chart. See the page control chart attachment. <p><i>Elizabeth L. Ray</i> Elizabeth L. Ray Vice President, Mission Support Services Air Traffic Organization</p> <p>Date: 6/2/14</p> <p>Distribution: ZAT-740 (ALL) Initiated By: AJV-0 Vice President, Mission Support Services</p>
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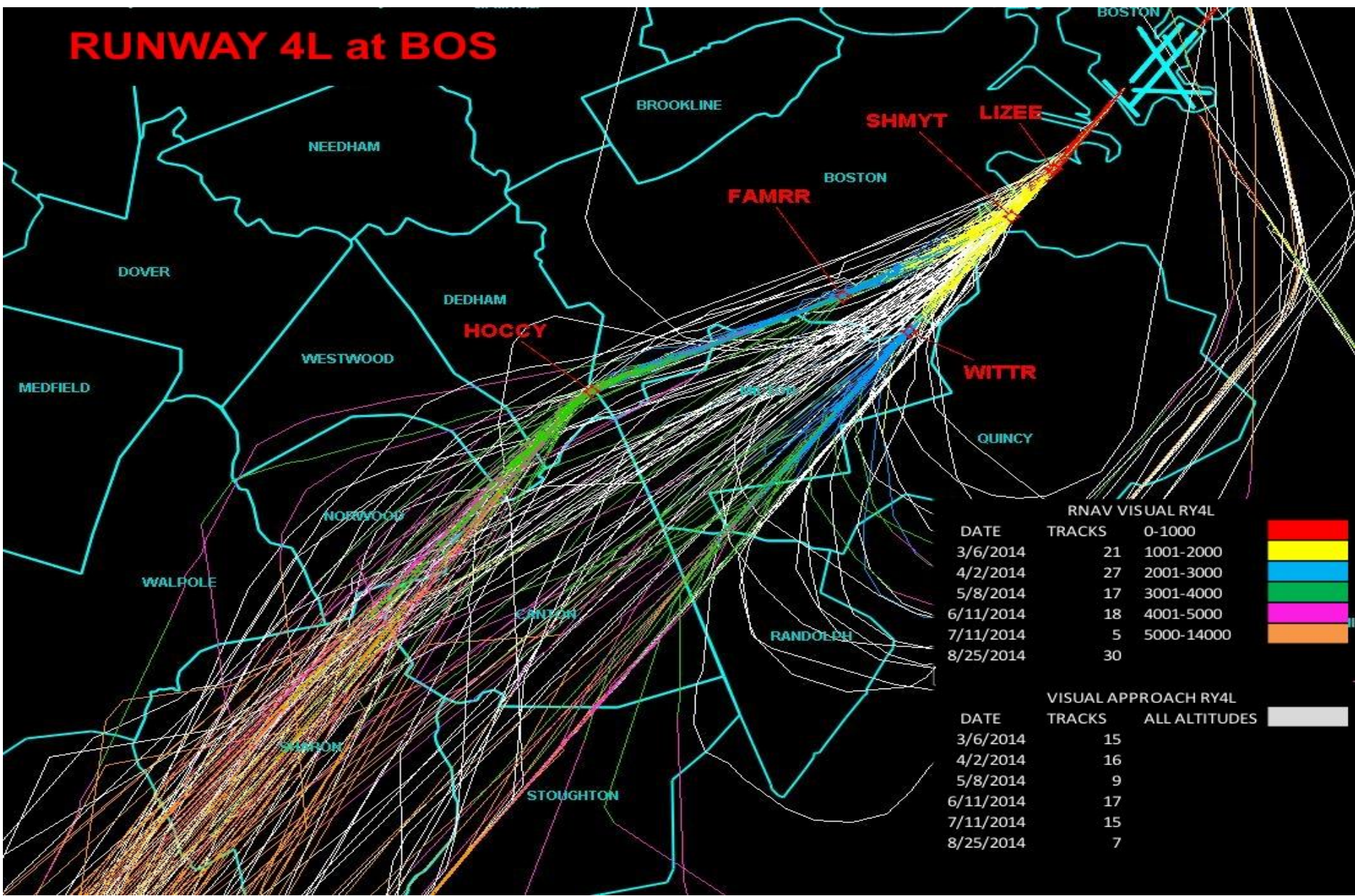
Status of Environmental Review for Runway 4L RNAV Approaches

- **Completing Initial Environmental Review (IER) from Appendix 5 in FAA Order 7400.2K**
- **Awaiting public input in response to May 18, 2015, public meeting which will be noted in the final IER**
- **Potentially qualify for FAA CATEX:**
- **311i - Air traffic control procedures conducted at or above 3,000 feet AGL; below 3,000 feet AGL over non-noise sensitive areas; below 3,000 feet AGL without significant noise increase over noise sensitive areas; and increases in minimum altitudes and landing minima**
- **No extraordinary circumstances identified to date (note FAA/Volpe presentation dated May 18, 2015)**

Status of Environmental Review for Runway 4L RNAV Approaches

- **Jet Blue Runway 4L RNAV Visual Test (March – August 2014)**
- **A CATEX and IER were completed in June 2013**
- **CAC was notified of the six-month test and the IER and CATEX were posted to the BLANS website**
- **Flight track data was collected and analyzed and provided to Volpe for purposes of modeling cumulative noise impacts with the FAA's RNAV IFP**
- **Cumulative noise analysis also considered use of the procedure by other airlines**

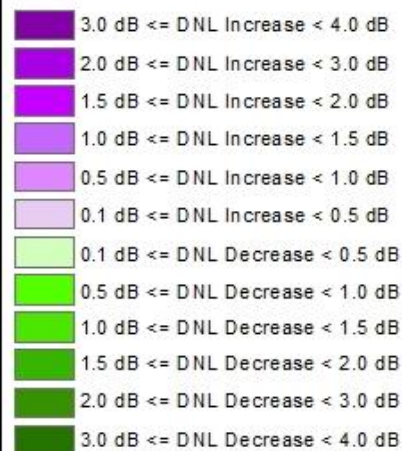
RUNWAY 4L at BOS



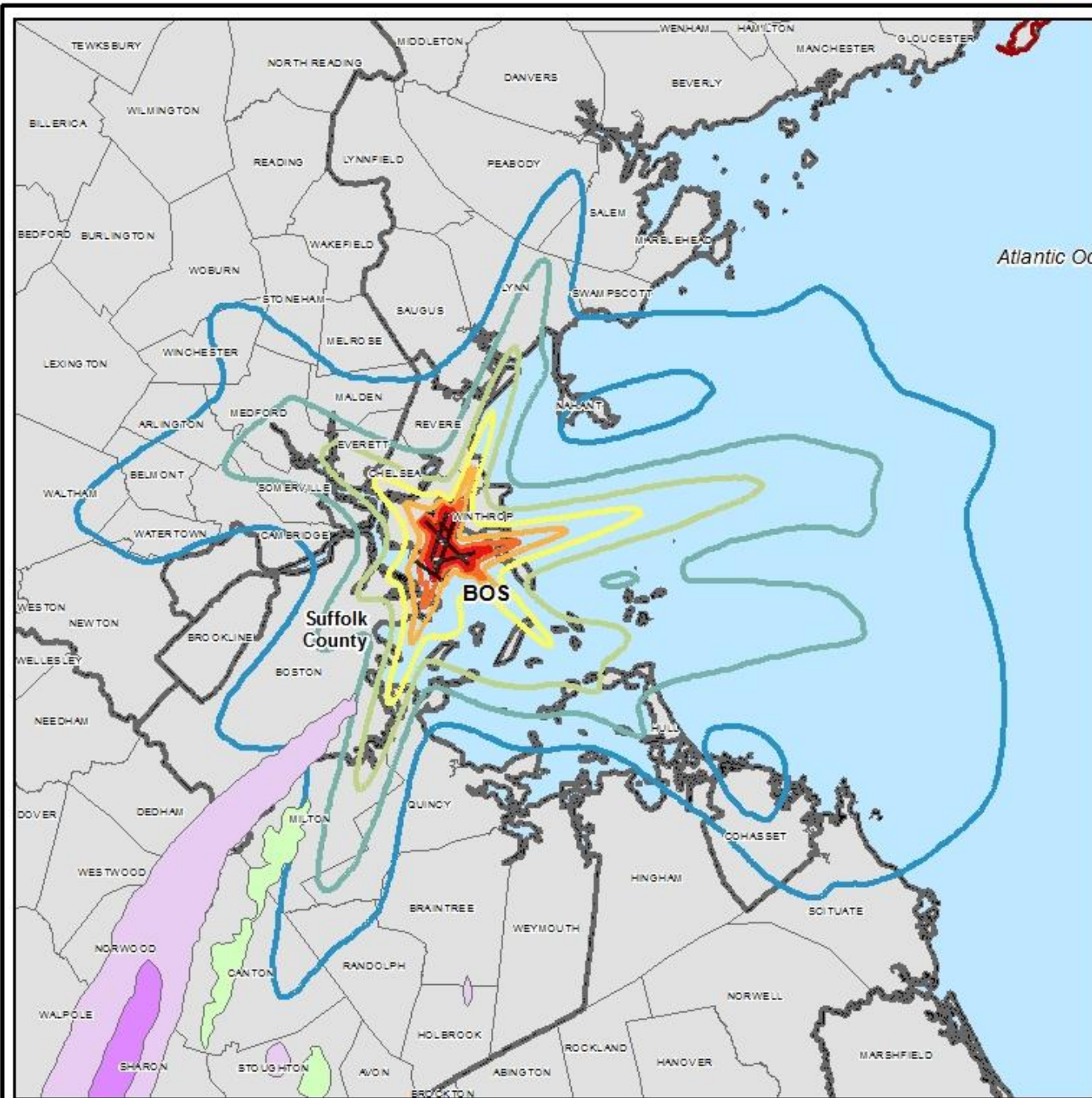
RNAV VFR Procedure, JetBlue Use

•Case #3 change from Case #1

Noise Difference



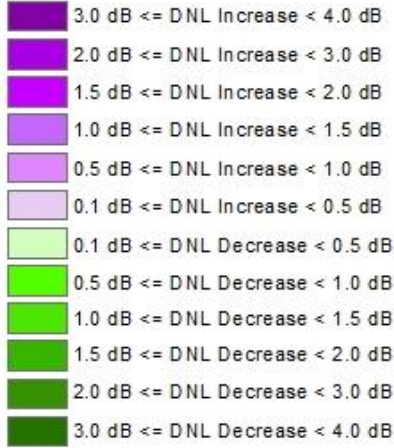
BLANS Baseline (≥ 45 DNL)



RNAV VFR Procedure, JetBlue + Other Carrier Use

•Case #4 change from Case #1

Noise Difference



BLANS Baseline (>= 45 DNL)

