



Logan Airport Committee Update

SUBMITTED TO: Board of Selectmen

SUBMITTED BY: David Carlon

August 4, 2016 - Draft

Agenda

- Review of Objectives
- Progress Update
- Logan Airport Background
- Flight Paths
- Mitigation Opportunities
- Mobilizing Hull Residents
- Action Plan

Objectives

- Mitigate the impact of plane flights over Hull
 - Reduce Noise
 - Reduce Air Pollution
- Work within the Context of Logan Airport
 - Airplane Safety Number One Priority
 - Air Transportation Vital to Massachusetts Economy
 - Make Noise & Pollution Mitigation a Priority

Committee Members

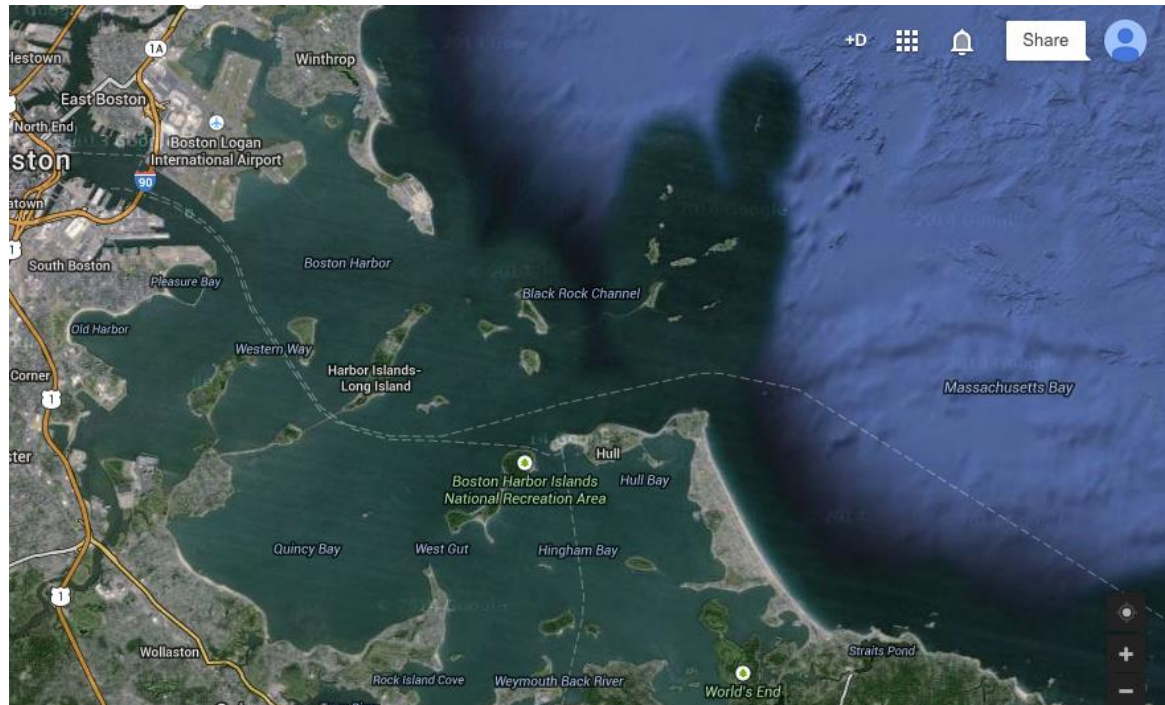
- Logan Airport Committee
 - David Carlon, Chairman
 - Bob Paul,
 - Frank Kerr,
 - Carol Taylor
- Joan Mechino, Advisor

Progress Update

- Researching the Issues
- Identifying Potential Mitigation Opportunities
- Logan CAC / Massport CAC Participation
- Engaging State & Federal Legislators
- Mobilizing Hull Residents
 - Hull Municipal Light Mailing
 - Foster Grass Roots Activity
- Coalition Building

Mitigation Opportunities

- Hull's unique geography suited to mitigation
- Surrounded by bodies of water
 - Boston Harbor, Hingham Bay, and Quincy Bay
- Allows Flight Paths to be adjusted to provide relief to Hull, as well as Cohasset and Hingham, without impacting other communities



Hull Situation

- Dramatic increase in the concentration of flights over Hull due to the implementation of RNAV_(FAA Modernization and Reform Act of 2012 Public Law 112–95 [H.R. 658] Feb. 14, 2012)
- Flight path changes from Runway 22 departures and Runway 33 Arrivals
- **Increase in Runway 15 Departures**
- Dramatic Increase in airplane noise
- Fly over window continues to increase – typically 21:30 hours – 4:00 a.m. to 1:30 a.m. with both departures and arrivals – **Now reaching 24/7**

What has changed?

- Economy Rebound – Growth in Airline Travel
- Growth of Logan Airport – JetBlue, JAL, Emirates', et al
- Runway 33L Extension
- RNAV Implementation
 - Area (Random) Navigation, Beacon to Beacon
- Flight Path Changes
- FAA Modernization and Reform Act of 2012
 - Public Law 112–95 [H.R. 658] Feb. 14, 2012
- Changing Demographics & Values
 - Home Office & Quality of Life
- Community Activism Increasing – Hull, Belmont, Milton, etc.

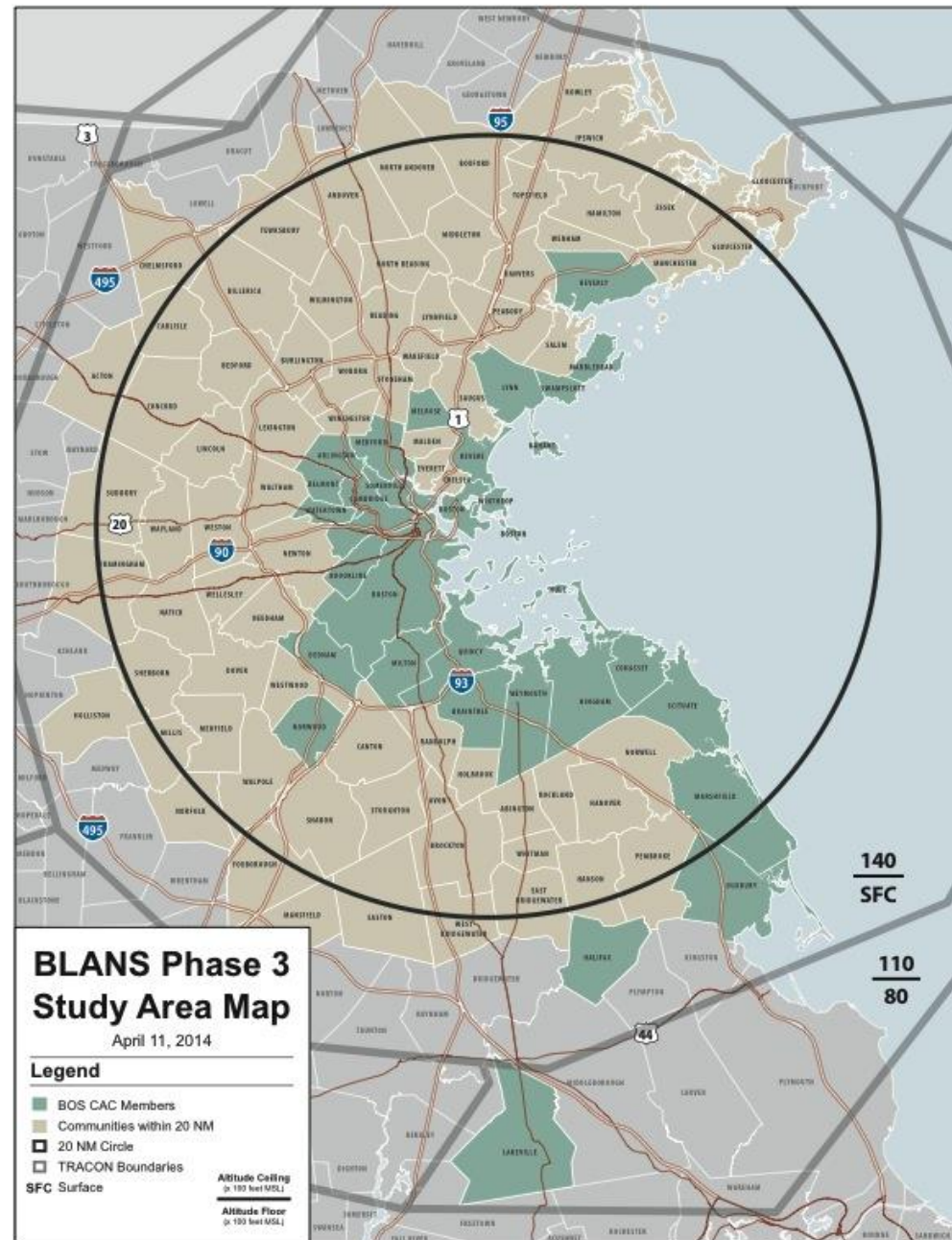
Who Benefits?

- **Airline Industry**
 - Increased Capacity
 - Reduced Fuel Consumption
 - Less Engine Wear
 - Record Profits
- **Commonwealth of Massachusetts**
 - Increased Revenue from Massport
 - Economic Growth

With the advent of new technology - better navigation, younger fleet of planes - along with a strengthening economy, has resulted in a dramatic increase in revenue for the Airlines and Massport with no benefits going to those that have to shoulder the burden of the Airport.

Massport/FAA Focus

Boston Logan Airport Noise Study

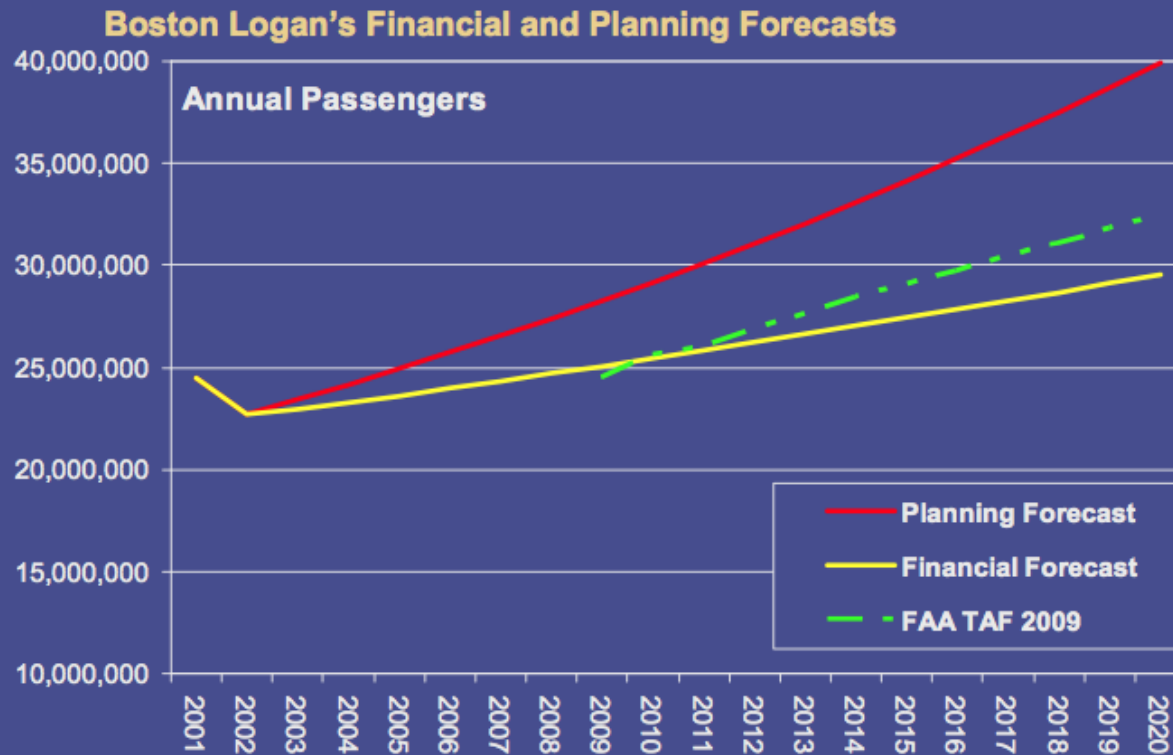


Forecast

- Logan Airport to increase capacity by 30% increasing number of flights over Hull and surrounding communities
- Logan Airport projected third straight annual passenger record at 29.6 M travelers in 2013. Previous high 28.1 M in 2007 and 26.1 M in 2008 after the financial crisis
- Town of Hull highlighted as an area of impact
- No curfew at Logan Airport, 7/24 flights looming

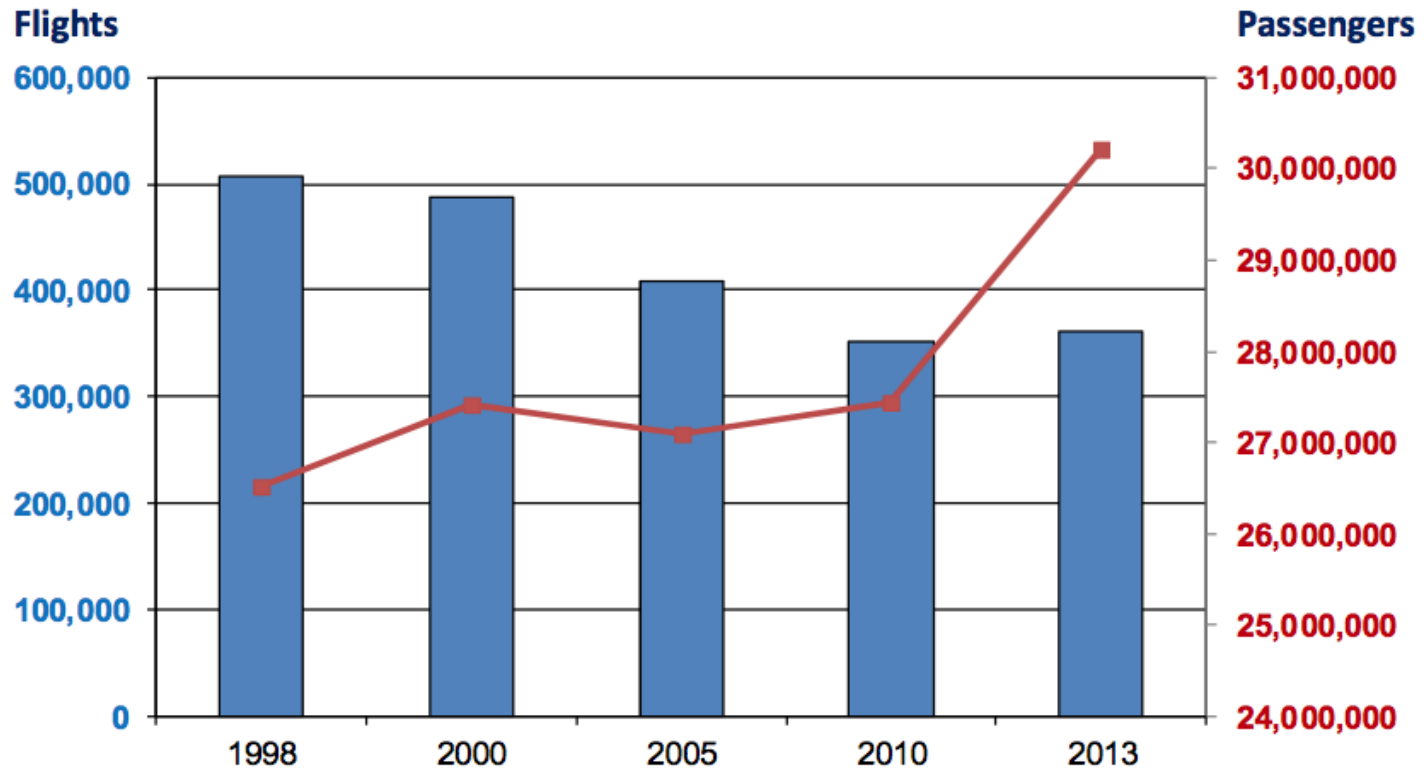
Passenger Growth Forecast

BOS Long Term Forecasts Reflect Historical Experience as well as Fundamental Demand Drivers



Boston-Logan – Activity

Although total Logan passenger levels reached a record high of over 30 million in 2013, total flights are well below the historical peak.



July 18, 2014

Boston-Logan International Airport
Airport Operations and Noise Issues



Federal Aviation
Administration

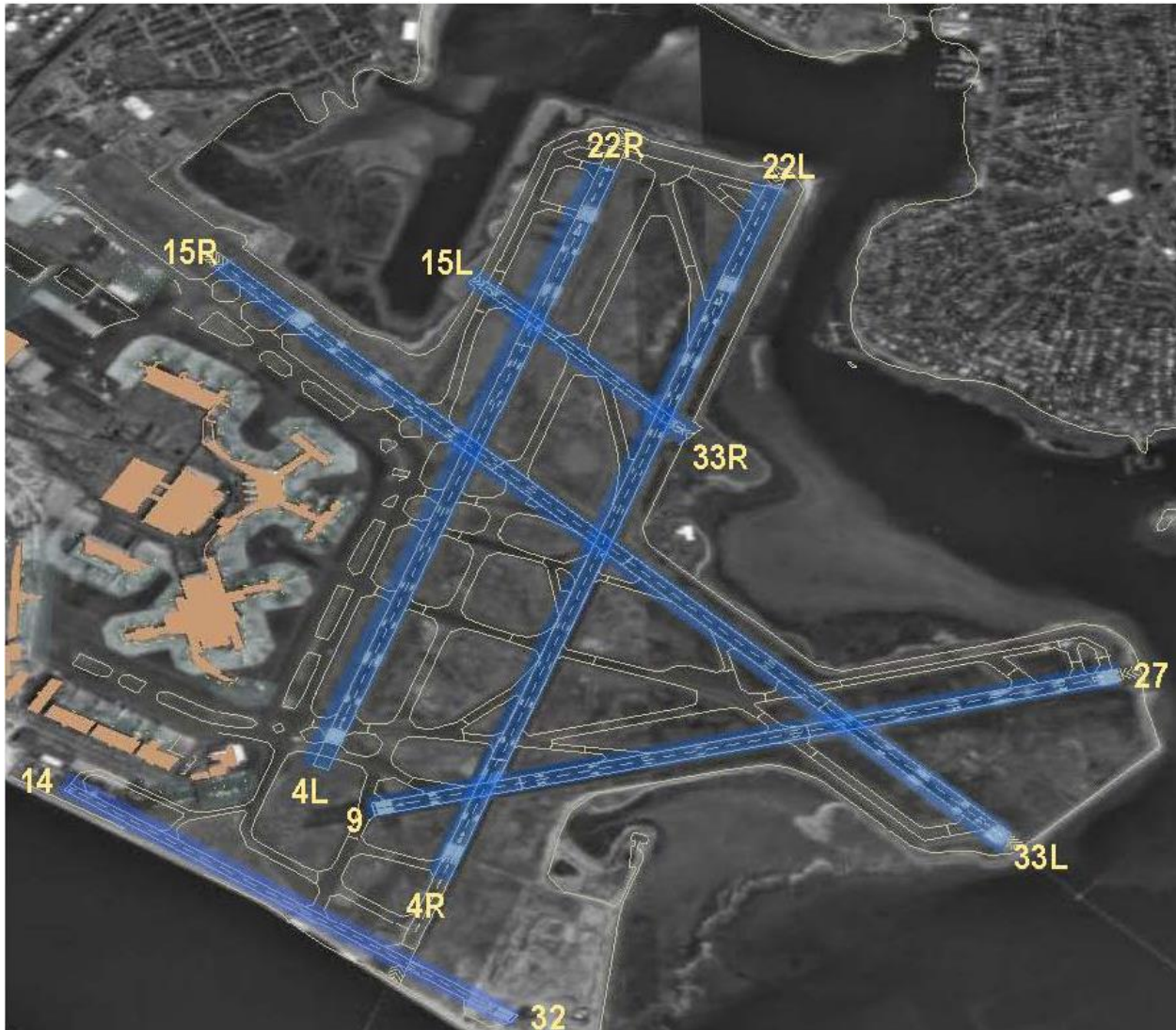
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Logan Airport Growth

New Airlines Routes

- Japan Airlines, April 2012
 - Departing 11:50 a.m. arriving Tokyo 3:35 p.m.
 - Arriving 4:50 p.m. departing Tokyo 6:20 p.m.
- Hainan Airlines to Beijing, June 2014
 - Monday, Wednesday, Friday and Saturday service
 - Departing Boston 4:10 p.m. arriving Beijing at 6:50 p.m.
 - Arriving Boston at 7:45 p.m. departing Beijing at 1:55 p.m.
- **Cathay Pacific Airways to Hong Kong, May 2015**
 - **Departing Boston at 1:45 a.m. arriving Hong Kong 5:35 a.m.**
 - **Arriving Boston 9:30 p.m. departing Hong Kong 6:00 p.m.**
- Emirates' Airline to Dubai, March 2014
 - Departing Boston 10:25p arriving 7:35p Dubai
 - Arriving Boston 2:10 p.m. departing Dubai 8:45 a.m.
- Turkish Airlines to Istanbul, May 2014
 - Departing Boston 10:55 p.m. arriving Istanbul 3:35p.m.
 - Arriving Boston 5:35 p.m. departing Istanbul 2:00 p.m.

Airfield Layout



Prevailing Winds

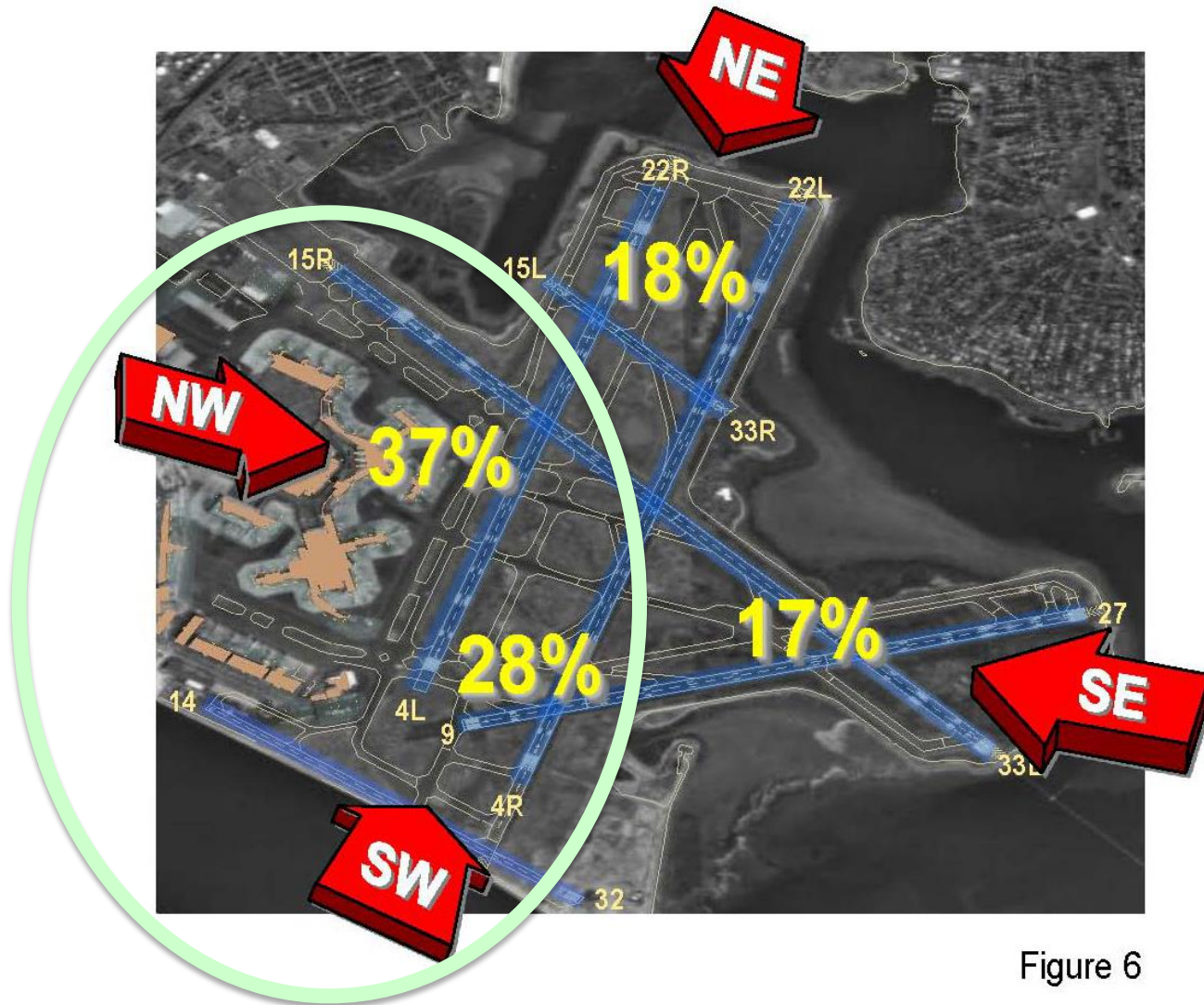


Figure 6

Northwest Flow Operating Configuration



Figure 4

Southwest Flow Operating Configuration

- Arrivals to R 22L and 27, and 22R (non-jet)
- Departures from R 22L and 22R



Southeast Flow Operating Configuration



- ➔ Arrivals to R 15R and 15L
- ➔ Departures from R 15R, 14 and 9

Figure 5

Northeast Flow Operating Configuration

- ⊕ Arrivals to Runways 4L and 4R
- ⊕ Departures from R 9, 4L (non-jet), and 4R



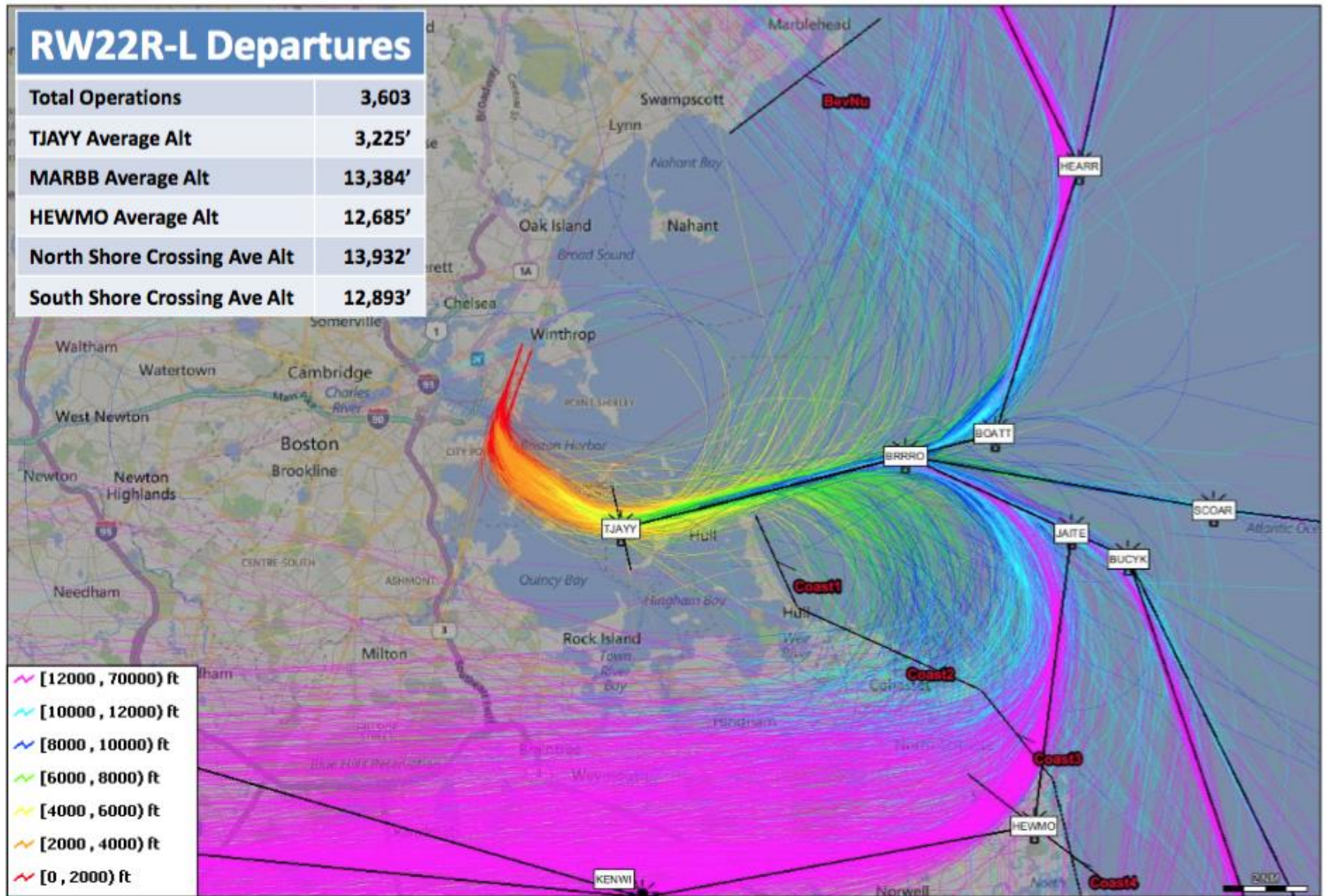
Runway Usage Comparison

Runway	2013				2012				2011			
	Arrival	%	Departure	%	Arrival	%	Departure	%	Arrival	%	Departure	%
04L	8,093	5.51%	0	0.00%	9,241	6.39%	0	0.00%	9,523	6.37%	0	0.00%
04R	42,838	29.18%	6,892	4.64%	48,838	33.79%	9,366	6.44%	54,395	36.38%	8,856	5.84%
9	0	0.00%	43,992	29.59%	0	0.00%	49,059	33.72%	0	0.00%	54,143	35.71%
15R	1,299	0.88%	7,284	4.90%	902	0.62%	6,300	4.33%	412	0.28%	8,069	5.32%
22L	22,931	15.62%	2,940	1.98%	23,634	16.35%	4,862	3.34%	24,821	16.60%	3,158	2.08%
22R	24	0.02%	51,550	34.67%	22	0.02%	55,412	38.08%	9	0.01%	53,328	35.18%
27	47,568	32.41%	17,288	11.63%	48,729	33.71%	8,587	5.90%	43,356	29.00%	10,961	7.23%
33L	22,751	15.50%	18,721	12.59%	12,523	8.66%	11,920	8.19%	16,119	10.78%	13,058	8.61%
32	1,277	0.87%	0	0.00%	657	0.45%	0	0.00%	870	0.58%	0	0.00%
Total	146,781	100.00%	148,668	100.00%	144,546	100.00%	145,507	100.00%	149,505	100.00%	151,598	100.00%

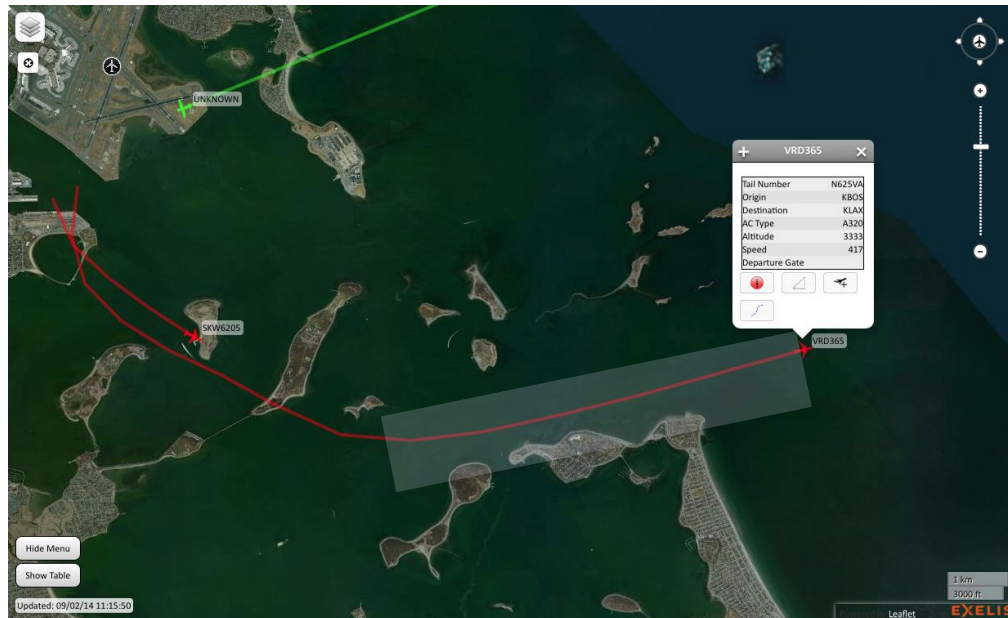
24,028	16.37%	61,774	41.55%	13,180	9.11%	66,574	45.75%	16,989	11.36%	64,555	42.58%
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Note: Departures on R 14 not included

Current RW22 R-L Departures

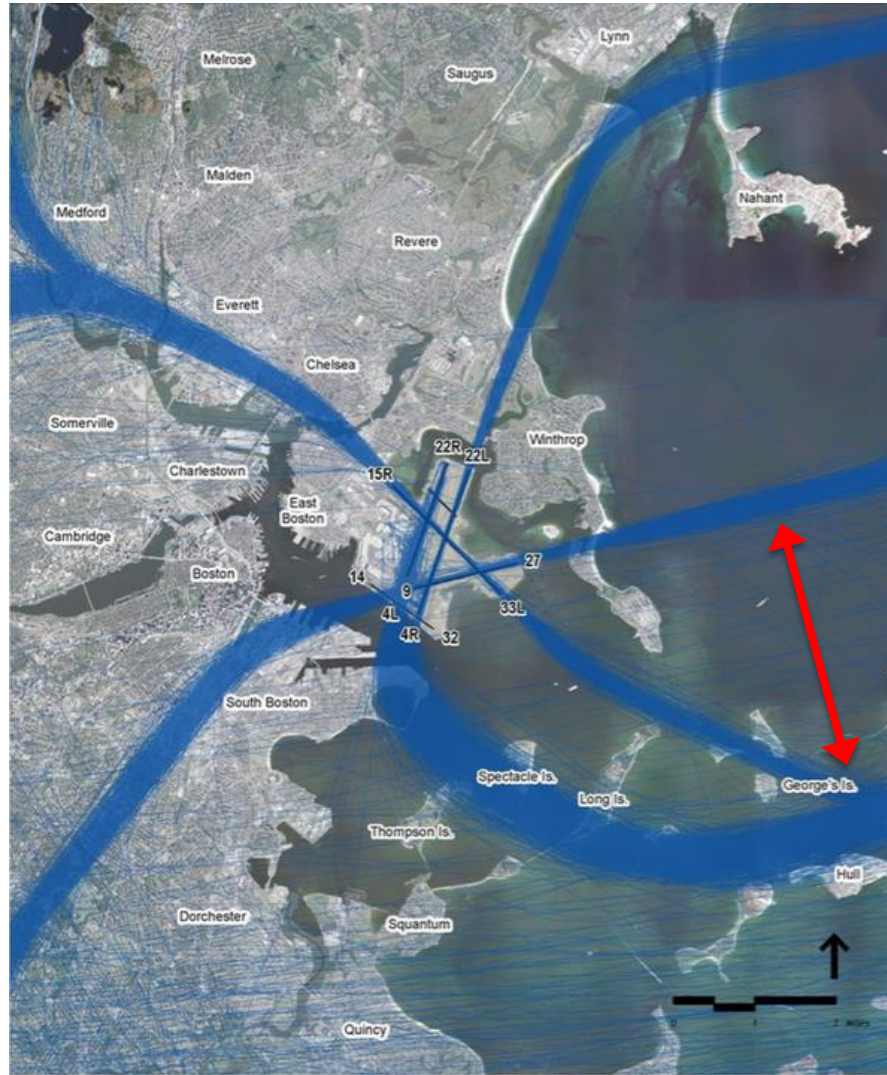


Previous Departure R22 vs. Current RNAV R22



Departures R22 & R15 over Hull

3 Nautical Mile Separation from R27 Arrivals over Winthrop

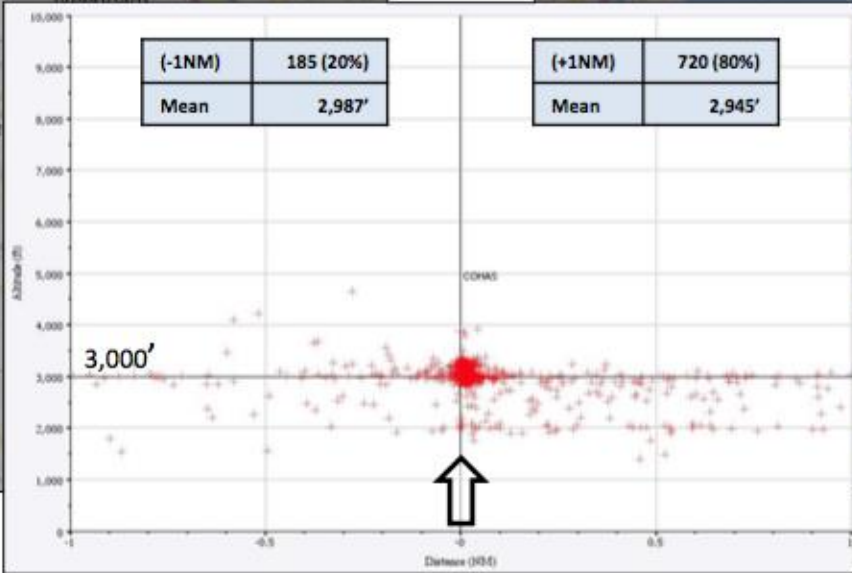
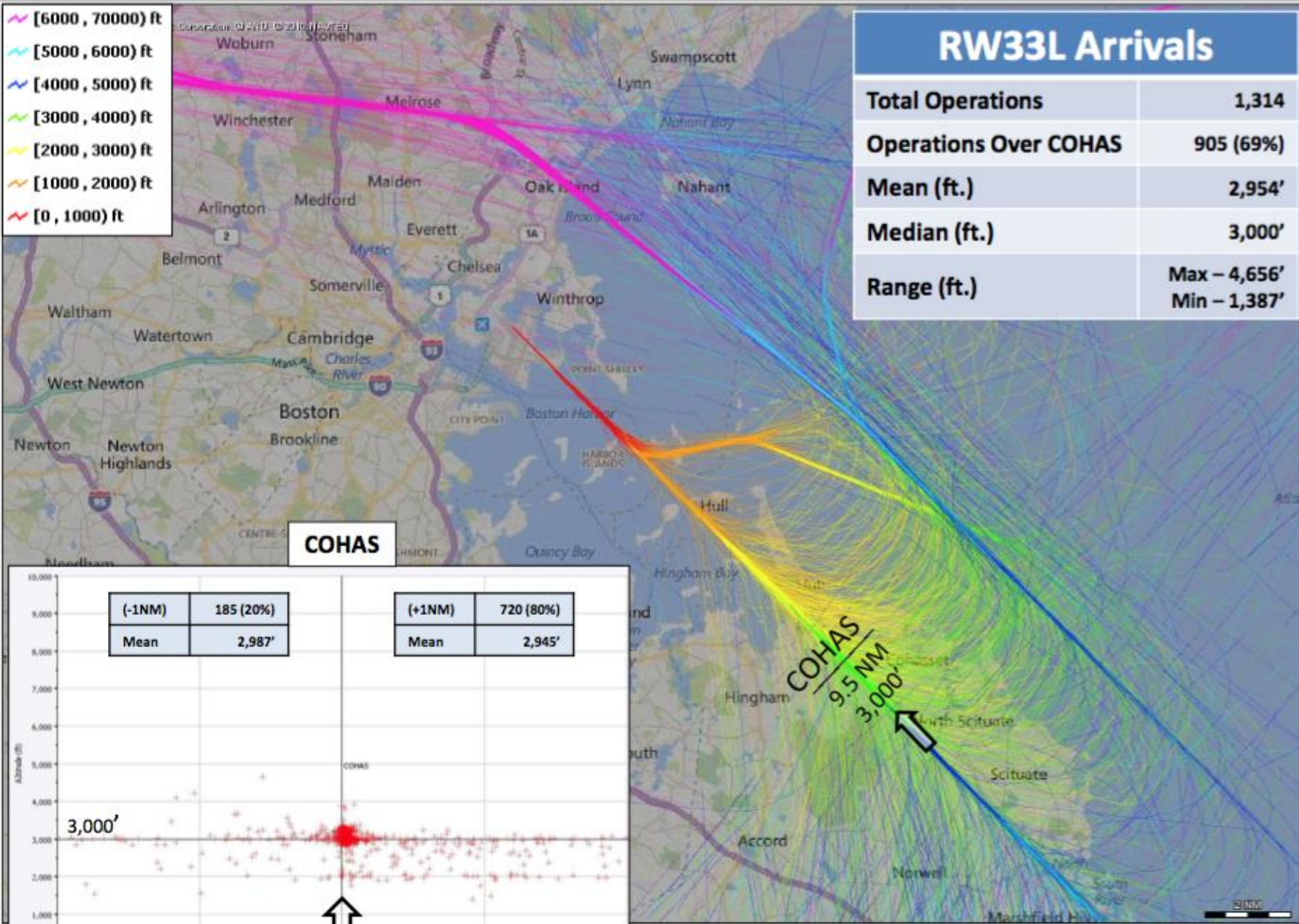


Source: Massport, Exelis NOMS, MassGIS, USDA NAIP 2014.

RealContours™ Air Carrier Jet Departure Tracks (April 2014)

-  [6000 , 7000) ft
-  [5000 , 6000) ft
-  [4000 , 5000) ft
-  [3000 , 4000) ft
-  [2000 , 3000) ft
-  [1000 , 2000) ft
-  [0 , 1000) ft

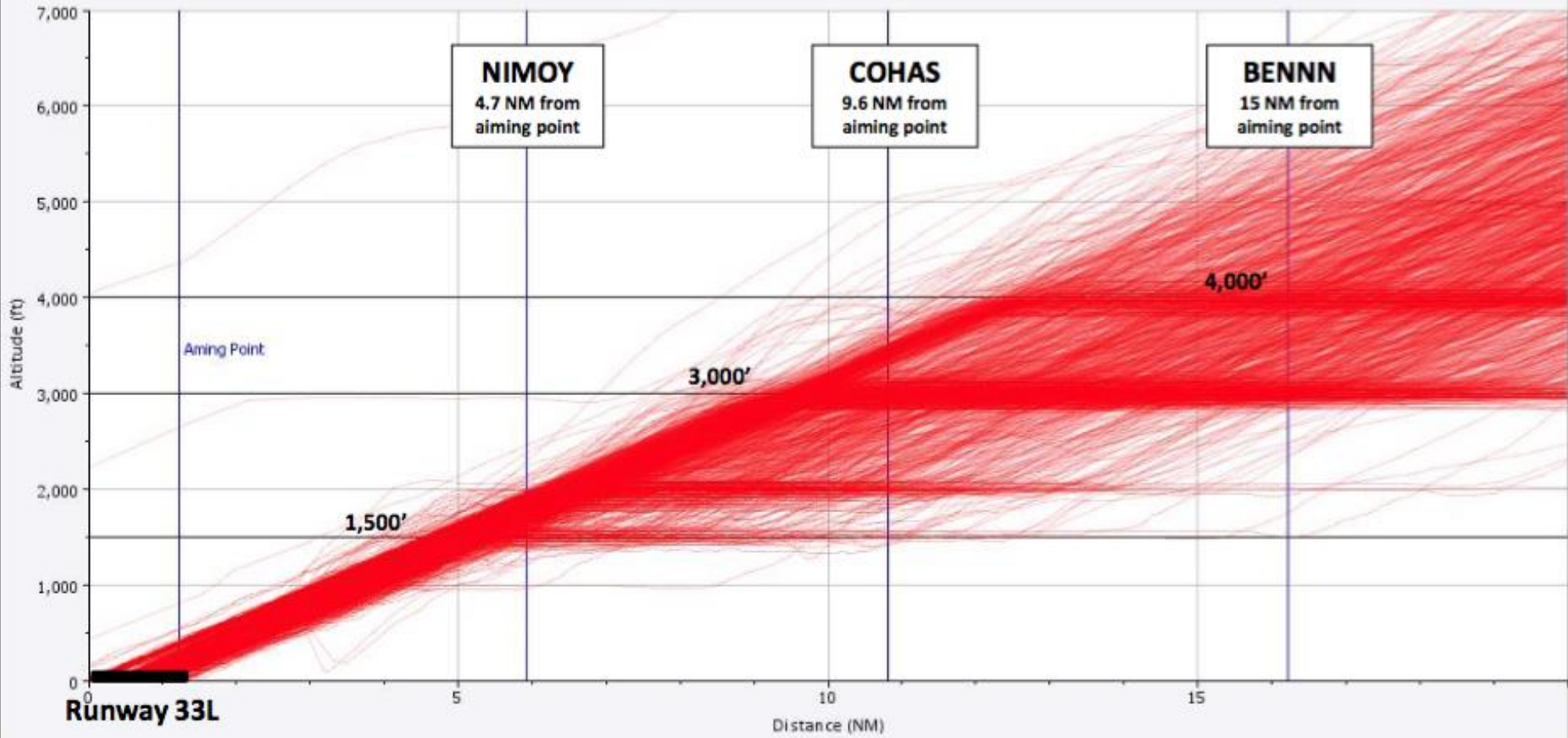
RW33L Arrivals	
Total Operations	1,314
Operations Over COHAS	905 (69%)
Mean (ft.)	2,954'
Median (ft.)	3,000'
Range (ft.)	Max – 4,656' Min – 1,387'



COHAS
 9.5 NM
 3,000'

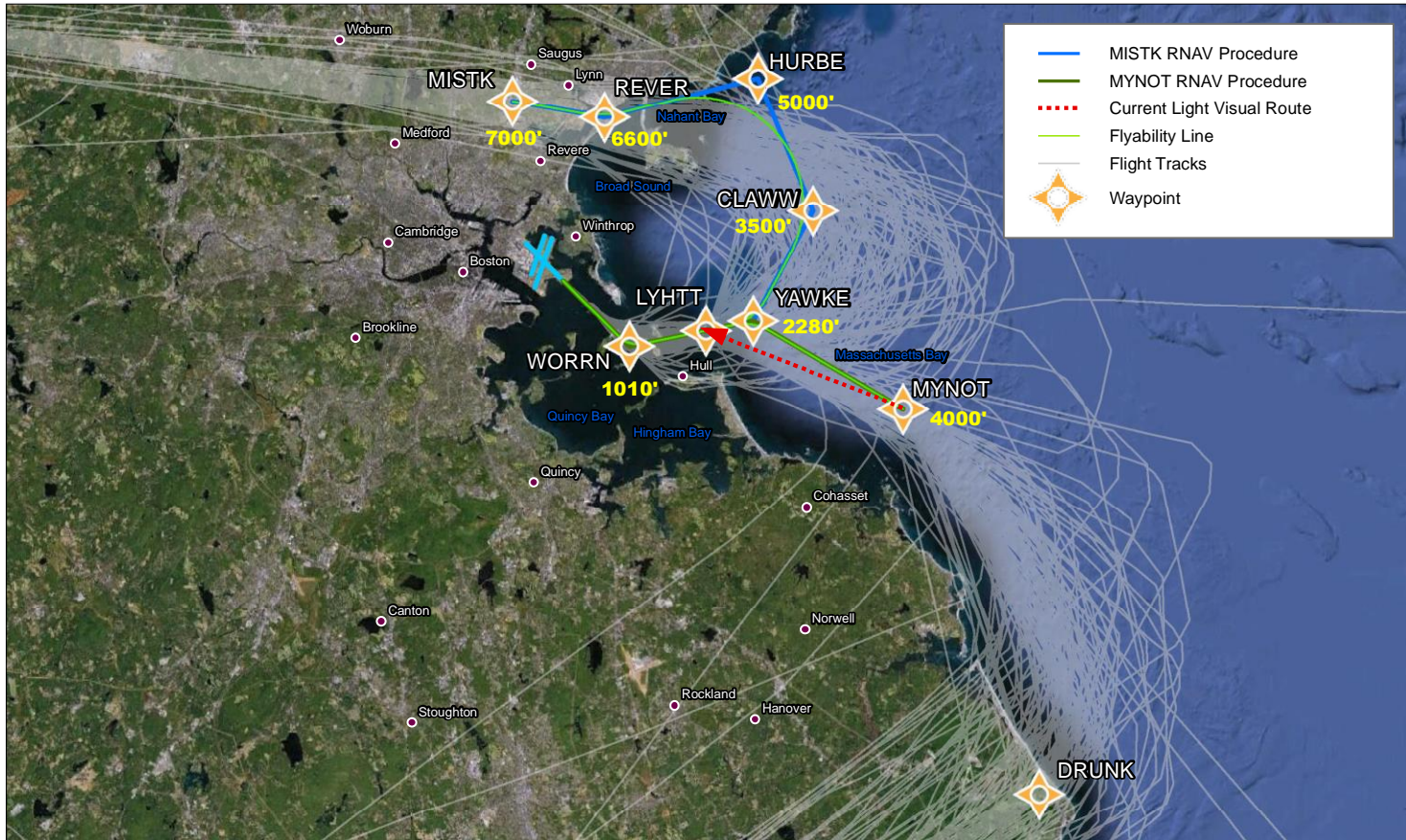
Profile View of RW33L Arrivals May - 2016

RW33L Profile View Chart

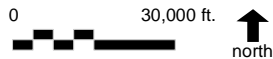


Proposed JetBlue Flight Path 33L

Boston-Logan International Airport

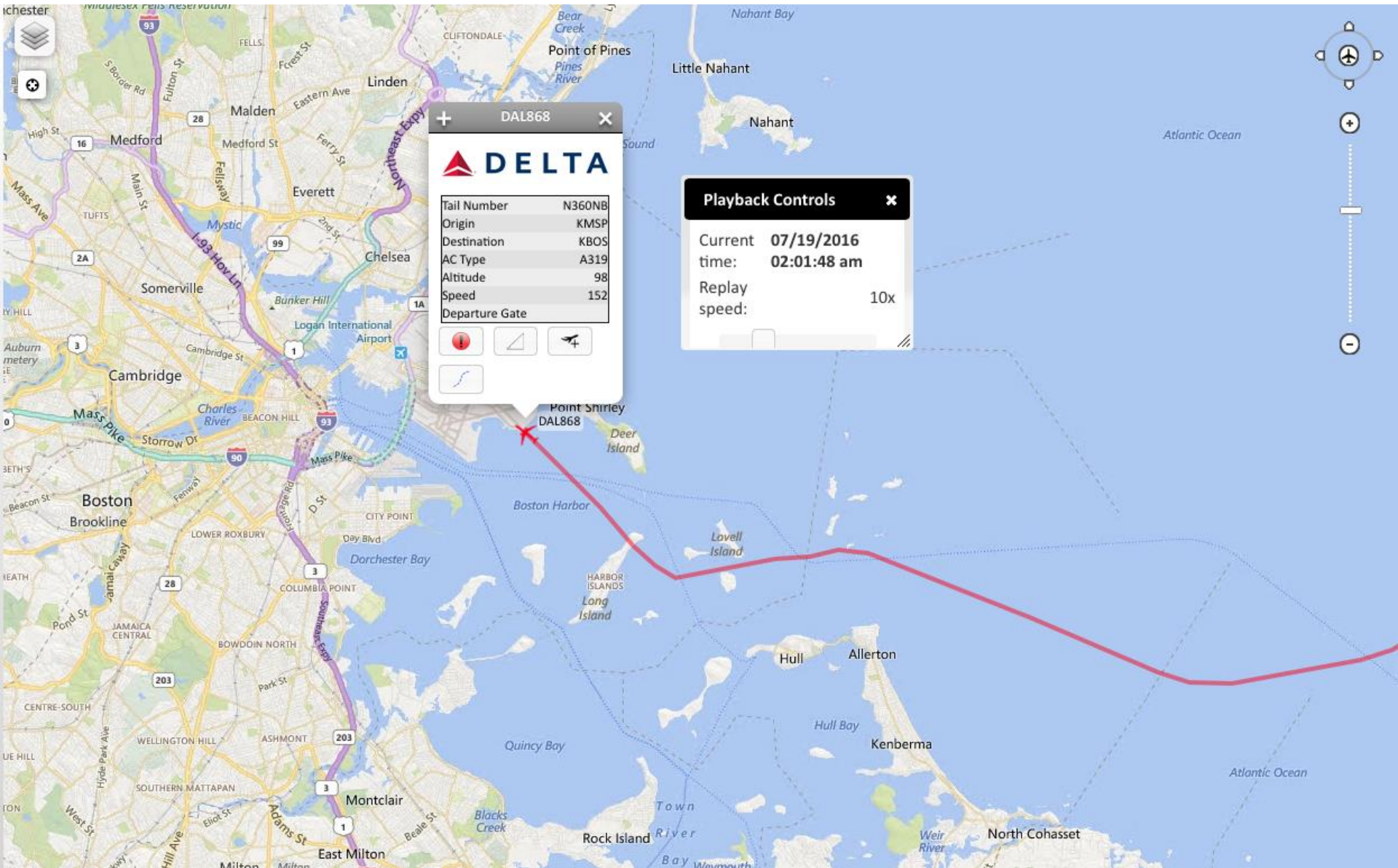


Sources: Federal Aviation Administration Sector Design and Analysis Tool (SDAT) (track data for RNAV visual approaches on Runway 33L for 30 selected days between July 2010 and March 2012); Federal Aviation Administration A90 TRACON (flyability lines); Federal Aviation Administration, System Operations, Performance Based Navigation RNAV/RNP Group, September 2012 (routes, procedures and waypoints); Google Earth Pro 2012, Terrametrics 2012 (aerial imagery).
 Prepared by: Ricondo and Associates, Inc., June 2013.



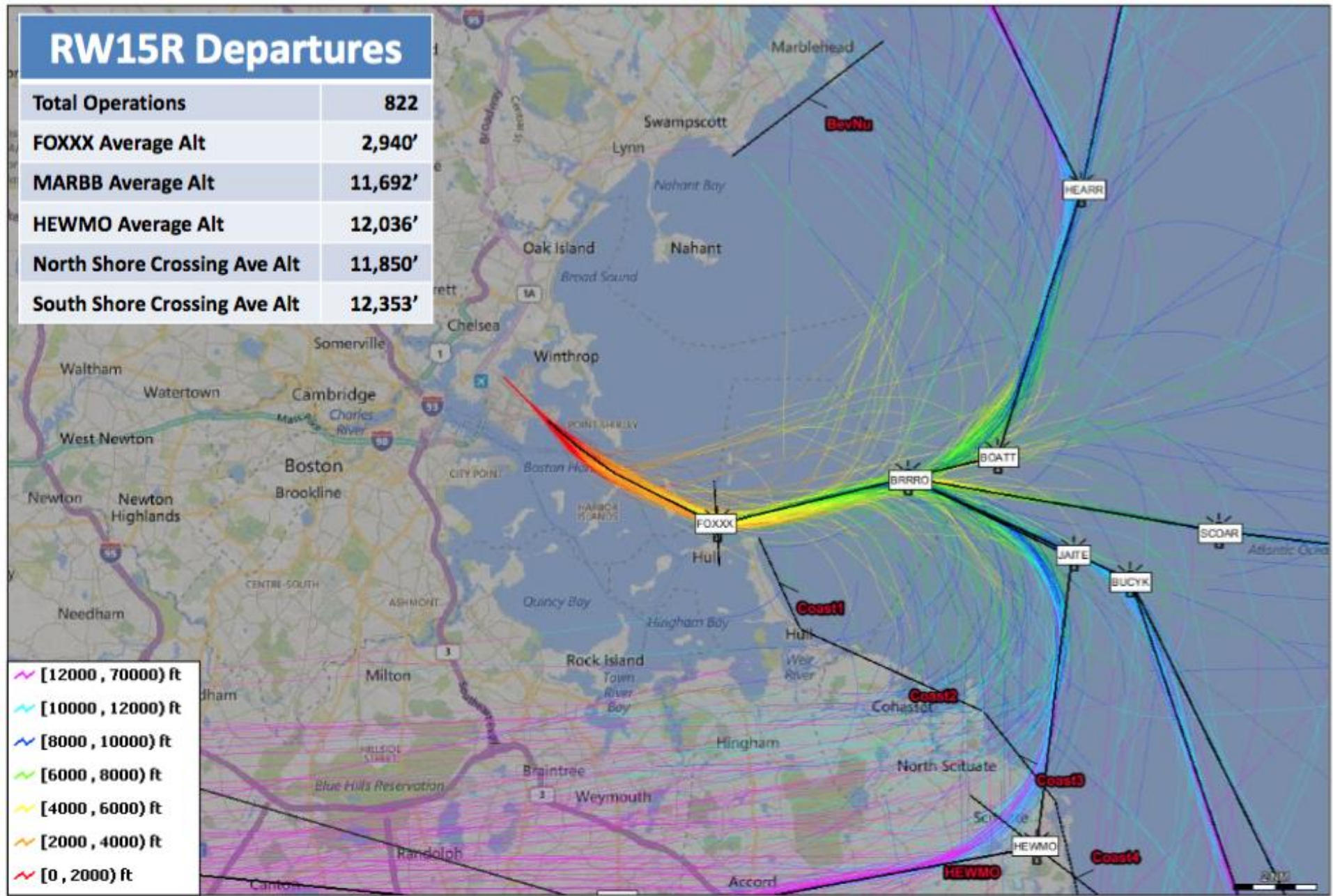
**Proposed JetBlue RNAV Visual
BOS Runway 33L**

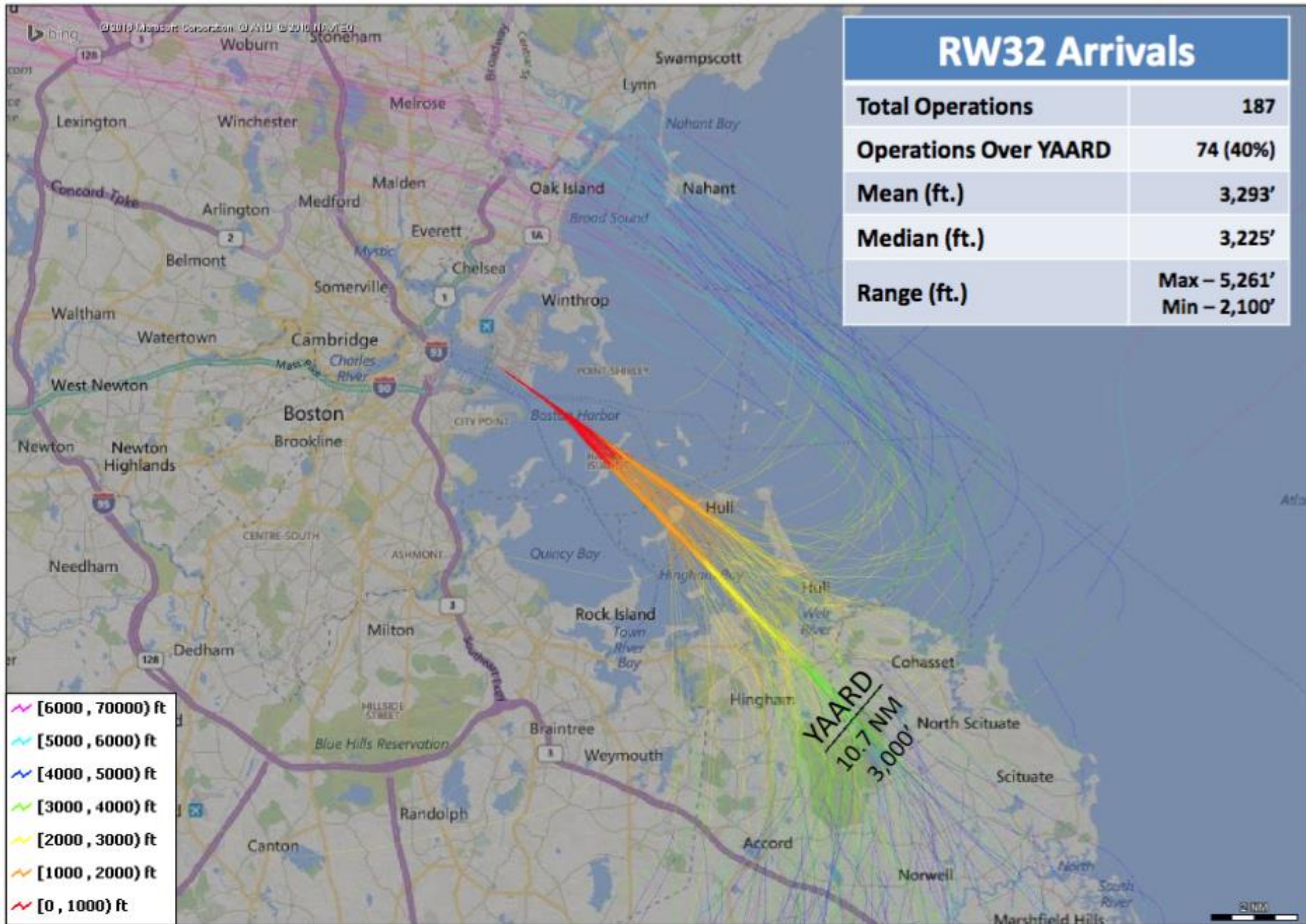
Boston Light – Delta Airbus A319



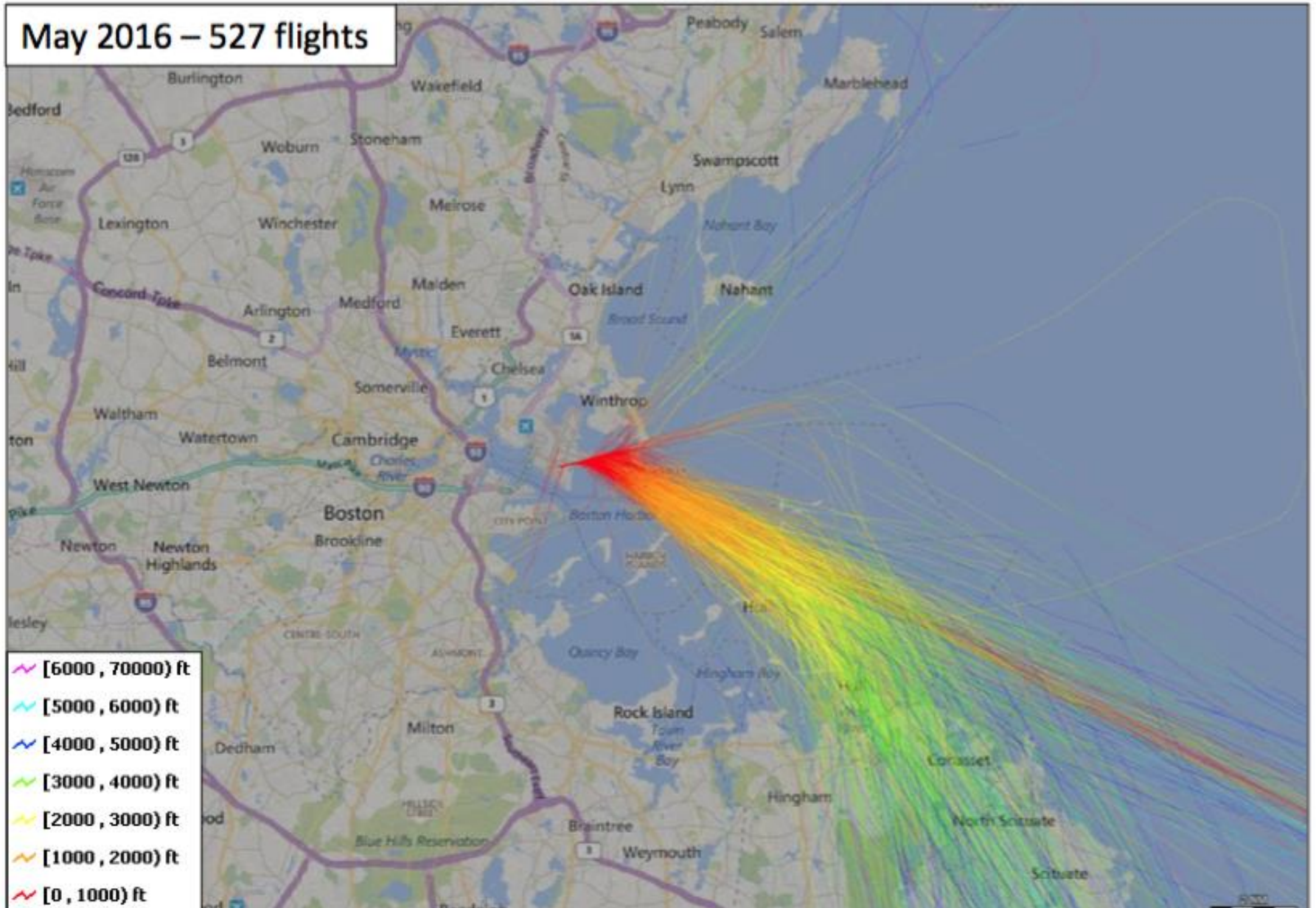
RW15R Departures

Total Operations	822
FOXXX Average Alt	2,940'
MARBB Average Alt	11,692'
HEWMO Average Alt	12,036'
North Shore Crossing Ave Alt	11,850'
South Shore Crossing Ave Alt	12,353'





Non Jet RW9 Departures



Massport Community Advisory Committee

- New State Agency with oversight of Massport
- Enabling Legislation
- Reports to Governor and General Court
- Appointed Members by Communities
- Statute Funding from Massport
- Massport Board of Directors Appointment
- Will supersede Logan CAC Interest Group
 - BLANS Initiative with Runway Use Program

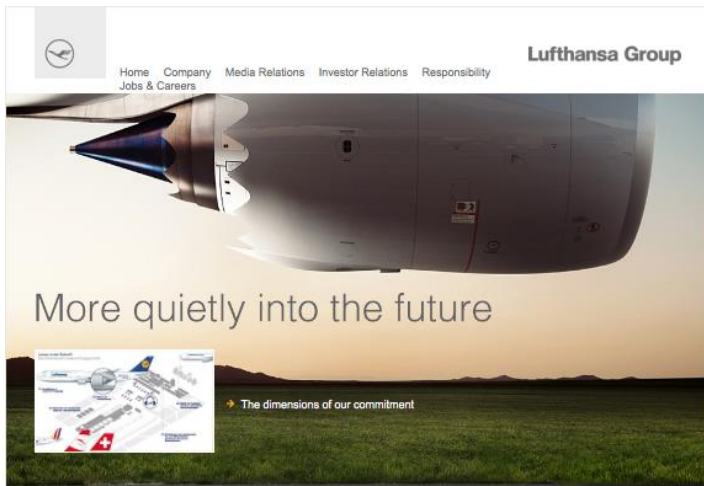
Specific Noise and Pollution Mitigation for Hull, Cohasset, and Hingham

- **Over Harbor Arrivals** - Utilize RNAV over Boston Harbor known as the “jBlue RNAV Visual BOS Runway 33L” for arrivals especially for overnight flights. This flight path was officially approved in December, 2014. This flight path would provide a great benefit to residents of the South Shore.
- **Share the Burden** – with other communities especially overnight flights. We take on the greatest burden of overnight flights relative to other communities.
- Eliminate late overnight passenger flights – not necessary. Massport has been trying to find ways to generate revenue and it has been at the expense of those that live near the airport. The FAA seems to be silent on this issue.
- **Modify Runway 15R Departures** – for overnight flights on Runway 15R (33L landings) by turning earlier over the harbor. Three nautical mile flight path separation rule should not be enforced when overnight plane traffic is almost non-existent.
- **Reduce the three nautical mile flight path separation** - rule for departures on Runway 22R pushing planes back out over the harbor pre-2012. The implementation of RNAV has created a more precise and reliable flight path. Pre-2012 path was not as precise and was flown for decades without incident. Moving the path a short distance and planes flying at a higher altitude would provide significant relief.

Noise & Pollution Mitigation Opportunities for All

- **FAA Priority** - Reducing aircraft noise and pollution should be on the FAA's priority.
- **Continuous Decent** - for airplanes when landing - engines set at idle similar to jetBlue protocol.
- **Increase airplane descent angle** - as proposed by jetBlue for new Milton flight path. This is also being implemented in Europe.
- **Noise Suppression** - Require airlines to modify Airbus A320 plane engines with a vortex generator to eliminate the engine noise screech/whine. Already being implemented in Europe. Lufthansa has been a leader in this area.
- **Eliminate Older and Louder jet engines** - Current standards are not good enough. Example is the antiquated MD-80 planes that were grandfathered by the FAA if engines were modified.
- **Implement a runway use plan at Logan Airport** - to more equitably share the burden and reduce the persistence of the flights over communities. This is a Logan CAC work in progress with no assurances that it will be implemented or enforced.
- **Modify Flight Paths** - to benefit the people on the ground who take on the burden of the airports. There should be a balance between maximum efficiency benefiting the airlines and quality of life for those who live under the planes. We are taxpayers too. When is the FAA going to work for us?
- **Greater Flight Altitude** - when flying in the vicinity of Hull
- **Enforcement** - of flight paths for all aircraft
- **Noise Based Landing Fee / Incentive** - that would encourage all carriers to fly their newest, quietest aircraft.
- **New Airplane Engines** – are in development that will produce less noise and use less fuel.

Noise a Priority in Europe



More quietly into the future



The dimensions of our commitment

Flight Noise Reduction Investment Technical Upgrades Noise Research Noise-Reducing Procedures Dialogue

The Lufthansa Group is setting standards in its active approach to noise abatement

The 20th and 21st centuries saw an unprecedented degree of mobility become an ordinary aspect of everyday life. The world became a village. Nowadays it is a fundamental condition for economic or social community. In 2013, for the first time, more than three billion people traveled by air. Mobility can also give rise to conflict, however. It not only provides benefits but also has an impact on the environment, one source of which is noise emissions. This is true of all modes of transportation. It is as true of freight trains as it is for trucks, cars, or even airplanes. The airlines of the Lufthansa Group have been setting standards worldwide for responsible mobility. And that includes our commitment to active noise abatement. Understanding the causes of noise in detail and finding ways to continually reduce them are formidable tasks. We are working on them with leading scientists and experts.



"We have been actively involved for years in noise research so that we can fly even more quietly."

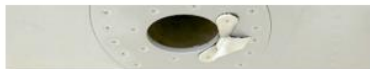
Dr. Gerd Saueressig
Manager, Group Environmental Concepts Deutsche Lufthansa AG

Noise reduction at the Airbus A320

In February 2014 Lufthansa became the first airline in the world to take delivery of an Airbus A320 equipped with vortex generators. A total of 157 aircraft in the existing fleet will be equipped with the new noise-reducing component, so that, when the expected new deliveries are added in, more than 200 A320 aircraft in total will be flying more quietly.

Audio tests

A320 audio tests with and without vortex generators on the final approach at Frankfurt Airport from the Offenbach-Lauterborn monitoring point.



Without vortex generators

With vortex generators



Sustainability Report

To find out more about responsibility within the Lufthansa Group, read the latest sustainability report Balance (E-Paper).

Order or download the report.

Further Information

- Forum Airport and Region
- Fraport - Frankfurt Airport
- Munich Airport
- BDL (Federal Association of German Aviation and Space Industry)

Press Releases

- 25.06.2015
- * Lufthansa now flying much quieter
- 28.07.14
- * Balance sustainability report 2014: Lufthansa Group flies more quietly and more efficiently
- 07.04.14
- * Lufthansa Group orders quieter, fuel-efficient LEAP-1A engines for 40 aircraft
- 12.02.14
- * Lufthansa takes delivery of world's first aircraft with vortex generators
- 11.2.14
- * Boeing 747-8: Quieter and more fuel efficient
- 19.09.13
- * Modern, quiet and environmentally efficient: Lufthansa Group orders 59 ultra-modern wide-body Boeing 777-300ER and Airbus A350-900 aircraft

Policy Brief

- * Policy Brief 2014-1 – Investing billions in quiet aircraft

Weitersagen



More Themes

- * Overview

Economy

Heathrow flight paths: Airport to trial steeper arrival to reduce noise pollution over west London



By Lewis Dean

August 10, 2015 15:17 BST



Heathrow Airport is trialling a new flight path in the hope it will reduce noise pollution (Getty)

Heathrow Airport will trial a steeper approach for landing planes in a bid to give west London greater respite from noise pollution.

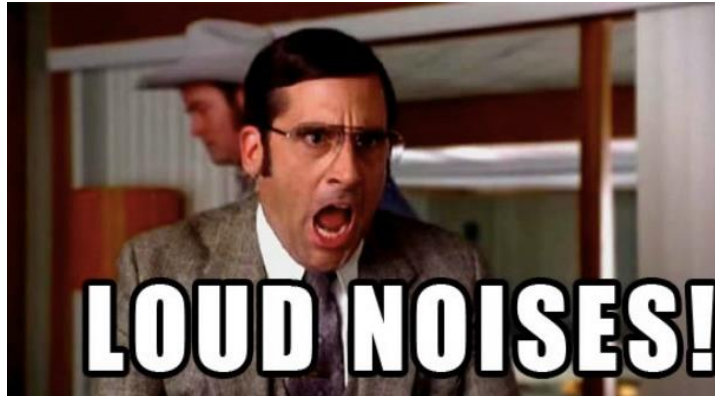
Starting on 14 September 14, the airport will be trying out a slightly steeper approach angle of 3.2 degrees. The international standard approach for most airports in the world is set at three degrees.

Airport bosses believe a steeper angle would lead to quieter approaches to the airport and the trial comes after Frankfurt successfully adopted steeper approach angles to reduce the impact of noise on residents.

<http://www.lufthansagroup.com/en/themen/more-quietly-into-the-future/flight-noise-reduction.html>

<http://www.ibtimes.co.uk/heathrow-flight-paths-airport-trial-steeper-arrival-reduce-noise-pollution-over-west-london-1514859>

Call to Action - Let Our Voices Be Heard!



Massport Noise Complaints

617-561-333

Monday-Friday, 7:00 a.m. – 4:30 p.m.



Flight Monitor

Online flight tracking and noise complaints

https://secure.symphonycdm.com/publicvue/Frames.asp?sys=bos&HeaderFrame=HeaderPage.asp&MenuFrame=LeftMenu.asp&ContentFrame=welcome_redirect.asp?sys=bos

Action Plan

- Continue Engaging Our Legislative Leaders
- Update Meeting with Massport Officials & Legislators on Over Harbor Solutions
- Continue Active Participation on Massport CAC
- Continue Grass Roots Effort
- Continue Coalition Building
- Move Relationship with Massport and FAA to a More Productive Place

HULL NEIGHBORS for QUIET SKIES

QuieterSkies.org



Hull Neighbors: Fighting for Quieter Skies



Several members of "Hull Neighbors" meet with Congressman Lynch to present a petition signed by Hull citizens calling for relief from Logan overflights.

Dear Neighbor:

Although you may not be personally affected by the sound of low-flying jet aircraft over Hull, the lives of many residents are being impacted each day by flights that begin as early as 5:00 a.m. and continue well past midnight. No one in this town chose to move next door to an airport, but over the past few years, like it or not, the airport has moved next door to us.

Today our little community is being hammered by more airport traffic than any other in Massachusetts; generating noise that diminishes property values and harms our health and well-being. And it's about to get worse. In the coming years, flights over Hull are projected to increase as Logan Airport moves toward around-the-clock arrivals and departures.

Faced with this alarming forecast, concerned citizens formed Hull Neighbors for Quiet Skies to raise public awareness about aircraft noise pollution and press our public officials for answers and common sense solutions. Every neighborhood association in Hull stands behind this effort, including the Point Allerton Association, Hull Village Association, the Sagamore/Hampton Bay Area Association and both the Atlantic Hill and Green Hill Improvement Associations.

We ask your support as well. Please sign the petition, share an email address, and join your neighbors in the fight for quieter skies over Hull. Thank you!!!

A PETITION in the pursuit of happiness. We The People...

... of Hull, Massachusetts have been forced to endure the relentless assault of Logan Airport traffic directed over our community by the Federal Aviation Administration's Next Generation Air Transportation System (NextGen). These flight corridors, implemented without adequate notice, explanation or study, have disrupted the lives of our citizens and affected the health and well-being of our families. The undersigned residents call upon our local, state and federal representatives, as well as Massport and the FAA, to find meaningful solutions that offer relief from the destructive legacy of NextGen. *(NOTE: If you signed our petition last year, there is no need to do so again.)*

NAME:

ADDRESS:

TOWN:

STATE:

Send

Reset




Thanks for signing the petition! We'd like to keep you informed about the town's progress in fighting for quieter skies over Hull. To support "Hull Neighbors" and receive periodic updates, please enter your name and email below. This website is secure and email addresses are never shared.

NAME:

EMAIL:

Send

NEED A REASON TO COMPLAIN ABOUT JET NOISE?

JUST WAIT 30 SECONDS.

COMPLAIN ABOUT THE PLANES
CALL (617) 561-3333
MASSPORT NOISE COMPLAINT LINE

Hull Neighbors for Quiet Skies Contact: Mail@QuieterSkies.org

Thank You!

Challenges

- FAA Regulations
 - Safety, concerned with increased risk
 - Noise standards, DNL (Day Night Average Loudness)
 - Noise impact not a priority
- Logan Airport's physical capabilities
- Air Traffic Controllers resistance
- RNAV Implementation & NextGen funding
 - Noise impact not a priority
- Financial – Massport, FAA, Airlines
- No Fly Zones – Existing Mitigation

Grass Roots Organization

<https://www.facebook.com/AirplaneNoiseHullMA>

Airplane Noise Hull, MA

Community

Following Share

Timeline About Photos Likes Events

PEOPLE

6 likes

ABOUT

- Don't Suffer Airplane Noise in Silence!
- Call MassPort's Complaint Line Often 617-561-3333
- or go to: <http://tinyurl.com/op7ykbz> and click Complaint
- Suggest Edits

PHOTOS

Post Photo / Video

Airplane Noise Hull, MA shared a link. August 17

Milton officials try making some noise of their own against deafening roar of Logan's jets - The... www.bostonglobe.com

Boston-area residents have griped for the past year and a half about the house-rattling, sleep-depriving, and conversation-ending noise from low-flying jets.

<https://www.facebook.com/pages/Hull-Is-Not-A-Runway/140939192747737>

Hull Is Not A Runway

Community

Following Message

Timeline About Photos Likes

PEOPLE

227 likes

ABOUT

- Rallying Hullonians to fight the increase in airline noise that threatens our quality of life.
- Suggest Edits

PHOTOS

Hull Is Not A Runway September 5

Still waiting for Massport to post the caller numbers for August... and hoping to have big numbers to post soon. Recent conversations with both Massport and local politicians indicate that what we are doing can only have a positive impact -...See More

Town of Hull, Logan Airport Committee 08-04-2016

Grass Roots Results

- One Facebook page created - Hull is Not a Runway - and grown to 225 likes
- One Facebook group created - Airplane Noise Over Hull and grown to 56 active members
- 700 fliers distributed
- 50 posters posted
- Record call volume to Massport in July - 136 unique callers totaling 329. Increase from June – 46 unique callers totaling 124 calls.
- Increasing interest among Hull Neighborhood Associations
- 2 Hull Times cover stories
- The creation of a citizen action committee

Action Plan

- Continue Engaging our Legislative Leaders
 - Make a Case for Environmental Justice and Fairness
 - Facilitate Massport & FAA to Take Action
- Meeting with Massport Officials & Legislators
 - Focus on Implementing Near-term Solutions
- Active Participation in the new CAC
- Increase Grass Roots Campaign to Mobilize Residents
- Continue Coalition Building
- Move Relationship with Massport and the FAA to a More Productive Place

Resources

- **Massport Noise Complaints** <https://www.massport.com/environment/environmental-reporting/noise-abatement/noise-complaints/>
- **How Logan Operates**
<https://www.massport.com/environment/environmental-reporting/noise-abatement/how-logan-operates/>
- **Flight Monitor**
https://secure.symphonycdm.com/publicvue/Frames.asp?sys=bos&HeaderFrame=HeaderPage.asp&MenuFrame=LeftMenu.asp&ContentFrame=welcome_redirect.asp?sys=bos
- **Passur Flight Tracking**
<http://ww4.passur.com/bos.html>
- **RNAV**
<http://www.youtube.com/watch?v=gSqmLDEaqBAPassur>
- **RNBoston Logan Airport Noise Study**
<http://www.bostonoverflight.com/index.aspx>

Don't Suffer Airplane Noise in Silence!

Summer's here, windows are open
and it's time to let your voice be heard!

**Call MassPort's Complaint Line:
617-561-3333**

Monday-Friday, 7:00 am - 4:30 pm

or file a complaint online anytime:
<http://goo.gl/mWJCIK>



Thanks to the Hull Airport Committee

<http://goo.gl/FM929K>

Runway 33L Impact

Boston Logan International Airport

