

# NY/NJ/PHL Metropolitan Area Airspace Redesign

Presented to: Congressional Staffers

By: Robert Novia, Manager

Date: January 28, 2011



Federal Aviation  
Administration



# Review of Objectives of NY/NJ/PHL Metropolitan Area Airspace Redesign

- **Purpose**

- Increase efficiency and reliability of the airspace structure and ATC system to accommodate growth while enhancing safety, reducing delay and taking advantage of new technologies.

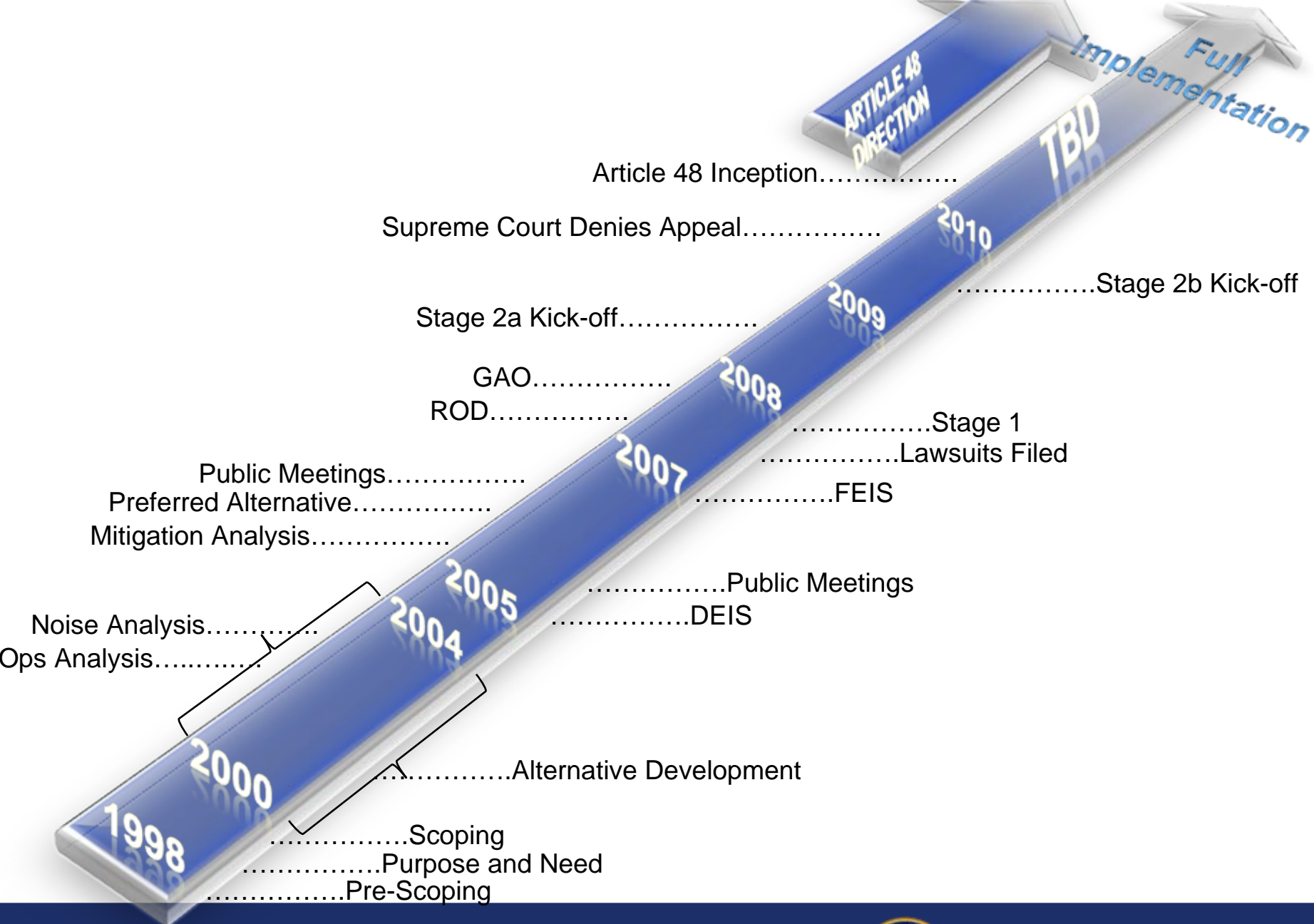
- **Need**

- Maintain Safety
- Respond to Increasing Aviation Growth
- Mitigate Current Mounting Delays



- **Eight Elements to Evaluate Purpose and Need:**

- Reduce Delay
- Improve User Access
- Maintain Airport Throughput
- Expedite Arrivals and Departures
- Flexibility in Routing
- Reduce Complexity
- Balance Controller Workload
- Reduce Voice Communications



# Environmental History

- **The Project was the subject of the largest environmental study for airspace changes ever undertaken by the FAA. This study began in 1999.**
- **The alternatives developed as a part of this Environmental Impact Statement (EIS) were done in a collaborative relationship between FAA and Labor/Management.**
- **Thousands of comments were taken on the DEIS and some of those comments were used in developing the noise mitigation measures. The comment period lasted over 6 months and involved over thirty (30) public meetings throughout the study area. We have responded to each comment in the Final Environmental Impact Statement (FEIS).**
- **The Final Environmental Impact Statement (FEIS) was published on Aug 3, 2007.**
- **The Record of Decision (ROD) was issued on September 5, 2007. The Selected Project for this study is The Integrated Airspace Alternative with the Integrated Control Complex (ICC) with Mitigation variation.**



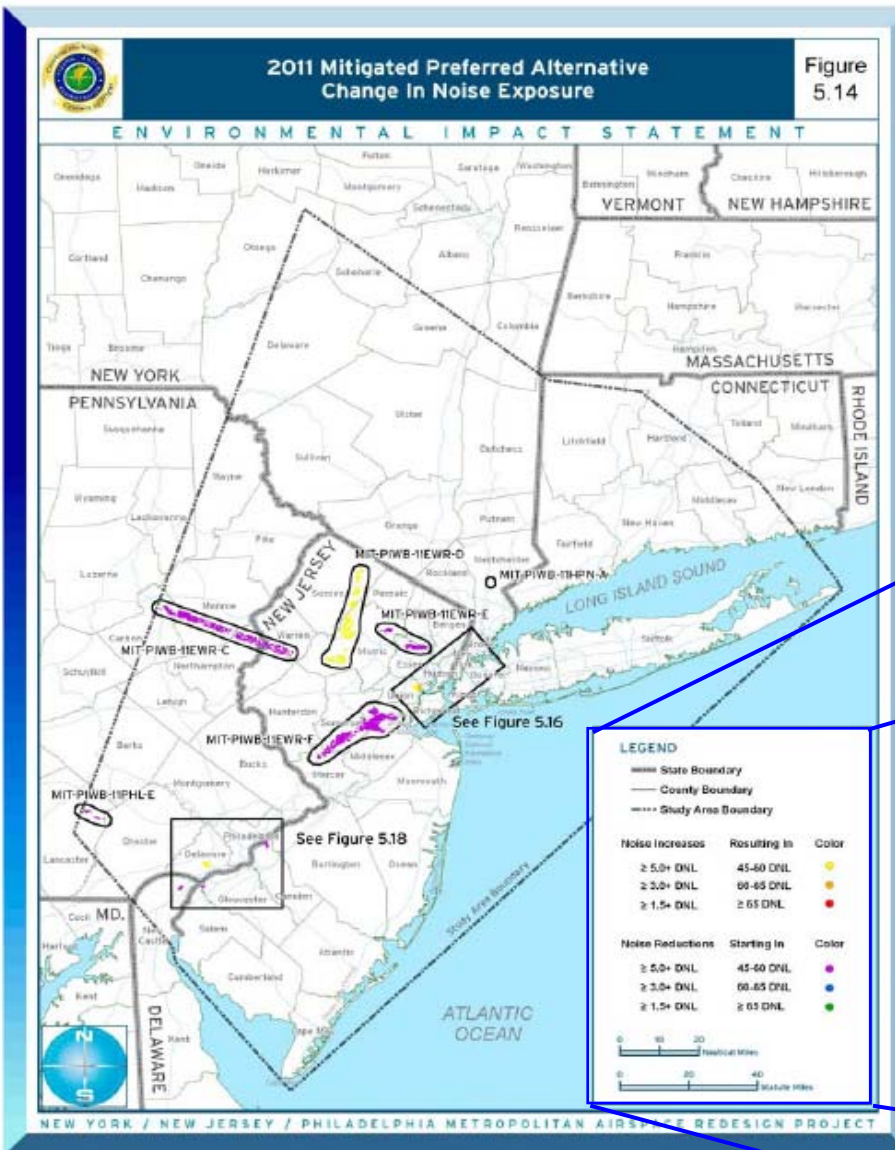
# Legal History

- On June 10, 2009, the U.S. Court of Appeals for the District of Columbia Circuit issued a favorable opinion that dismissed or otherwise disposed of all claims against the FAA's Record of Decision (ROD) for the New York/New Jersey/Philadelphia Metropolitan Area Airspace Redesign Project.
- On August 19, 2009 Petitioners of the Project were denied a rehearing by the U.S. Court of Appeals for the D.C. Circuit.
- The U.S. Supreme Court was petitioned for certiorari (*a writ issuing from a superior court calling up the record of a proceeding in an inferior court for review*), on November 17, 2009.
- On January 19, 2010 the U.S. Supreme Court denied certiorari.

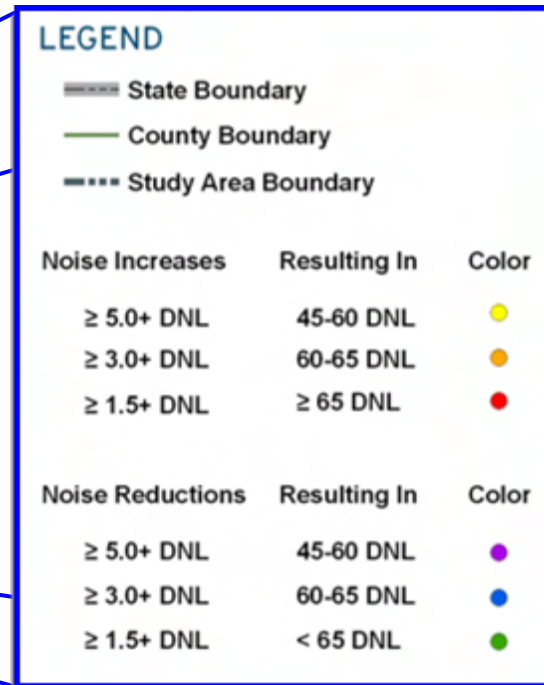


# EIS Noise Study Area: Surface -14,000





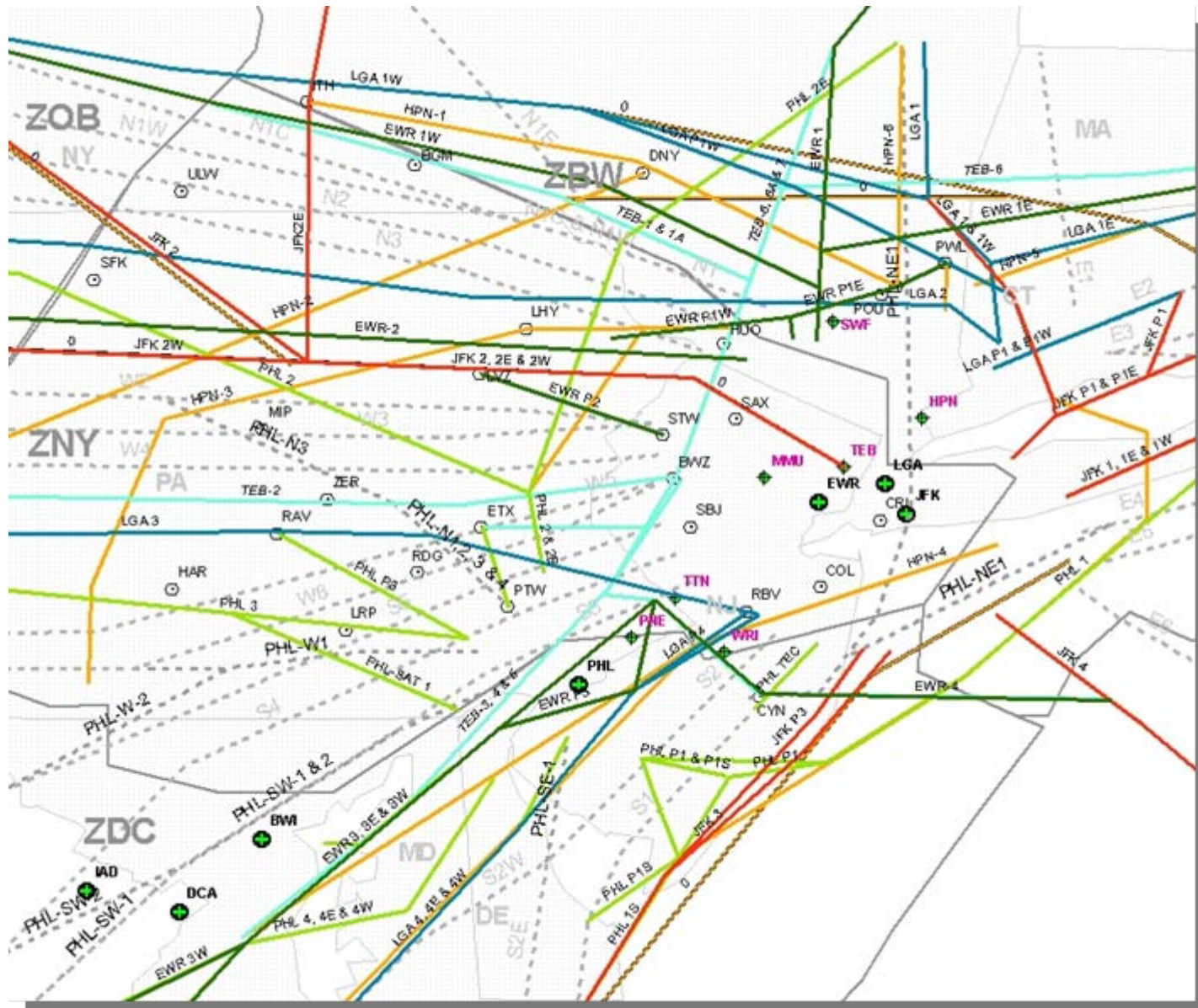
# Integrated Airspace Alternative with ICC with Mitigation *Change in Noise Exposure*



# Redesigned High Altitude Route Structure (Notional)

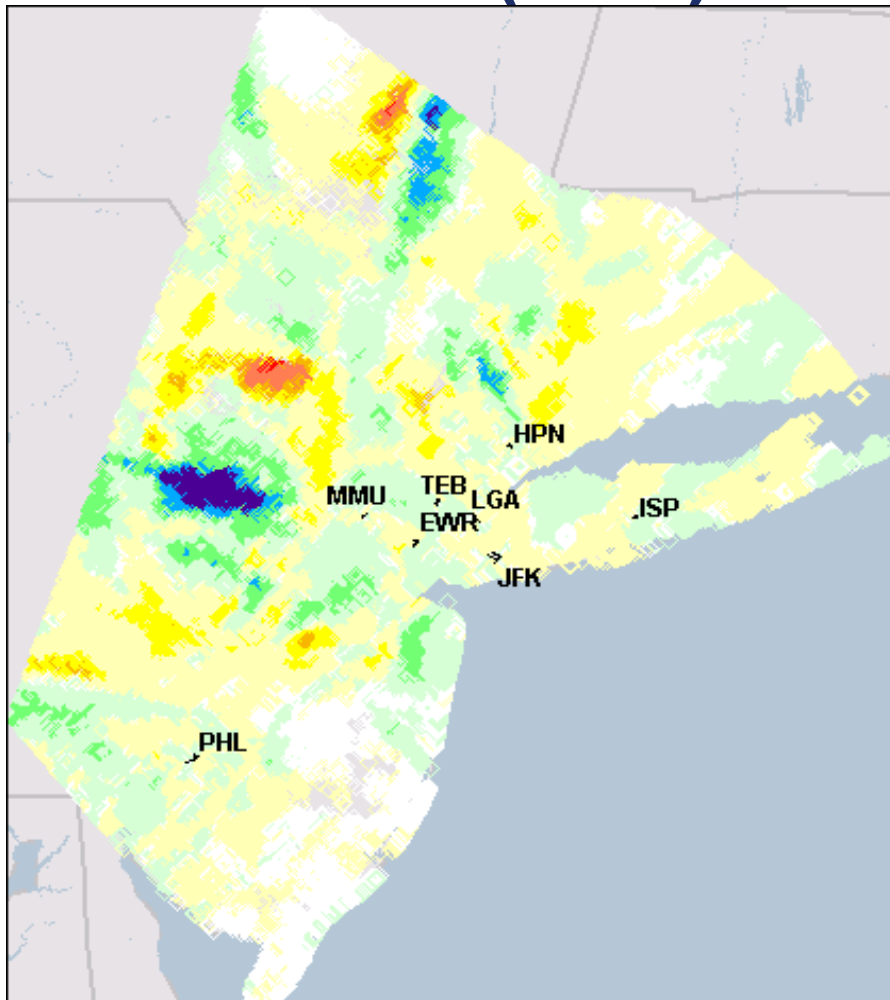
DEPT Routes (dashed lines)

ARR Routes (color by arpt)





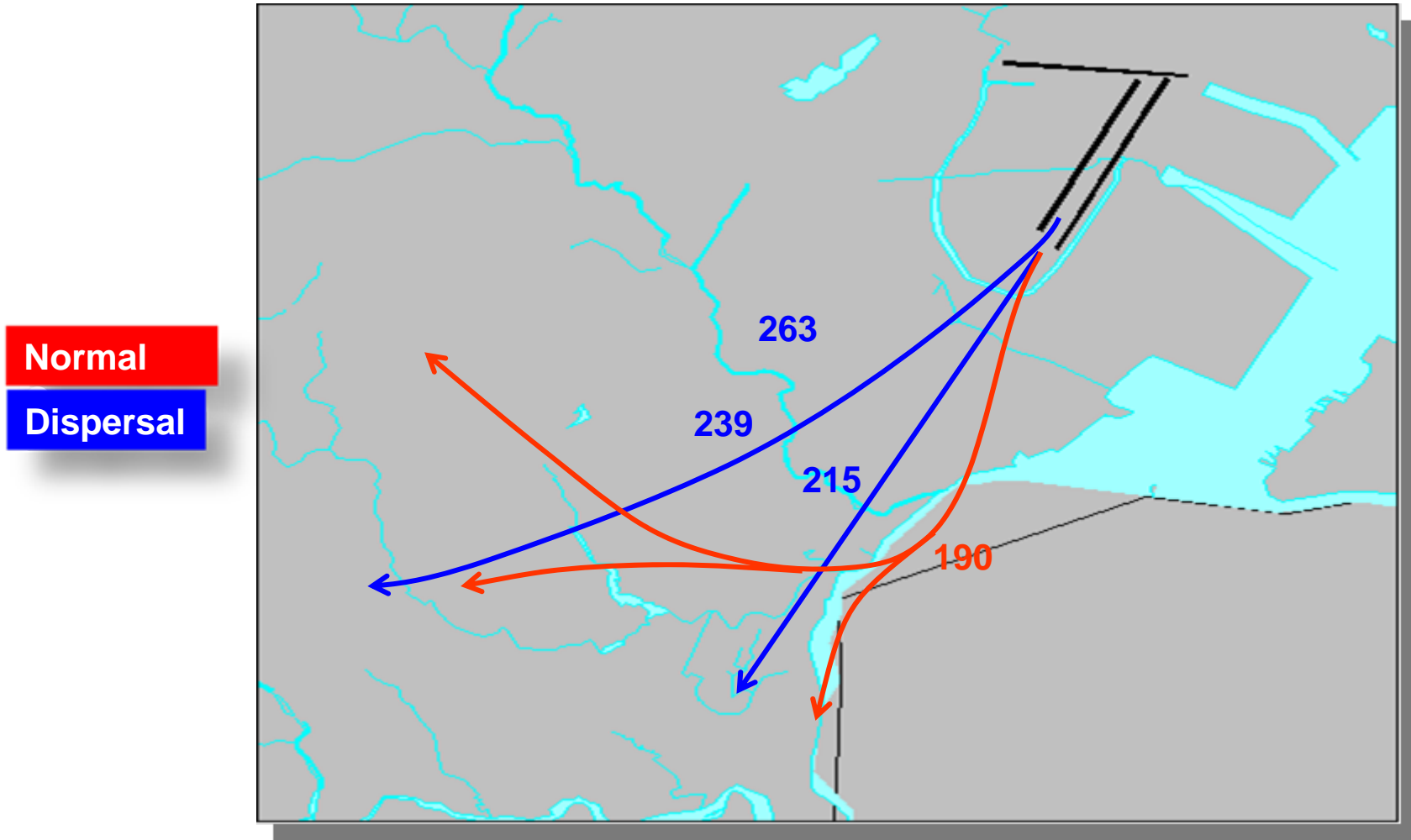
# Raw Data Noise Changes - Selected Alternative with mitigation as compared to the No Action Alternative (2011)



## Raw Change in Db from Future No Action with Mitigation

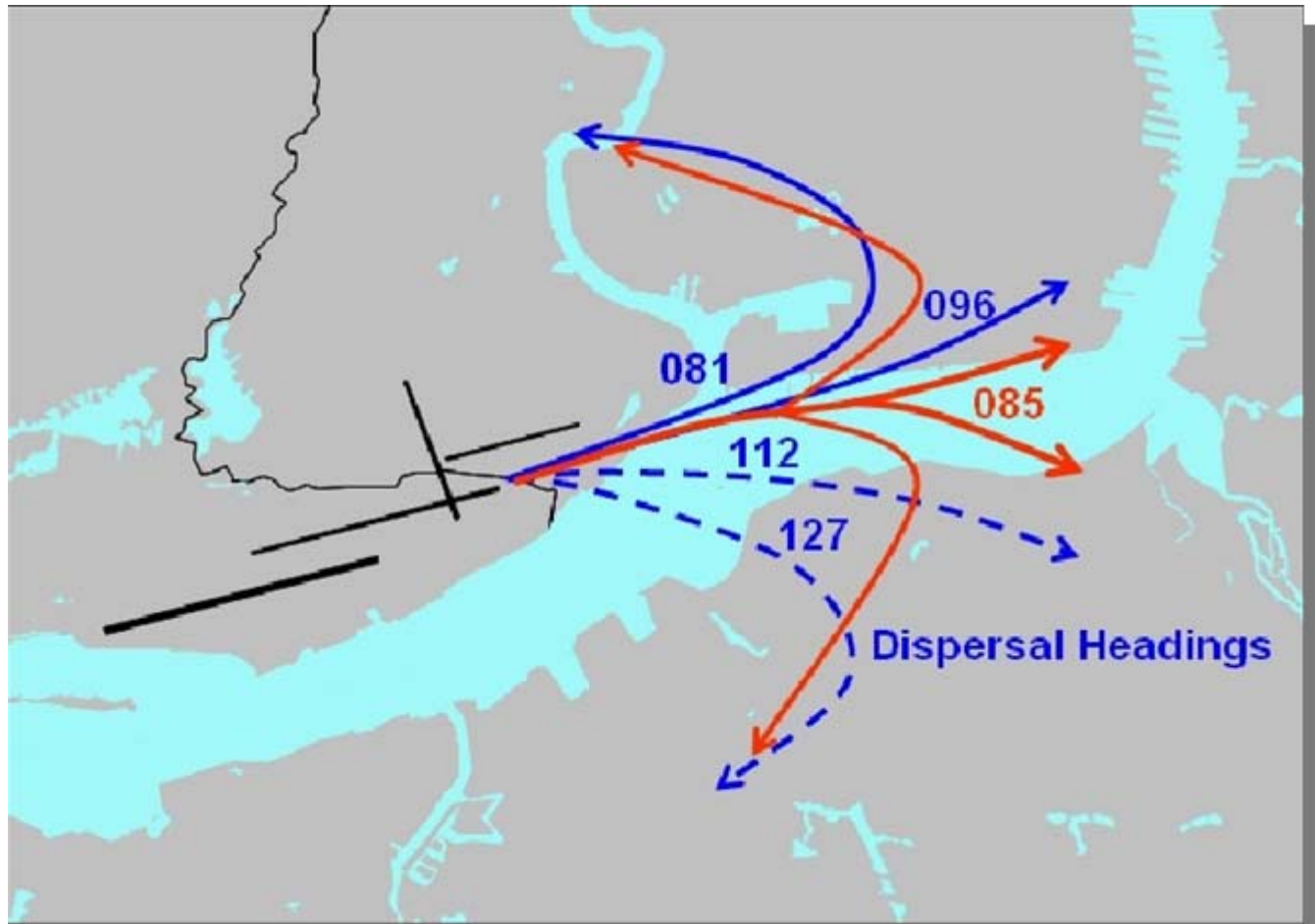
	Number of Census Points
◆ 20 to 25	(26)
◆ 15 to 20	(622)
◆ 10 to 15	(576)
◆ 5 to 10	(9044)
◆ 0.1 to 5	(153067)
◇ -0.1 to 0.1	(41060)
◇ -5 to -0.1	(107108)
◇ -10 to -5	(9230)
◇ -15 to -10	(1985)
◇ -30 to -15	(991)

# Stage 1: EWR Departure Headings RWY 22L/R



# Stage 1: PHL Departure Headings RWY 09R/L

Normal  
Dispersal

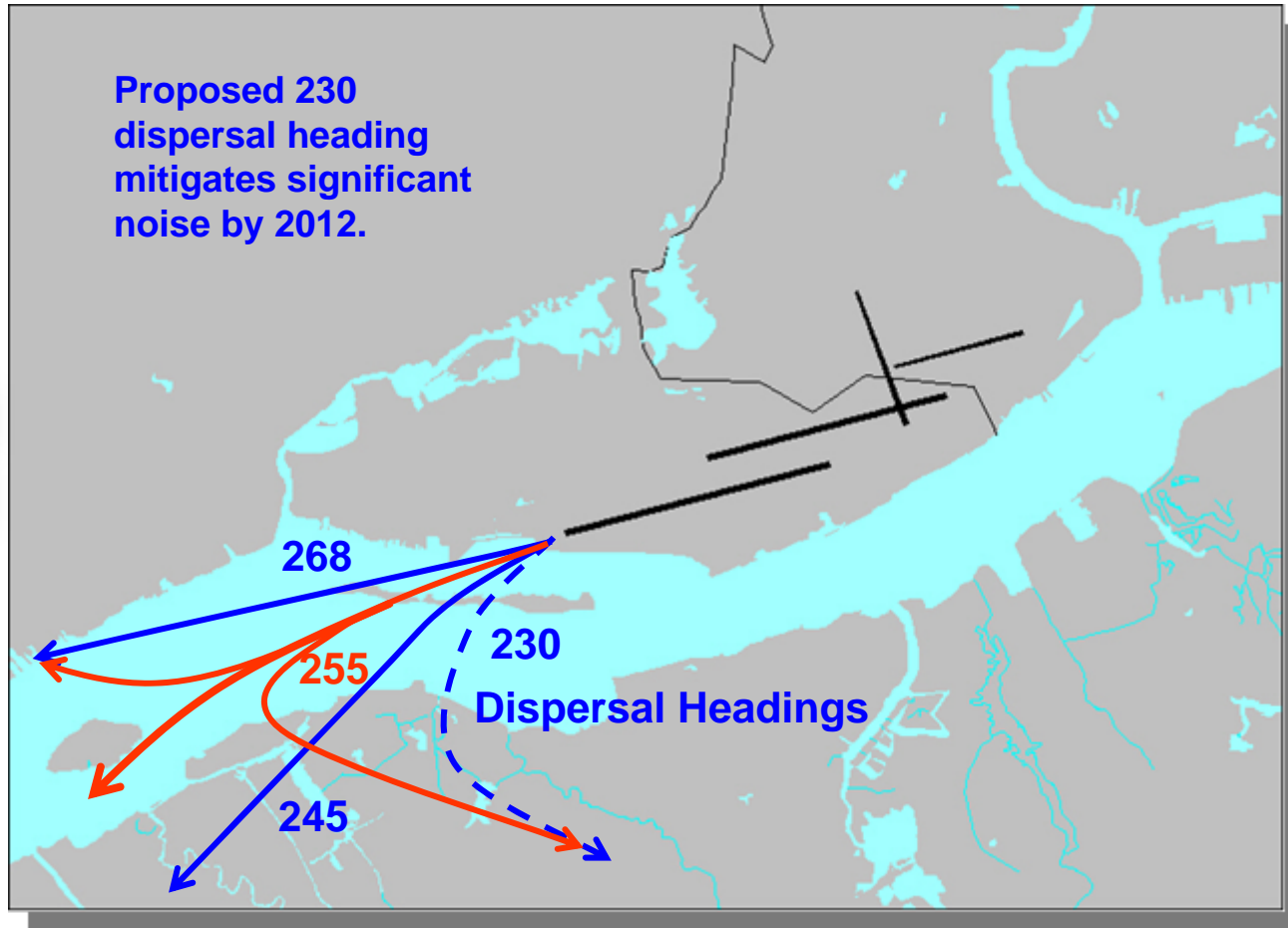


# Stage 1: PHL Departure Headings RWY 27L/R

Proposed 230  
dispersal heading  
mitigates significant  
noise by 2012.

Normal

Dispersal



# Formal Collaborative Process Established (Mgmt/Labor)

July 30, 2010

- Provides operational perspective into the development, testing and deployment of changes to the NY/NJ/PHL airspace.
- Affords design validation from those directly involved in Air Traffic Operations.
- Complies with Congressional recommendation to formally engage Labor.
- Complies with Executive Order (E.O.) 13522 by providing a collaborative, engagement-based approach where the parties jointly develop solutions to workplace issues.

## The parties...

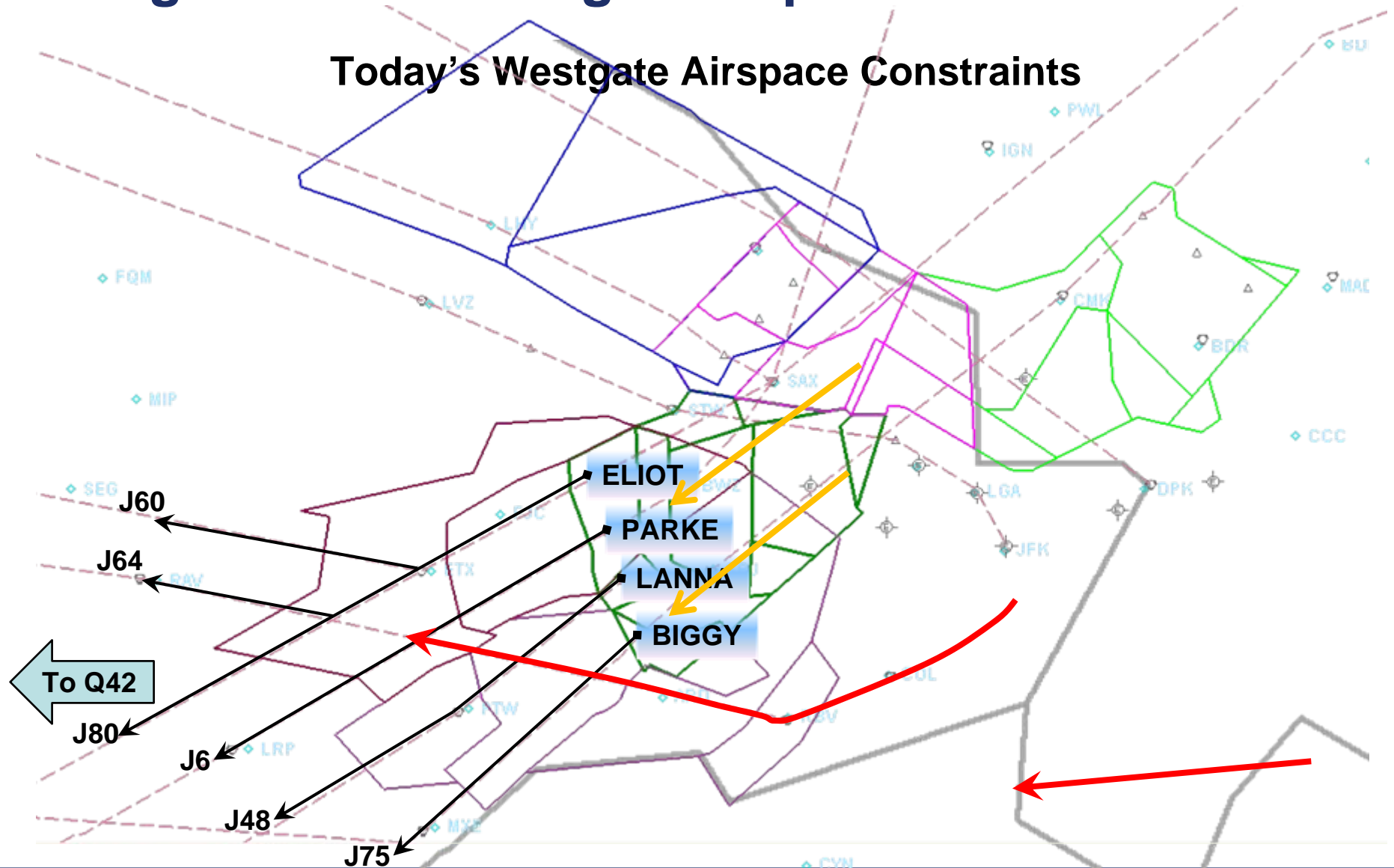
**One NATCA and Management rep from each affected facility**

**N90, ZNY, ZBW, PHL, ZDC, ZOB, PCT**



# Stage 2a – NY Westgate Departures

## Today's Westgate Airspace Constraints



# Stage 2a Initiatives

## Planned for May 5 2011 Implementation

- **Begin integrating airspace at NY TRACON to achieve efficiency gains through better internal coordination close to airports.**
- **Feed additional radar data into NY Center to expand use of 3 mile separation.**
- **Implement new air traffic control procedure to expand use of reduced separation above 18,000 in NY Center airspace.**



# Stage 2a Initiatives

## Planned for October 20 2011 Implementation

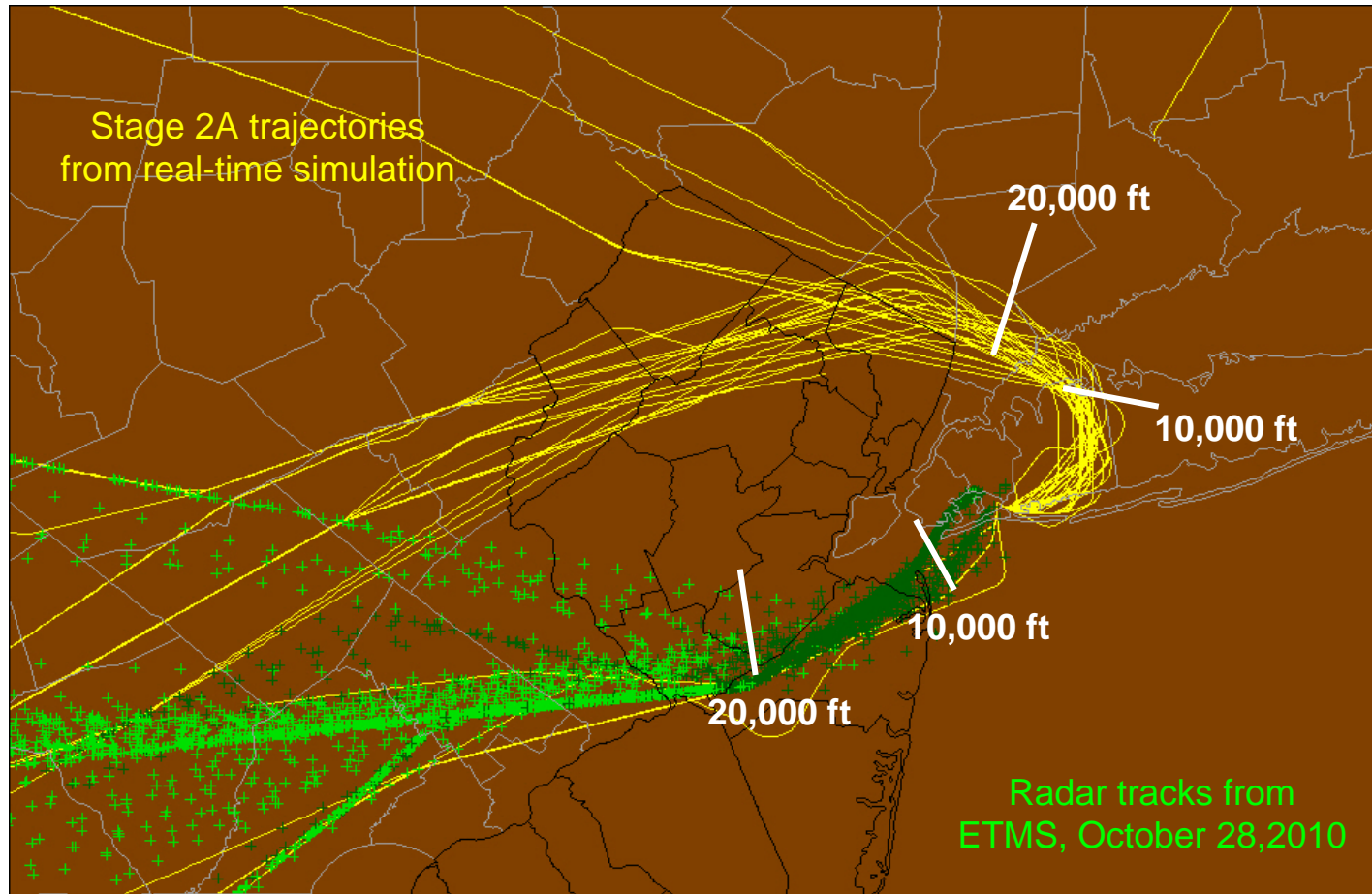
- **A new JFK departure procedure. The departure procedure enables JFK departures to reach optimal altitude more quickly than today's route over Robbinsville, New Jersey, and reduces complexity in airspace sectors.**
- **The addition of a New York Metro departure route for westbound flights. This will facilitate more efficient access to the westbound high altitude route structure and alleviate traffic management restrictions that cause delays.**
- **New offset routing for Dulles arrivals in order to reduce controller workload and complexity. This new offset routing will facilitate more efficient climbs for NY Metro departures.**





Today's westbound JFK departure procedure (Green)

New JFK "Wrap" departure procedure (Yellow) 10/20/11

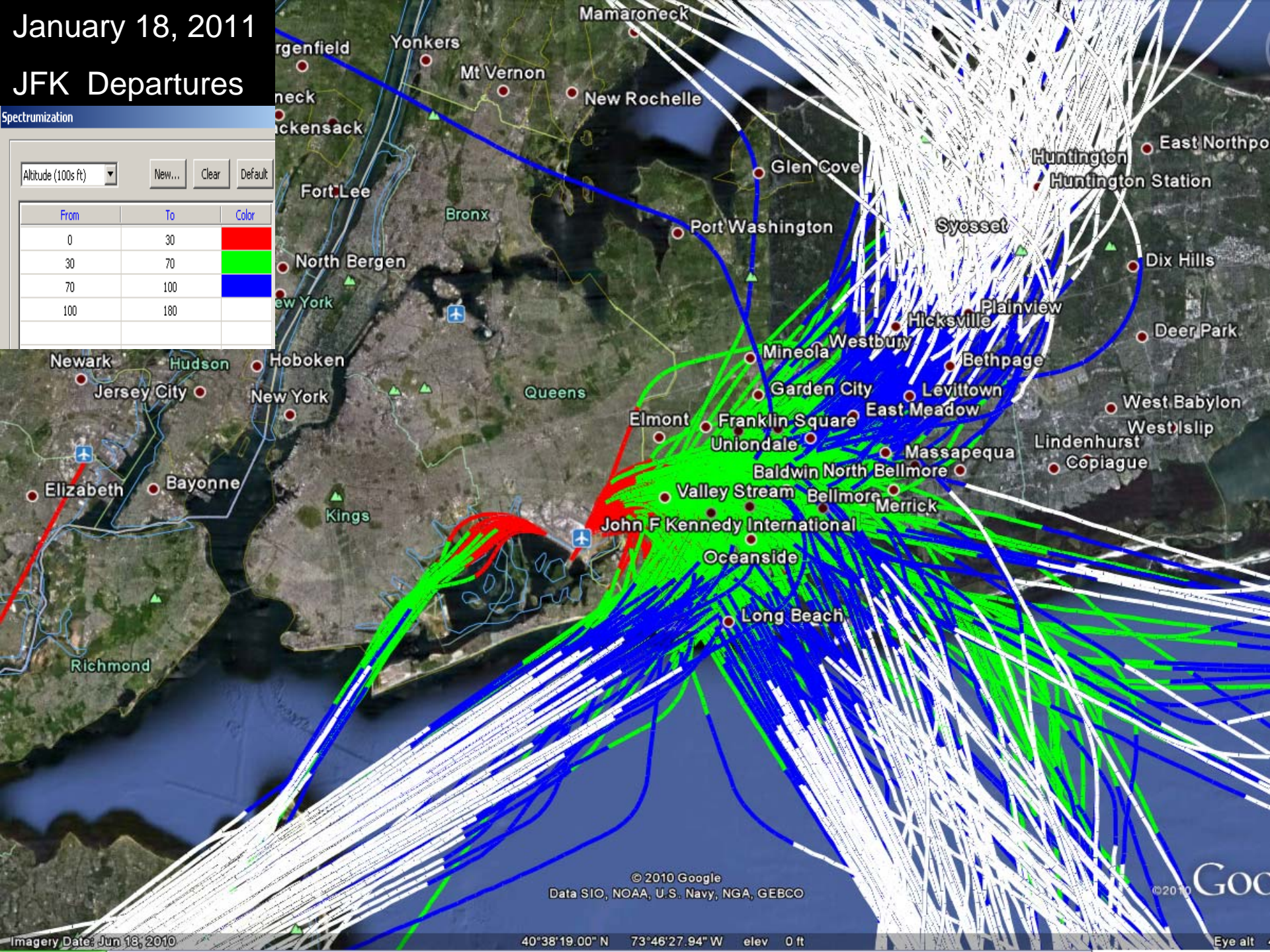


# January 18, 2011 JFK Departures

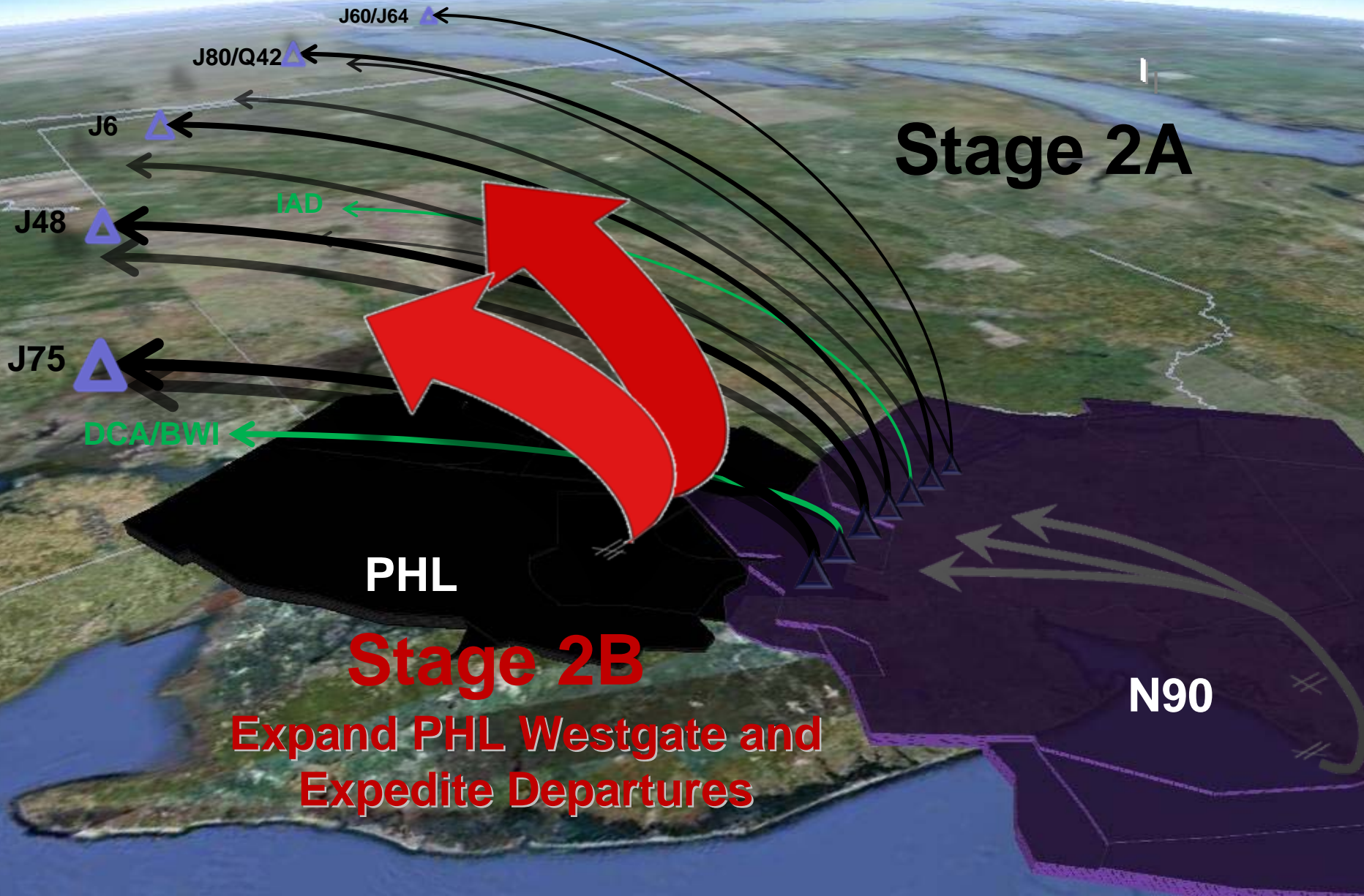
Spectrumization

Altitude (100s ft)

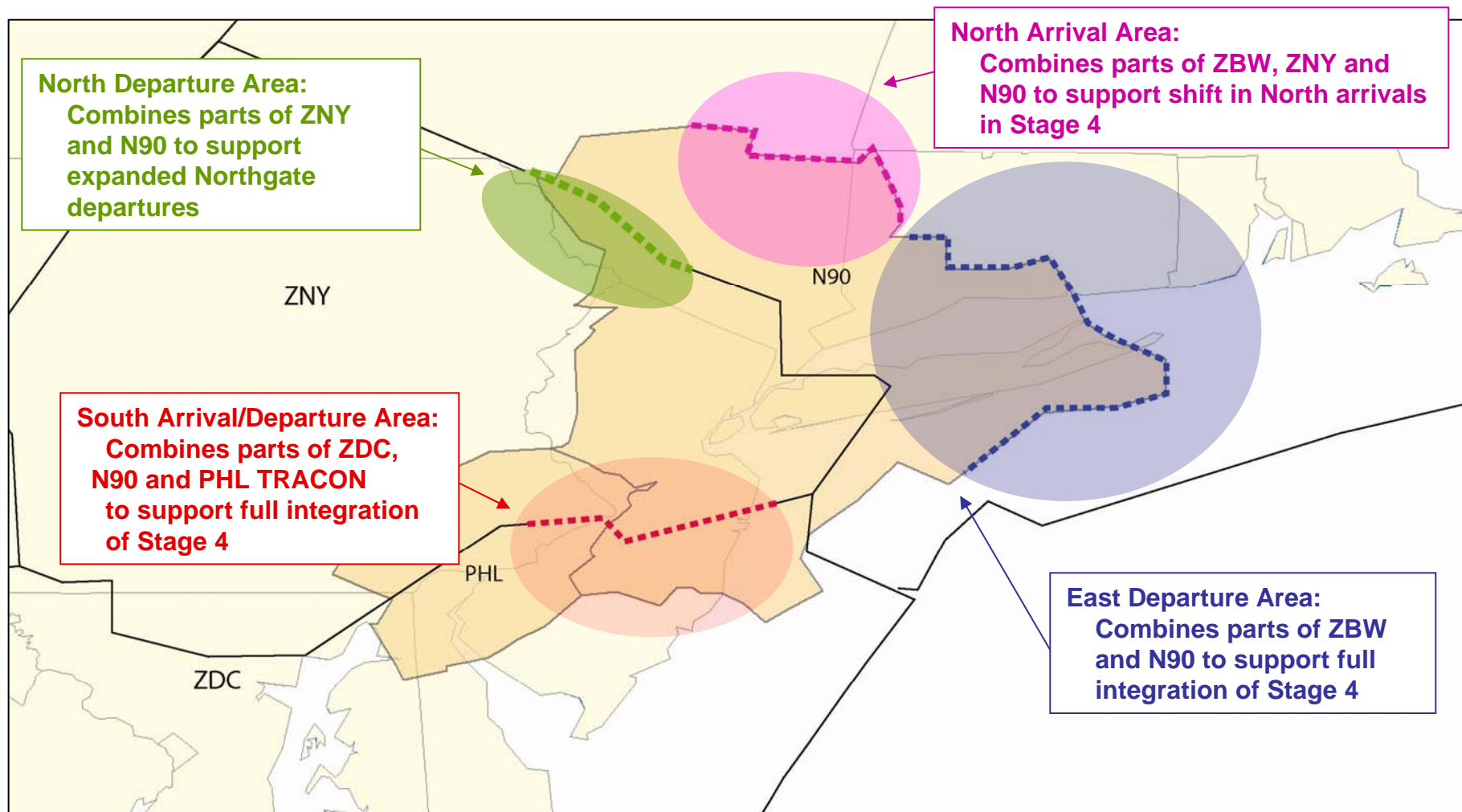
From	To	Color
0	30	Red
30	70	Green
70	100	Blue
100	180	



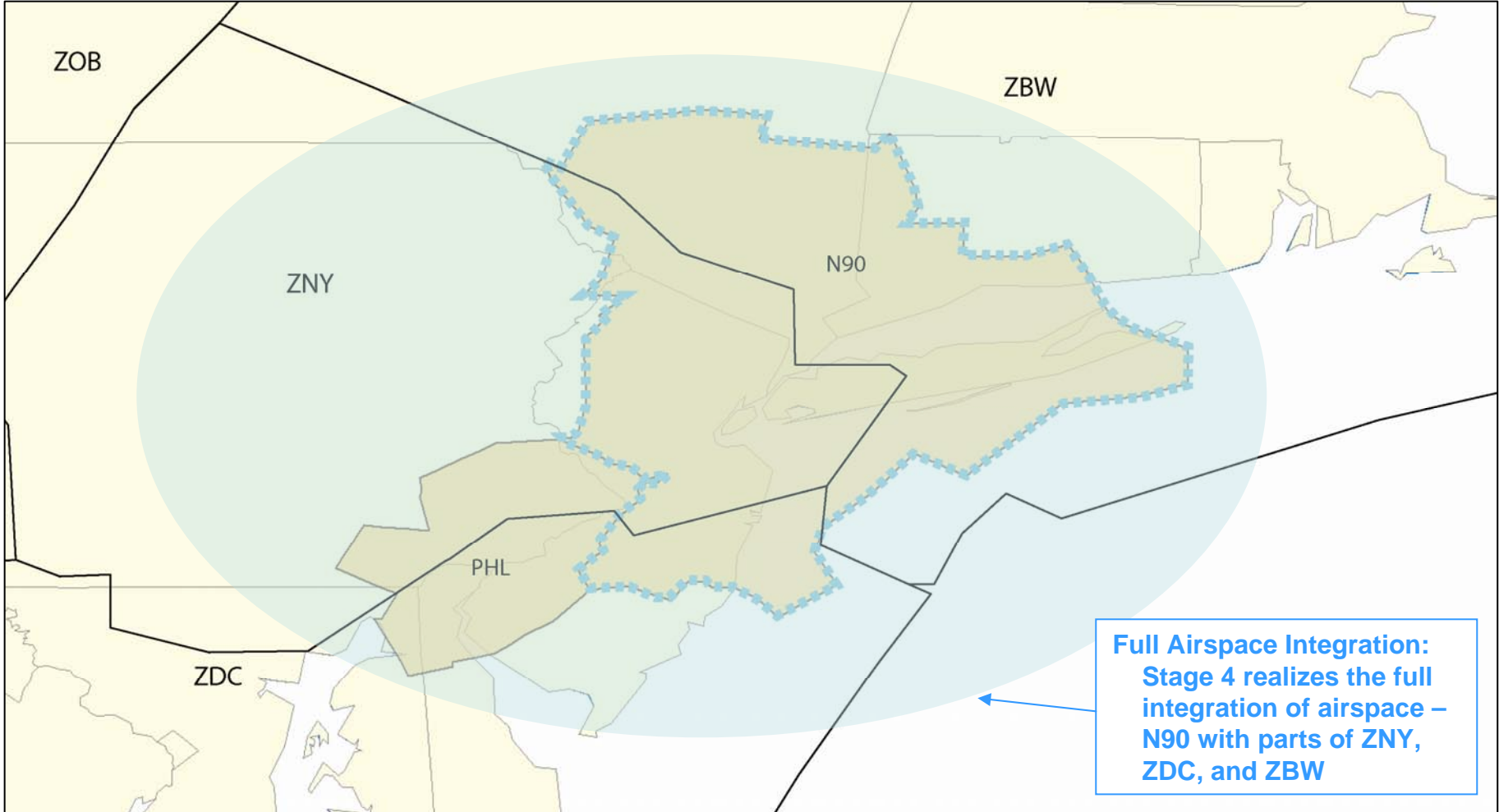
© 2010 Google  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO



# Stage 3: Major Airspace Realignment



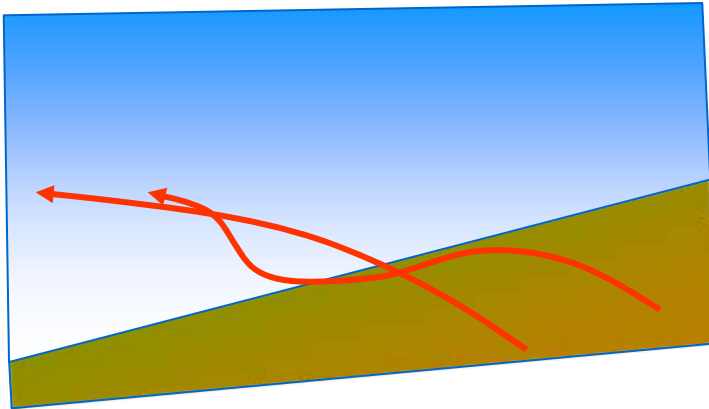
# Stage 4: Full Airspace Integration



# Integrated Airspace Improves Departures

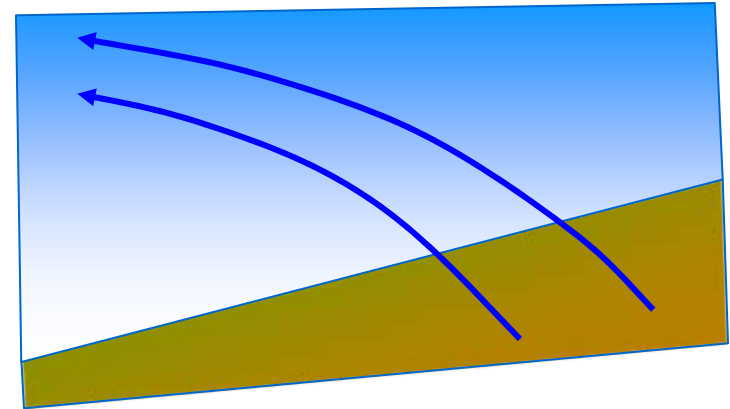
## Current System:

- Departures held down to lower altitudes
- Maneuvering at low altitudes to line up for jet route access



## Integrated w/ ICC:

- Unrestricted climb for departures
- Reduced fuel burn and emissions
- Reduced delay
- Reduced complexity for ATC



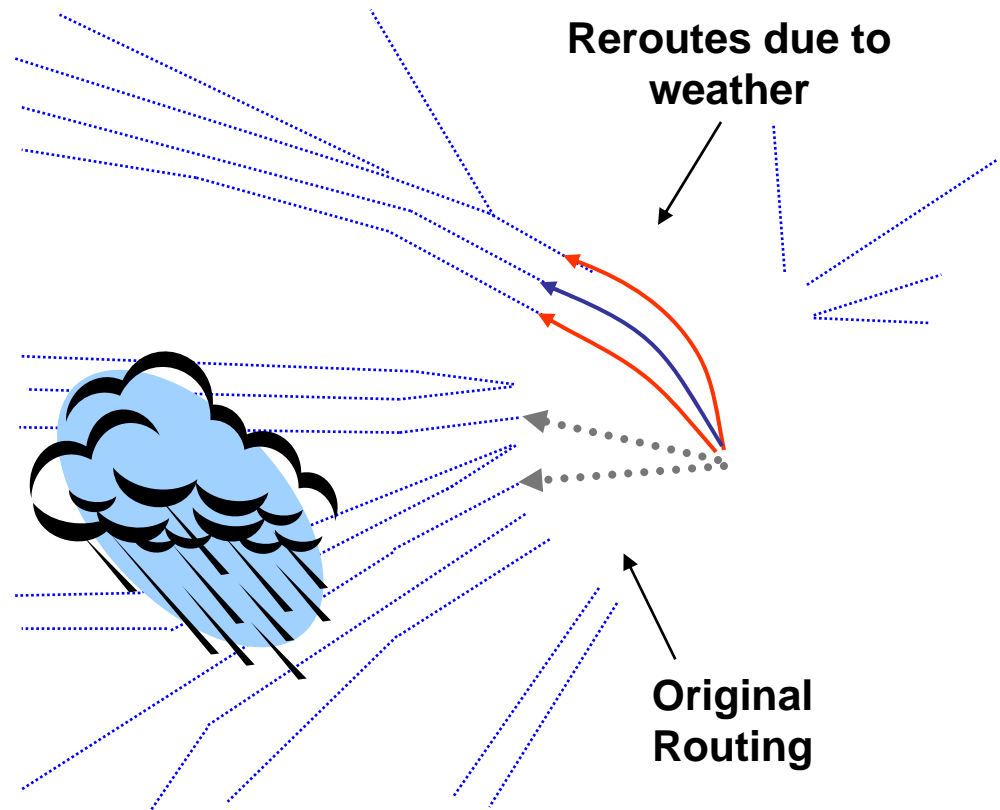
# Flexibility in Routing Minimizes Impact of Severe Weather

## Current System:

- Airspace constraints result in increased congestion when severe weather is present
- Delays escalate

## Integrated w/ ICC:

- Increased access to en route airspace means more options in severe weather situations
- Flexibility to take off and fly around the weather
- Reduced delay



# Summary of Next Steps

- **Stage 2a**
  - Partial implementation by May 5, 2011
    - Begins integration of airspace close to airports within NY TRACON to enhance efficiency through better internal ATC coordination.
    - Expands use of 3nm separation at NY Center.
  - Full 2a implementation will occur on Oct 20, 2011
    - New JFK Departure Procedure
    - Additional Westgate Departure Route
    - New Dulles arrival route to segregate NY departures.
- **Stage 2b**
  - PHL Human-In-The-Loop Simulations beginning in October 2011
- **PHL Dispersal Heading**
  - Add 230 PHL dispersal heading to mitigate noise per ROD.
    - Begin design March 2011, Implement May 2012.
- **Stage 3 and Stage 4 Strategic Transitional Planning**
  - GAO recommends practicing “Adaptive Management” when planning sequence of implementation
  - Initial Transitional Plan Sept 2011.

