

IN THE UNITED STATES COURT OF APPEALS  
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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Nos. 07-1363, 07-1437, 07-1493, 07-1494, 07-1495, 07-1496, 07-1497, 07-1498,  
07-1499, 08-1105, 08-1106, 08-1107

COUNTY OF ROCKLAND, NEW YORK, et al.,  
Petitioners,

v.

FEDERAL AVIATION ADMINISTRATION, et al.,  
Respondents.

ON CONSOLIDATED PETITIONS FOR REVIEW OF AN ORDER OF THE  
FEDERAL AVIATION ADMINISTRATION

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BRIEF FOR FEDERAL RESPONDENTS

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## **Certificate as to Parties, Rulings, and Related Cases**

### **A. Parties.**

All parties, intervenors, and amici appearing in this Court are listed in the Brief for Petitioners. D.C. Cir. R. 28(a)(1)(A). We note, however, that William C. Withycombe, listed by Petitioners as a Respondent, is not a proper respondent. He is the Regional Administrator for the Federal Aviation Administration's Western Pacific Region and, as such, is not involved in the action at issue.

### **B. Rulings Under Review.**

References to the ruling at issue appear in the Brief for Petitioners. D.C. Cir. R. 28(a)(1)(B).

### **C. Related Cases.**

This case was not previously before this Court. There is one related case currently pending in this Court, which was identified incorrectly in the Brief for Petitioners. The correct citation is:

*County of Delaware, Pennsylvania, et al., v. United States Dep't of Transp.*,  
D.C. Cir. No. 07-1385.

Oral argument was held in that case on October 7, 2008.

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## GLOSSARY

90P	90 <sup>th</sup> Percentile Day
AAD	Average Annual Day
ATC	Air Traffic Control
AGL	Above Ground Level
BCA	Benefit Cost Analysis
CAA	Clean Air Act
CEP	Philadelphia Capacity Enhancement Program
CEQ	Council on Environmental Policy
dB	Decibel
DEIS	Draft Environmental Impact Statement
DNL	Day Night Average Sound Level
EDMS	Emissions and Dispersion Modeling System
EPA	Environmental Protection Agency
ESRI	Environmental Systems Research Institute
EWR	Newark Liberty International Airport
FAA	Federal Aviation Administration
FICON	Federal Interagency Committee on Noise
FEIS	Final Environmental Impact Statement

FRG	Republic Airport
FOK	Westhampton Beach/The Francis S. Gabreski Airport
GPS	Global Positioning Systems
HPN	White Plains/Westchester County Airport
ICC	Integrated Control Complex
IFR	Instrument Flight Rules
INM	Integrated Noise Model
JFK	John F. Kennedy International Airport
LGA	LaGuardia Airport
MMU	Morristown Municipal Airport
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NIRS	Noise Integrated Routing System
NJCAAN	New Jersey Coalition Against Aircraft Noise
NST	Noise Screening Tool
PHL	Philadelphia International Airport
Region	New York/New Jersey/Philadelphia region
RNAV	Area Navigation
ROD	Record of Decision

ROMA	Route Optimization and Mitigation Analysis
SIP	State Implementation Plan
SWF	Stewart International Airport
TAAM	Total Airspace and Airport Modeller
TAF	Terminal Area Forecast
TARGETS	Terminal Area Route Generation, Evaluation and Traffic Simulation
TRACON	Terminal Radar Approach Control Facility
VOR	Very High Frequency Omni Directional Range
WR/ROD	Written Re-Evaluation and Record of Decision

## STATEMENT OF JURISDICTION

Respondents concur in Petitioners' Statement.

## STATEMENT OF THE ISSUES

1. Is the Federal Aviation Administration's (FAA) environmental analysis of a regional Airspace Redesign Project (Project), summarized in a Final Environmental Impact Statement (FEIS), adequate under the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 *et seq.*?
2. Did the FAA reasonably determine that the Project will not result in constructive use of any properties protected by §4(f) of the Department of Transportation Act of 1966, 49 U.S.C. § 303(c)?
3. Did the FAA comply with the general conformity requirements of the Clean Air Act (CAA), 42 U.S.C. § 7506(c)?

## STATUTES AND REGULATIONS

Except for the following, *see* Addendum A of this brief, all applicable statutes and regulations are contained in Addendum A of Petitioners' Brief:

49 U.S.C. § 47101.

14 C.F.R. Part 150, App. A., Table 1.

40 C.F.R. § 1505.2.

## STATEMENT OF THE CASE

Petitioners challenge FAA's Corrected Record of Decision (ROD) entitled "New York/New Jersey/Philadelphia Metropolitan Area Airspace Redesign" (Sept. 28, 2007). The ROD approved sweeping changes to modernize and improve air traffic procedures for 21 airports in the approximately 31,000 square miles of airspace over the New York/New Jersey/Philadelphia region (Region).

As shown by the list of adopted measures (ROD 17-19), this Project includes more than 60 changes to current procedures for arrivals and departures at major airports. Points in the sky designated as "departure gates" and "arrival posts" were shifted or newly created to make access into and out of this complicated airspace more efficient and safer, while new flight procedures were adopted to expedite arrivals and departures, to provide system flexibility, and to make full use of today's high performance aircraft and their navigation systems. While most of these changes occur high above the ground and up to eighty miles from the airports involved, other changes, notably providing additional departure headings from several of the major airports, had close-in effects.

The purpose of these changes is to increase the efficiency, safety and reliability of the Region's airspace and FAA's air traffic control system, updating procedures that were largely developed in the 1960's, and making the Region's

airspace compatible with the new technology expected over the next decade.

FAA's decision came after nine years of studies and analysis including a detailed FEIS, along with numerous appendices on issues such as noise, parklands, and air quality, an extensive mitigation package, and a large administrative record.

Seventy-three petitioners have challenged FAA's decision in this consolidated action.<sup>1/</sup>

## STATEMENT OF FACTS

### A. Background

This massive airspace redesign by FAA can be best understood by considering three historic factors. First, this action takes place in some of the most complex airspace in the world. Five of the nation's busiest airports – Kennedy, LaGuardia, Newark, Teterboro and Philadelphia – are historic anomalies in that they are unusually close to each other, constraining current and future operating procedures, creating overlapping flight paths, and requiring heavy air traffic controller workloads. *See* ROD App. A at A-1 to A-20 (depicting present and proposed arrival and departure flows).<sup>2/</sup> When Newark and Teterboro were

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<sup>1/</sup> In this brief, FAA responds to the principal points raised by Petitioners' lengthy submission, and in doing so, believes it has reasonably responded to the principal points raised by *amici*.

<sup>2/</sup> This complexity is illustrated by an inter-active website showing real-time air  
(continued...)

constructed in the 1920's, air traffic was light, aircraft speeds were much slower, and bad weather curtailed operations. The same was largely true when LaGuardia opened in 1939, and when Kennedy opened in 1948. Today, these airports and their original runways remain as they always have been, but traffic volume is much greater, aircraft speeds are faster (requiring more room in the sky to maneuver) and technological advances have helped reduce weather-related curtailments. These airports, their runway geometry, and propinquity to each other create a situation of unrivaled complexity for FAA airspace redesigners.<sup>2/</sup>

The Region's airspace is and will continue to be "one of the busiest air traffic areas in the world." FEIS 1-17; ROD 2. To demonstrate the volume and complexity of this airspace, radar flight tracks from a sample day in August 2007 for arrivals and departures at the eight primary airports in the Region are presented in a PowerPoint presentation included in Addendum C. *See also* FEIS Fig. 1.11. The final slide includes operations from the other 13 airports and overflights in the

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<sup>2/</sup>(...continued)

traffic in the region ([www4.passur.com/lga.html](http://www4.passur.com/lga.html)) and also by a short segment of audio tape from a typical day at the New York Terminal Radar Approach Control Facility (TRACON) (Administrative Record (AR) 9371, included in Addendum C).

<sup>3/</sup> LaGuardia is 16 miles east of Newark Airport. Kennedy is only 8.5 miles southeast of LaGuardia. Teterboro is 11 miles due north of Newark and 11 miles west of LaGuardia. FEIS Fig. 1.8.

Region. The ROD describes this numerically by reporting that the New York TRACON facility that serves all major airports in the New York region handled 1,710,000 operations in 1988, and 2,090,977 operations in 2006. Operations are expected to increase to 2,400,143 by 2011. ROD 8.

As a result of this growth and existing inefficiencies, the Region's four major commercial airports (Kennedy, LaGuardia, Newark, and Philadelphia) are among the five most delayed airports in the country.<sup>4/</sup> ROD 3. Despite these delays, the Region's importance in domestic and international commerce means "these increases [in operations] are forecast to continue." FEIS 1-21. As a result, "the system will become increasingly inefficient and unreliable (unpredictable in terms of scheduling) in order to ensure safe operations." ROD 6.

The second historic factor is that aviation progress always has been directly related to federal use of the latest technology. By 1931, the Department of Commerce Bureau of Lighthouses had developed million-candlepower aircraft navigation beacons and placed them at 30-mile intervals on routes across the entire country, enabling commercial aircraft to fly at night.<sup>5/</sup> In the following decades,

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<sup>4/</sup> During first quarter 2007, Newark was the country's most delayed airport (55% on-time record), LaGuardia was second (58% on-time record), Kennedy was fourth (60% on-time record), and Philadelphia was fifth (65% on-time record). ROD 3.

<sup>5/</sup> See Bonfires to Beacons, the Federal Civil Aviation Policy under the Air  
(continued...)

radar, instrument landing systems, and other technological advances made air travel safer, and more reliable. However, the Region's airspace remained based on technology from the 1960's, when the air traffic procedures were first approved. Rules governing aircraft separation, and routes reflecting arrival and departure procedures were based on electronics using vacuum tubes, and manual systems rather than advanced computers. Thus, FAA's rationale for this action was: "Most importantly, the Airspace Redesign Project modernizes the structure of the NY NJ PHL air traffic environment in an environmentally responsible manner, and lays a foundation for achieving the Next Generation Air Transportation System in 2025."

ROD 1. Similar airspace redesign projects have been completed or are underway for the Baltimore-Washington, Chicago, and Cleveland-Detroit regions, as part of an overall National Airspace Redesign initiative. FEIS 1-17.

The third historic factor is that far fewer people are exposed to significant aircraft noise today, despite increased operations, because modern aircraft are quieter and climb more quickly. ROD 2. The Port Authority of NY/NJ (proprietor of all four major NY/NJ airports) reported that over the past two decades, the number of people exposed to significant airport noise had decreased from about

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<sup>54</sup>(...continued)

Commerce Act, 1926-1938, pp. 133-137, Smithsonian Institution Press, reprinted 1989.

two million to about 100,000. FEIS App. N (AR 9304 at pdf 2666). Even so, FAA remains concerned about the noise impacts of these urban airports. The FEIS presents detailed discussion of FAA's noise modeling methodology, current and projected aircraft noise exposure in the Region, and noise mitigation strategy.

#### **B. FAA's Management of Air Traffic**

It is vital to understand the basic concepts of how FAA maintains safe separation between aircraft. All commercial flights operate under "Instrument Flight Rules" (IFR) which require filing a flight plan, traveling along designated points in the sky, and maintaining voice and electronic communication with FAA controllers throughout the journey. To ensure safety, FAA utilizes a variety of facilities, navigation technologies, and operating rules. See FEIS 1-2 to 1-14, App. A.

There are three types of FAA air traffic control facilities. Controllers at 20 "Centers" guide aircraft at high altitudes, generally above 18,000 feet. Controllers at about 160 TRACONs handle arriving aircraft once they descend below 18,000 feet and departing aircraft until they are handed off to a Center. Local controllers, found in the familiar airport towers, provide takeoff and landing clearances and guide the movement of aircraft on the ground. FEIS 1-5 to 1-6, Figs. 1.2,1.5,1.6,1.7.

Aircraft operating under IFR use both ground-based and satellite-based navigation systems. On the ground, FAA operates Very-high Frequency Omnidirectional Radio (VOR) range stations, which allow a pilot to travel from one exact point in the sky to another. Straight lines between many VORs are designated as numbered federal airways, as familiar to pilots as the Interstate Highway system is to truck drivers. Also, a controller can direct aircraft to points (or “fixes”) in the sky that are based on a specific location in relation to a VOR, to ensure adequate separation and efficient use of the airspace. Aircraft join a published airway through a “gate,” a specific region of sky defined by altitude and location to a VOR, much as vehicles use ramps to join highways. Similarly, aircraft leave an airway and begin their descent to an airport through a “post,” another area of sky akin to a “gate” that allows TRACON controllers to sequence arrivals to a specific airport. These “gates” and “posts” are from 30 to 80 miles from the airports they serve.

More recently, VORs have been augmented by satellite navigation facilities. Aircraft equipped with area navigation (RNAV) technology can determine their precise positions from multiple navigation sources, and can navigate from one place to another without moving along a series of fixes. Global Positioning Systems (GPS) provide precise three-dimensional location, time, and speed

information which, when augmented by other devices, allows for accurate and precise positioning for aircraft. All these technologies can now be used in airspace design.

Aircraft handled by a Center flying at altitudes between 18,000 and 41,000 feet must be separated by a distance of five nautical miles laterally or 1,000 feet vertically. Aircraft handled by a TRACON at lower altitudes require only three miles of lateral separation. *Id.* Additional criteria ensure that smaller aircraft following large aircraft are not disturbed by wake turbulence. *See* FEIS 1-3 to 1-4, Fig. 1.4.

### **C. Development of an Action that Meets the Purpose and Need**

In 1998, FAA's Administrator directed the agency to modernize the nation's airspace through a National Airspace Redesign program. ROD 3. Inefficiencies abounded: for example, aircraft departing New York City to Washington, D.C. were sequenced on the same routes as transcontinental flights, and Chicago O'Hare departures were delaying other westbound departures because of in-trail separation requirements over the same navigation fixes. ROD 9. Moreover, "[i]nefficiencies due to the inherent limitations of the existing airspace design, including route structure and [Air Traffic Control] procedures, will be exacerbated by growth in air traffic operations. As traffic increases, the system will become increasingly

inefficient and unreliable in order to ensure safe operations.” FEIS 1-21 to 1-22. FAA was advised in 1999 that if it failed to modernize the system, the cost to the national economy from delay could exceed \$46 billion by 2010. ROD 10. And, because the Region was projected to handle almost 20% of all air traffic in the nation by 2011, ongoing delays in this airspace would surely ripple through and cripple the entire system.

Thus, almost 10 years ago, FAA began this airspace redesign process. FAA identified several specific inefficiencies that if fixed, could enhance safety, even with growing traffic. For example, current airspace restrictions require incremental changes in altitude for arrivals and departures, causing radio frequency congestion from additional instructions from controllers to pilots; arrivals to Westchester County Airport from the south cross several other traffic flows and create unnecessary complexity; and traffic to Philadelphia and Long Island-MacArthur Airports and their satellite airports is restricted to intersecting courses in narrow corridors of airspace. FEIS 1-22 to 1-23. Also, delays are made worse because, *inter alia*, some individual arrival fixes become saturated while others are underused, and because the existing system lacks flexibility to reroute heavy flows of aircraft during periods of severe weather. FEIS 1-25. As stated by FAA (*id.*):

The purpose of the Airspace Redesign is to increase the efficiency and reliability of the airspace structure and ATC system, thereby

accommodating growth while enhancing safety and reducing delays in air travel.

ROD 9-10.

“Noise reduction is not a component of the Purpose and Need for the Proposed Action . . . because it is not FAA policy to reroute aircraft to reduce noise levels in one community at the expense of another.”<sup>6/</sup> FEIS 1-25; ROD 10. The Region is densely populated (29 million people), and there are few unpopulated areas near the major airports. See FEIS 3-7 to 3-10, Figs. 3.2 to 3.13. Depending on runway alignments, there may be little or no mitigation possible for communities close to the airports. ROD 10. FAA could only commit to consider means to reduce noise effects *where feasible*. FEIS 1-25 to 1-26; FEIS App. N (AR 9304 at pdf 2355,2358-60,2371,2394). As explained in Argument I.F below, noise impacts were a major consideration in the EIS process, and FAA in fact did what it could to mitigate aircraft noise.

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<sup>6/</sup> Petitioners cite (Br. 4) a Pre-Scoping Summary Report (at 2) prepared for use of FAA staff, listing reduced noise as one “benefit” of airspace redesign (FEIS App. L § L.2), but noise reduction was never part of the Project’s purpose and need. And despite Petitioners’ references (Br. 5-6) to Congressional statements faulting FAA for not paying even greater attention to the Project’s potential noise impacts, Petitioners did not identify any enacted legislation directing FAA to alter the Project’s purpose and need or its primary focus.

Early in the process, FAA conducted an independent study to forecast IFR activity in 2006 and 2011 for each of the 21 airports evaluated. These projections provided the basis for operational and environmental analyses. Substantial increases in operations were forecast for all major airports during the period 2001-2011. *See* Argument I.B.1 below.

FAA identified five potential “categories of alternatives,” encompassing over ten different types of actions. FEIS 2-1 to 2-8. Screening the categories based on their ability to meet the purpose and need, FAA eliminated four categories because they would not address the inefficiencies in the current airspace structure.<sup>7/</sup> ROD 11; FEIS 2-6. Relying in part on experience with redesigns of airspace such as the Potomac TRACON for the Baltimore-Washington area, FAA carried forward the airspace redesign category for detailed further analysis, along with the “no action” concept that is examined in every EIS. FEIS 2-8.

FAA looked at four airspace redesign concepts and decided to study three of them in depth: modifications to existing airspace, ocean routing,<sup>8/</sup> and a “clean

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<sup>7/</sup> These included alternative modes of transportation and communication (such as high-speed rail and promoting telecommunications), changes in airport use (such as enhancing satellite airports), congestion management programs (artificial traffic limitations), and improved air traffic control technologies. FEIS 2-1 to 2-8.

<sup>8/</sup> FAA agreed to study the ocean routing concept proposed by New Jersey Coalition Against Aircraft noise (NJCAAN) to reduce noise in communities south  
(continued...)

sheet” approach involving a complete redesign that, over time, evolved into the Integrated Airspace Alternative. ROD 12-13; FEIS 2-10 to 2-11.

In its detailed consideration of these alternatives, FAA began with a study of operational viability and efficiency. ROD 13-14. FAA developed eight system improvements it sought to achieve, and identified metrics to quantify each improvement. FEIS 2-13 to 2-14, App. C at 9-2 to 9-6. FAA sought to reduce complexity of the airspace resulting from crossing traffic routes and demand for a segment of airspace. App. C at 9-2 to 9-3. An alternative also needed to reduce voice communications, by minimizing the need for vectoring, advisories, and clearances. *Id.* at 9-3 to 9-4. FAA sought to reduce “delay,” the difference between the flight-planned time and the actual time of an arrival or departure operation. *Id.* at 9-4. Delay would be calculated separately for arrivals and departures because airspace redesign includes separate strategies for each. Controller workload needed to be better balanced so that all airspace resources were being used, and controllers needed greater routing flexibility to deal with

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<sup>8/</sup>(...continued)

and west of Newark even though it would plainly not increase the efficiency or reliability of the Region’s airspace. Aircraft departing Newark’s Runway 22 would follow the currently used 190° heading for about 15 miles, then turn south and east over the Raritan Bay and fly about 40 miles over the Atlantic Ocean before turning back toward their destinations. FEIS 2-10 to 2-11, Figs. 2.15 to 2.18.

severe weather and other unexpected events. *Id.* at 9-4 to 9-6. FAA also measured how well alternatives addressed system demands and improved user access (*id.* at 9-5), expedited arrivals and departures (as described by three separate metrics including flight time or “block time”) (*id.* at 9-5), and maintained airport throughput by supporting maximum runway capacity (*id.* at 9-6).

The elements of the alternatives were developed and refined through an iterative process of repeated simulations. FEIS App. C at xx-xxi. Through this process, FAA recognized that the “Integrated Airspace Alternative” actually had two sub-components or variations. The first was reallocation of airspace to create new departure gates, new departure headings and other new procedures at Newark, LaGuardia, Teterboro, Westchester, and Philadelphia Airports. ROD Table 2.3 at 17; FEIS Table 2.3 at 2-46, Figs. 2.19,2.20 to 2.22. The second, which would follow by the project completion date, involved additional procedures made possible by creating an Integrated Control Complex (ICC), a new type of consolidated operation that would extend the New York TRACON airspace (and its terminal separation rules) to areas formerly assigned to the surrounding Centers. ROD Table 2.4 at 17-19; FEIS Table 2.4 at 2-60 to 2-61, Figs. 2.23 to 2.33. To implement all these changes, FAA would use existing facilities. Thus, this

alternative was measured against decisional criteria as the Integrated Airspace Alternative first without ICC and then with ICC.

ROD Table 2.6 (at 20) summarizes the operational comparison of alternatives, and is attached for ease of reference at Addendum B. After detailed examination of each alternative (FEIS 2-11 to 2-79, Figs. 2.1 to 2.33, App. C at 9-1 to 9-39), FAA found that the Modifications to Existing Airspace Alternative had only “small benefits.” FEIS 2-79. The Ocean Routing Alternative greatly reduced departure efficiency at Newark, increased complexity for Kennedy arrivals and departures, and made the airspace above Philadelphia even worse – drawbacks that “are not offset by operational benefits.”<sup>9f</sup> *Id.* In contrast, the Integrated Airspace Alternative with ICC provides the most significant operational benefits through a “wholesale restructuring of arrival and departure routes. Efficiency is increased by more use of available runways and departure headings. Airspace delays are virtually eliminated and route flexibility is enhanced. Flying distances are increased for many flights, but the delay reductions are large enough to make this a net benefit to traffic.” FEIS 2-80.

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<sup>9f</sup> While ocean routing was rejected as an alternative, FAA did adopt ocean routing as a noise mitigation measure for Newark Runway 22R departures to be used only after 10:30 p.m. when fewer conflicts would result from flying through airspace normally reserved for LaGuardia and Kennedy arrivals. ROD 21-22; FEIS App. P at 15. This mitigation was designed to benefit communities to the south and west of Elizabeth, NJ.

In their description of the Project and its benefits, Petitioners focus (Br. 9-10, 26-27) on the average reduction in *block time* systemwide (1.4 minutes per flight) and at Newark (about 6 minutes per flight) upon full implementation. “Block time” is the “minutes between flight start and landing.” FEIS App. C at 9-34. “Delay,” on the other hand, takes into account the scheduled arrival or departure time. If an airplane is scheduled to depart at 1 p.m. and to land at 4 p.m. but actually departs at 2 p.m. and lands at 5 p.m., there would be one hour of delay but no change in block time.

While Newark will experience the greatest reduction in average block time, *all five major airports will experience significant “delay” reductions*, as shown on the bar charts depicting arrival and departure delays for each of the major airports upon initial implementation (2006) and upon full implementation (2011).

FEIS App. C at 9-20 to 9-28. Departure delays are reduced immediately in 2006 and reduced even further by 2011; arrival delays are comparable to the Future No Action Alternative in 2006, but would be reduced by 2011. A critical redesign feature for departures is fanned (or “dispersed”) departure headings, part of the first stage of implementation.<sup>10/</sup> An important redesign feature for arrivals, on the

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<sup>10/</sup> With additional departure headings, “[a]ircraft spend less time on taxiways, with engines running, waiting to depart” and “[a]ircraft on dispersal headings fly shorter distances at low altitudes.” FEIS App. Q at 43; *see also* FEIS App. O at 19, (continued...)

other hand, is revised approach paths which are more effectively separated from each other, but which can be somewhat longer. Many of these new arrival paths, such as the dual arrival procedure for Newark, come in later stages of implementation.<sup>11/</sup> ROD 5-6; Project Implementation Schedule at 8, Respondents' Motion for Supplementation of the Administrative Record, Judicial Notice, and Submission of Demonstrative Exhibits, filed Jan. 12, 2009, (hereafter referred to as Resp. Motion), Ex. C. Whether any arriving flight will have a longer or shorter block time on a longer arrival path will depend on whether the benefit of the separation (in the form of higher flight speeds and reduced circling) compensates for the additional mileage. This is the "break-even point" referred to in FEIS App. C at 10-2 and cited by Petitioners (Br. 8-9).<sup>12/</sup> The block time and delay reductions of airspace redesign are more apparent at higher traffic levels when congestion delays in the Future No Action Alternative would be worse.

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<sup>10/</sup>(...continued)  
App. Q at 101.

<sup>11/</sup> Note that the average route length for Integrated Airspace *without* ICC, which does not include all the longer arrival paths that come with the ICC stage, is 1.2 miles *shorter* than Future No Action. See Addendum B.

<sup>12/</sup> As an analogy, whether Car A gets from Baltimore to Richmond via the Beltway more quickly than Car B, which drives a more direct route through downtown D.C., depends on how fast traffic is moving through town; there is a "break-even" point at which it's faster to go around the Beltway even though it's a longer route.

Petitioners infer from the reference to a “break-even point” for arrivals that airspace redesign could actually make the airspace less efficient – and thus result in relatively higher air emissions – when traffic levels are below a certain level. But there is no reason to believe that air traffic controllers would exercise the options airspace redesign gives them in a way that is less efficient than the 1960’s-era airspace. Moreover, it has always been apparent to FAA as a qualitative matter that the redesign could only benefit local air quality around the Region’s airports.

In evaluating air quality impacts, the primary concern is air emissions below the “mixing height,” which is generally 3,000 feet above ground level. Above that altitude, winds move so quickly that emissions disperse and have little to no impact on people on the ground. Below the mixing height, departing flights have more of an effect on local air quality than arriving flights because, on average, departing flights spend more time idling and taxiing than do arriving flights.<sup>13/</sup> As explained above, airspace redesign expedites departures immediately upon implementation and whatever the traffic level, with the benefit of reduced fuel consumption and reduced air emissions. All of the benefit of reduced idling and taxiing will of

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<sup>13/</sup> See USEPA, Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources, EPA420-R-92-009 (Revised 1992), Table 5-1 at 141. See also, Office of the New York City Comptroller, Grounded: The Impact of Mounting Flight Delays on New York City’s Economy and Environment at 18 (Dec. 2007). See Resp. Motion, Exs. E, F.

course occur below the mixing height. In contrast, while airspace redesign has components that affect the fuel consumption of arrivals *above* the mixing height both positively (“[a]rriving aircraft are delayed less in the air,” FEIS App. Q at 43) and negatively (longer flight tracks), there is no component that would materially affect air emissions below the mixing height. There is thus no “break-even point” that is relevant to local air emissions.

Based on the overall efficiencies of Integrated Airspace with ICC, FAA assumed that the alternative would also reduce overall air emissions. To verify this quantitatively, FAA analyzed the change in fuel burn, which confirmed that, even with the inefficiencies resulting from noise mitigation, the Integrated Airspace Alternative with ICC would cause a net reduction in the burning of jet fuel, and therefore in emissions. FEIS App. R. *See* Argument III below.

#### **D. Public Participation in the NEPA Process**

Recognizing that past efforts to adjust airspace in the Northeast had garnered considerable public interest, FAA embarked on a “pre-scoping” initiative that included 31 public workshops to provide an initial introduction to the proposed actions. *See* 40 C.F.R. § 1501.7 (defining scoping). Almost 1,200 people provided a total of 712 comments on what they wanted the EIS to address. ROD 48; FEIS 6-1 to 6-2, FEIS App. L § L.2.

FAA then commenced in January 2001 a formal scoping process. ROD 48; AR 3; FEIS 6-2 to 6-6, App. L. Scoping included 28 more public meetings (from Danbury, CT to Talleyville, DE) drawing 1,031 attendees and 901 comments. FAA held numerous other meetings with state, local and federal agencies and other organizations and sent 200 letters requesting comments from public officials with jurisdiction or special knowledge. *Id.* FAA entered all comments into its database (including 107 from public officials) and categorized them. For example, Greenwich, CT wanted LaGuardia arrivals to fly higher when passing over its town. The Congressman from Staten Island wanted Newark departures to fly straight out over Elizabeth, rather than over his district. While many New Jersey officials advocated an ocean routing procedure for Newark flights, other officials asserted such a procedure would be wasteful and would simply move existing noise from one community to another. FAA responded to the concerns in a March 2002 Scoping Report. FEIS App. L § L.3.<sup>14/</sup>

After over three years of additional work, FAA released in December 2005 its Draft Environmental Impact Statement (DEIS) for public comment for a period extended to six months. ROD 49; AR 2676. The agency conducted another round

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<sup>14/</sup> FAA was simultaneously undertaking the aviation demand forecasting effort and commencing the operational design process.

of 30 public meetings, attended by 1,166 people, using graphic displays to show the alternatives' routings and noise impacts, and other related information.<sup>15/</sup>

FEIS 6-5 to 6-8. FAA also maintained a Project website throughout the EIS process. ROD 49; FEIS 6-9 to 6-10.

After the comment period closed, FAA began work on the FEIS, including both textual revisions and additional appendices. Appendix M documented public and agency involvement Post-DEIS and Appendix N contained 1,701 pages addressing the approximately 4,500 comments on the DEIS.

FAA announced its selection of its Preferred Alternative on March 23, 2007. "Among the alternatives studied, the Integrated Airspace Alternative Variation with ICC best meets the purpose and need of the project, which is to improve the efficiency and reliability of the airspace structure and air traffic control system from southern Connecticut to eastern Delaware." FEIS ES-19; ROD 21.

On April 6, 2007, FAA released, and invited public comment on, a 62-page Noise Mitigation Report (FEIS Appendix P) which provided detailed information on the mitigation measures FAA was proposing for the Preferred Alternative, and an 83-page Operational Analysis of Mitigation Measures (FEIS Appendix O), explaining which techniques were feasible. AR 8330. The mitigation measures

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<sup>15/</sup> See [http://www.faa.gov/airports\\_airtraffic/air\\_traffic/nas\\_redesign/regional\\_guidance/eastern\\_reg/nynjphl\\_redesign](http://www.faa.gov/airports_airtraffic/air_traffic/nas_redesign/regional_guidance/eastern_reg/nynjphl_redesign).

included adjusting departure headings to route aircraft over less noise sensitive areas, keeping arriving aircraft at a higher altitude for a longer period, and utilizing continuous descent approaches and RNAV procedures where appropriate. Seven public meetings were conducted, attended by over 2,200 people who provided approximately 1,700 additional written and oral comments. ROD 49; FEIS 6-8. These comments and FAA's responses thereto are in FEIS Appendix Q.

In addition to all the public participation opportunities described above, FAA undertook an additional public outreach program in communities near LaGuardia, Newark (including Elizabeth, NJ) and Philadelphia with the potential for high and disproportionate noise impacts on low-income or minority populations. *See* FEIS Appendix H. These steps included holding community meetings in accessible areas and taking appropriate measures to publicize the meetings and convey information effectively at the meetings. *See* FEIS 4-41 to 4-42. *See also* GAO Report on FAA Airspace Redesign (GAO-08-786 July 2008) (Resp. Motion, Ex. A) at 24-28.

On July 31, 2007, FAA released its FEIS to the public. 72 Fed. Reg. 43,271 (Aug. 3, 2007). This 528-page document includes chapters on Purpose and Need, Alternatives, the Affected Environment, Environmental Consequences, the Preferred Alternative and Mitigation, and Public Involvement and Agency

Coordination. The FEIS is accompanied by 18 Appendices providing detailed descriptions of technical issues.

**E. FAA's Records of Decision**

The ROD presents FAA's rationale for its action, provides responses to comments on the FEIS, and sets forth the formal decision and order that made this determination eligible for judicial review. In pertinent part, the ROD finds that the Project will not result in any use of publicly owned parklands, historic sites, and other properties protected by §4(f) of the Department of Transportation Act of 1966, currently codified at 49 U.S.C. §303(c), *see* Argument II below, and that the Project complies with general conformity requirements of the CAA, *see* Argument III below. ROD 30-38, 55-56.

The ROD approved the Preferred Alternative identified in the FEIS – the Integrated Airspace Alternative with ICC – with mitigation (Selected Project). The Redesign is being implemented in four stages over a five-year period with full implementation now expected in 2012. Stage 1 largely involved adopting new departure dispersal headings for selected runways at Newark and Philadelphia, implemented on December 19, 2007. *See* Implementation Schedule, Resp. Motion, Ex. C. Stage 2 focuses primarily on expanding the westgate for departures from Newark, Kennedy, and LaGuardia, along with a separate departure gate for

westbound traffic departing Philadelphia. Stage 3 will subsequently involve boundary changes, and Stage 4 includes the shifting of arrivals into Newark and implementation of the night-time ocean routing noise mitigation procedure for Newark Runway 22R departures.

As a result of the adopted noise mitigation measures, FAA was able to decrease the number of people with “significant” noise increases to 545 in 2006 and eliminate all significant noise increases by 2011 when the Project is fully implemented, as well as greatly reduce the number of people with slight-to-moderate noise increases. ROD 26-27; FEIS 5-1 to 5-39. Moreover, the Project, as mitigated, reduces the number of people exposed to aviation noise above the 45 DNL level by almost 600,000 as compared to the Future No Action Alternative. ROD 1, 27.

Even as the airspace redesign FEIS was being completed in Summer 2007, delays were increasing to unprecedented levels at Kennedy. Air carriers continued to schedule new flights there during peak hours, and delays were continuing at Newark despite level traffic there. At Kennedy, FAA issued an order capping operations at an average of 81 per hour, in effect until October 24, 2009. 73 Fed. Reg. 3,510 (Jan. 18, 2008). This order joined an earlier order capping operations at LaGuardia. 71 Fed. Reg. 77854 (Dec. 27, 2006). Concerned that the Kennedy

order might cause carriers simply to shift flights to Newark, FAA adopted a similar measure for that airport. 73 Fed. Reg. 29,550 (May 21, 2008).<sup>16/</sup> On July 31, 2008, FAA issued a Written Re-Evaluation and ROD (WR/ROD) for the NY/NJ/PHL Metropolitan Airspace Redesign FEIS in which it concluded that the schedule limits do not replace the purpose and need for airspace redesign and that the data and analysis of environmental effects in the FEIS remain substantially valid.

WR/ROD 9,15. Resp. Motion, Ex. B.

### SUMMARY OF ARGUMENT

If the late Senator Henry Jackson could return to Washington and examine the FEIS for this Project, he likely would find that its length, detail, and extensive public participation far exceeded his modest goal as NEPA's principal sponsor in 1969. FAA applied its considerable aviation and environmental technical expertise to this vital, but controversial, redesign Project with a thoroughness befitting the importance of the action and interest from the public. Petitioners are left with quibbles in the wake of this unprecedented NEPA process. Their claims, resting on NEPA, §4(f) and the CAA, are all without merit.

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<sup>16/</sup> On October 10, 2008, FAA issued long-term caps for Kennedy and Newark (73 Fed. Reg. 60,544) and for LaGuardia (73 Fed. Reg. 60,574), which were stayed by this Court in December 2008. *Port Authority of New York/New Jersey v. FAA*, D.C. No. 08-1329.

1. There is no major, overarching theme to Petitioners' NEPA attack. Instead, they present a laundry list of allegations grounded upon court decisions involving every federal activity except FAA actions and frequently incorrect factual assumptions. Petitioners' assertion that reducing delay in the Region's airspace will induce additional traffic is a variant on a claim rejected by courts with respect to other air traffic projects. Building another lane for an interstate highway could induce growth and in that sense may be like *adding a new runway*, but it is not similar to modernizing airspace, especially over New York where there is considerable history of delay acceptance. Similarly, FAA criteria used to guide financing new runways and terminals has no bearing on redesigning airspace.

Petitioners fault FAA for not giving greater consideration to "congestion management" as an alternative to airspace redesign, but they cannot explain how a temporary cap on operations at a handful of airports can solve the inefficiencies of air traffic procedures in 31,000 square miles of airspace. Petitioners demand more modeling to address more recent traffic data, but FAA has shown that its original projections retain integrity and court have repeatedly upheld its decision not to engage in endless rounds of modeling based on the constant unfolding of new data. Equally unavailing is Petitioners' effort to fault FAA's cumulative impacts analysis by demanding that it address other events unfolding during this NEPA

process. Those matters will receive their own NEPA review, taking into account the new procedures of airspace redesign.

FAA recognized that in these densely populated urban areas, concern over aircraft noise remains paramount. FAA noise mitigation measures actually reduce the number of people exposed to a significant level of aviation noise (65+ DNL). Instead, Petitioners make the remarkable assertion that FAA gave short shrift to noise impacts generally, and especially in Elizabeth, NJ. Putting aside the fact that this allegation stands in the face of volumes of studies, thousands of comments and considerable mitigation effort, these concerns devolve into complaints that FAA did not put contour lines on its noise exposure maps, that a staged approach and one-year delay in project implementation undoes the validity of traffic forecasts, and that background noise monitoring should have been conducted in Elizabeth. Petitioners ignore FAA's explanations that it employed the state-of-the-art noise model for projects involving multiple airports, that changing the traffic forecast years would not undercut FAA's consideration of alternatives or adoption of mitigation measures, and that Petitioners' demand for background monitoring reveals their misunderstanding of the fundamentals of aviation noise methodology. Other NEPA claims, involving Environmental Justice and noise mitigation

monitoring issues, are based on factually incorrect assumptions and legally flawed analysis.

2. Most of Petitioners' §4(f) claims were not raised during the lengthy administrative process and cannot be considered here. At bottom, they argue that FAA was obligated to examine every single property in the region that is arguably protected by the statute absent any possibility of constructive use. There is no authority for such an obligation. FAA's determination that no constructive use results from the Project is reasonable and based on screening criteria and appropriate analyses that fully satisfy its obligations under this measure. By and large, Petitioners' §4(f) arguments reflect factual errors and focus on properties that will experience noise changes far below any potential for constructive use.

3. Petitioners are equally unsuccessful in attacking FAA's compliance with the CAA. FAA's conclusion, first that the Project was presumed to conform to any applicable State Implementation Plan (SIP), and second, that the Project was exempt as *de minimis* because it will decrease emissions relative to the Future No Action Alternative are legally sufficient and find ample record support. As an air traffic activity expected to reduce delay and enhance efficiency, FAA's conclusion that emissions would decrease as a result of this Project was both reasonable and confirmed by a study comparing aircraft fuel usage before and after the proposed

action. As with other methodologies employed in this process, Petitioners quibble with the outcome but identify no critical defects in the study.

## ARGUMENT

### I. **FAA’S NINE-YEAR, \$53 MILLION EFFORT TO COMPLY WITH NEPA FULLY SATISFIED ITS OBLIGATIONS UNDER THAT ACT.**

#### A. **NEPA Background and Standard of Review**

NEPA requires agencies to prepare an EIS on proposals for “major federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). NEPA does not mandate particular results, but simply prescribes the necessary process. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350-51 (1989). “In reviewing the FAA’s compliance with NEPA, [this Court’s] role ‘is simply to ensure that the agency has adequately considered and disclosed the environmental impacts of its actions and that its decision is not arbitrary or capricious.’” *Communities Against Runway Expansion v. FAA*, 355 F.3d 678, 685 (D.C. Cir. 2004) (quoting *City of Olmsted Falls v. FAA*, 292 F.3d 261, 269 (D.C. Cir. 2002)). This Court reviews the EIS to “ensure that the agency took a “hard look” at the environmental consequences of its decision to go forward with the project.” *Id.* (quoting *City of Grapevine v. Dep’t of Transp.*, 17 F.3d 1502, 1503-04 (D.C. Cir. 1994)). Here, FAA adequately considered and disclosed the

environmental impacts of the Project, consistent with FAA Order 1050.1E “Environmental Impacts: Policies and Procedures” (eff. date June 8, 2004), and demonstrated that its decision to adopt the Selected Alternative was not arbitrary or capricious.

As explained below, courts have repeatedly upheld FAA’s judgment on these complex and technical issues, found that its reasoning is entitled to deference, and rejected attempts to “flyspeck” documents prepared for NEPA compliance such as those Petitioners present here. *Nevada v. Dept. of Energy*, 457 F.3d 78, 93 (D.C. Cir. 2006) (citation omitted).

**B. FAA Appropriately Compared the Environmental Impacts of the Alternatives at the Same Level of Flight Operations.**

FAA developed flight schedules for the 21 study airports at the traffic levels projected for 2006 and at the higher levels projected for 2011. ROD 23. In their Argument I.B (at 25-33), Petitioners argue, in effect, that it was not sufficient for FAA to undertake apples-to-apples comparisons for 2006 and 2011 (comparing the impacts of the alternatives’ different flight paths at the same level of flight operations) but should also have undertaken apples-to-oranges comparisons (comparing the impacts of the different flight paths at different levels of flight operations tailored to reflect alleged market responses to different levels of delay).

Petitioners' primary argument is that the forecasts for the Integrated Airspace with ICC Alternative are too low because they do not account for the "induced growth" in traffic they say will result from the Project's delay reductions. At another point (Br. 29), however, Petitioners seem to suggest that the Future No Action forecasts may be too high, presumably because they believe the forecasts should account for suppressed growth in traffic due to continuing delays. For purposes of comparing the *relative* effects of the alternatives, both operational and environmental, the two arguments are similar. Neither has merit.<sup>17/</sup>

FAA's aviation demand forecasting is entitled to deference. In *St. John's Church of Christ v. FAA*, No. 07-1362, 2008 WL 5264654 (Dec. 19, 2008), this Court recently reiterated that FAA's "forecasts of capacity and demand at an

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<sup>17/</sup> Petitioners cannot reasonably challenge the simulations FAA undertook. First, FAA had to develop the traffic forecasts in 2001 so that it could then simulate the airspace for each alternative and quantify how each performed with respect to the eight desired system improvements, including "reduce delay." Only when this work was completed in early 2005 (*see* FEIS App. C) was there any quantification of the delay expected under each alternative. Second, it was necessary to do at least one round of analysis of environmental impacts using the same 2006 traffic files for each alternative, and then one round using the same 2011 traffic files for each alternative. If two variables were changed at the same time (flight paths and number of flights), the relative impacts of the different flight paths could not be determined. Petitioners are thus actually demanding an *additional* set of demand forecasts and an *additional* round of operational and environmental simulations after FAA completed its operational analysis in 2005. Such an additional round of analysis was not legally or factually warranted for all the reasons explained below.

airport” are due “even more deference” than its “compliance with statutory and regulatory requirements under the highly deferential arbitrary and capricious standard.” In *City of Olmsted Falls*, 292 F.3d at 272, this Court had previously explained that “[t]he FAA’s expertise in forecasting air transportation demand and airfield capacity are areas where courts accord significant deference,” citing *National Parks & Conservation Association v. DOT*, 222 F.3d 677, 682 (9<sup>th</sup> Cir. 2000), and *City of Los Angeles v. FAA*, 138 F.3d 806, 807 n.2 (9<sup>th</sup> Cir. 1998). Petitioners have not come close to demonstrating FAA’s forecasting methodology was arbitrary or capricious.

#### **1. FAA’s Development of the Traffic Forecasts**

FAA developed the flight schedules in 2001 (FEIS 1-20), the first step in the detailed, multi-year operational and environmental analysis documented in the DEIS and FEIS. Although FAA develops and updates Terminal Area Forecasts (“TAFs”) for some 3,400 airports to assist in making planning, budgeting and staffing decisions, the TAFs were not sufficiently detailed for this Project. ROD 23-24; FEIS 1-18. FAA undertook an independent forecasting effort, as summarized in FEIS 1-18 to 1-21 and App. B.1, using actual operations in 2000 as the baseline. When forecasting began, FAA anticipated implementing the Project in 2006 but the timing of the implementation of each potential stage was not clear;

by the time the DEIS was issued in December 2005, FAA anticipated that the ICC stage would be implemented in 2011. ROD 23; FEIS 1-19. The timeframes for analysis “usually selected are the year of anticipated project implementation and 5 to 10 years after implementation.” Order 1050.1E App. A ¶ 14.4g(2). FAA determined that it was appropriate to develop forecasts for 2006 and 2011.

Detailed data relevant to trends in passenger demand and fleet mix were gathered from numerous sources, and assumptions were developed about the economy generally and aviation industry specifically. FEIS App. B.1 at B-3 to B-7. Passenger demand at the 21 study airports was then forecast for 2006 and 2011. FEIS App. B.1, Table 4 (at B-11) shows significant increases in passenger enplanements at the 11 airports with air carrier service: from about 62 million in 2000, to 78 million in 2006, to 90 million in 2011 (an increase of about 45% over the 11-year period). Fleet mix was also forecast for all the airports. FEIS App. B.1, Table 6 at B-16 and Att. B.

These projections were then translated into a forecast of annual flight operations for each of these airports for 2006 and 2011. FEIS App. B.1, Table 5 (at B-14) shows significant increases in annual flight operations. At the 11 airports with air carrier service annual flight operations increased from about 1.9 million in

2000, to 2.2 million in 2006, to 2.4 million in 2011 (an increase of about 26% over the 11-year period).<sup>18/</sup>

FAA compared the forecasts against the TAFs “as an order-of-magnitude check.” FEIS App. B.1 at B-10 to B-11.<sup>19/</sup>

FAA then took this data and developed two sets of daily operational schedules (“traffic files”) for each airport: the average annual day (“AAD”) schedule for 2000, 2006 and 2011 (to be used for environmental analysis)<sup>20/</sup> and the 90<sup>th</sup> percentile day (“90P Day”) schedule for 2000, 2006 and 2011 (to be used for operational analysis to ensure that the airspace is “sufficiently robust” to accommodate a busy traffic day). FEIS App. B.1 at B-7, B-11; *see also* FEIS App. C, Table 3-6 at 3-18 (showing the 90P Day daily arrival and departure counts for the eight busiest airports in 2006 and 2011).

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<sup>18/</sup> Note that while passenger demand was predicted to increase by about 45% between 2000 and 2011, annual flight operations were predicted to increase by a lower percentage – about 26%. The number of flight operations depends in part on fleet mix (size of aircraft) and on the occupancy rate of the aircraft.

<sup>19/</sup> Only two airports (Stewart and Trenton) showed variances of more than 4%: Stewart based on new service not anticipated in the TAF and Trenton based on withdrawal of scheduled service. FEIS App. B.1 at B-10 to B-11. As a rule-of-thumb, FAA uses a 15% threshold for accepting non-FAA 10-year forecasts (and a 10% threshold for accepting 5-year forecasts) as the basis for FAA decisions on airport development projects. *See* FEIS 1-19. While not directly applicable to airspace redesign, the guidance is a useful reference.

<sup>20/</sup> “The AAD provides the best representation of the typical longterm (365 days) average conditions for each airport or airspace system.” FEIS App. E at E-1.

**2. NEPA Does Not Require FAA to Adjust Traffic Forecasts Based on Alleged Induced Demand.**

FAA used the forecast 2006 schedules to simulate the airspace for the four alternatives FAA anticipated could be implemented in 2006 and used the forecast 2011 schedules to simulate the airspace for these four alternatives and the Integrated Airspace Variation with ICC.

Petitioners challenge this process as violating NEPA because it does not address the “induced growth” they believe this action will cause. Petitioners’ reliance (Br. 25) on the Council on Environmental Quality (CEQ) regulation requiring an agency to consider a project’s “indirect effects,” 40 C.F.R. § 1508.8(b), and on FAA Order 1050.1E App. A § 15 which provides guidance on applying this regulation, is unavailing. The CEQ regulation states: “Indirect effects” are effects “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” FAA considered “Secondary or Induced Impacts” in the areas near LaGuardia, Newark and Philadelphia where the Project would create significant noise impacts, but found no such significant indirect effects in these areas. FEIS 4-48; ROD 29.

These provisions do not require FAA to assume that reduction in flight delays following project implementation will induce additional demand.<sup>21/</sup> FAA develops aviation demand forecasts without regard to project implementation *unless* the project would increase airfield “capacity,” meaning, in this context, the “theoretical maximum number of aircraft that could use [an airfield] in a given time.” FEIS App. N (AR 9304 at pdf 2384). Airfield “capacity” is determined by the number, length and configuration of runways, taxiways, aprons and holding areas.<sup>22/</sup> In contrast, airspace redesign projects do not increase “capacity” but instead increase “throughput,” which is the “actually-achieved number of aircraft using [an airfield] in a given time.” *Id.* Increased throughput means that delays decrease; the difference between capacity and throughput is a measure of the efficiency of a system.<sup>23/</sup> *Id.* In FAA’s experience, the phenomenon of induced

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<sup>21/</sup> GAO concurs. *See* Report GAO-08-786 (Resp. Motion, Ex. A) at 77-81.

<sup>22/</sup> There are three categories of “capacity-related airport projects” – airside, airport terminal building, and landside access – but only airside capacity projects (which include construction, reconstruction and extension of runways, taxiways, aprons and hold pads) can induce additional flights. “FAA Airport Benefit-Cost Analysis Guidance” (Dec. 15, 1999) (“BCA Guidance”). *See* Pet. Add. C, Ex. B; Resp. Motion, Ex. D at 26-27, 41.

<sup>23/</sup> “There are so many definitions of the term ‘capacity’ that some confusion is inevitable.” FEIS App. N (AR 9304 at pdf 2409). In documents written for the lay public, “capacity” is often used in place of “efficiency” or “throughput.” *Id.*

demand is not significant enough to warrant modeling unless there is an increase in “capacity” and not just “throughput.”<sup>24/</sup>

Petitioners’ reliance on highway cases is unpersuasive. Courts have upheld FAA’s decision that it does not need to model “induced demand” when it revises flight patterns to make the airspace more efficient, but does not increase “capacity.” In *Morongo Band of Mission Indians v. FAA*, 161 F.3d 569, 572, 580 (9<sup>th</sup> Cir. 1998), the court upheld an FAA decision moving a flight path for Los Angeles Airport arrivals in order to improve efficiency and safety while accommodating growth in traffic. The court rejected the argument that NEPA required FAA to expressly discuss § 1508.8(b) and the “growth-inducing impact” of the project. As in this case, FAA had performed a detailed analysis “to estimate the numbers of aircraft” and had used its projections in its noise analysis, which found no significant impact. *Id.* at 578, 581. *Seattle Community Council Federation v. FAA*, 961 F.2d 829, 831 (9<sup>th</sup> Cir. 1992), involved FAA’s revised approach pattern to Seattle-Tacoma International Airport (“Sea-Tac”), a change designed “to increase airport efficiency and maintain safety.” The court rejected petitioners’ induced-growth argument, noting that FAA expected traffic to increase

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<sup>24/</sup> See, e.g., FEIS App. C at 3-22 (airport and runway capacity are frequently the constraining resource, not airspace); FEIS App. N (AR 9304 at pdf 2370) (“delay reductions [from airspace redesign] are smaller than those from, for example, building a new runway”).

at Sea-Tac because of the population increase in the metropolitan area whether or not FAA changed the approach patterns. *Id.* at 835. Although the plan “will increase the efficiency of the air traffic system and reduce delays” and “will necessarily allow the volume to increase” (*i.e.*, a larger number of aircraft could operate with the same level of delay) the court held that § 1508.8(b) did not require FAA to conduct any additional analysis. *Id.*

In *City of Olmsted Falls*, this Court rejected a similar challenge to FAA’s demand forecasting methodology (but one made without reference to § 1508.8(b)) in the context of a challenge to FAA’s decision approving the reconfiguration of runways at Cleveland Hopkins International Airport (“CLE”):

The FAA determined that the airport can accommodate the predicted demand for 2006, based on its current airfield configuration and without the proposed improvements. While there may be delays, FAA defines capacity without reference to delay goals. Here the improvements are to move an *existing* runway, not the addition of a runway, and thus in the FAA’s judgment they will not induce demand. According to the FAA, its forecasts show that “the demand for air travel at CLE is independent of the proposed improvements at the Airport.” In other words, “if you don’t build it, they will come anyway.” *City of Los Angeles v. FAA*, 138 F.3d 806, 807 (9<sup>th</sup> Cir. 1998). . . . As the FAA is entitled to rely upon its demand and capacity forecasts, and to credit the views of its own experts – who are charged with determining demand and capacity issues for the National Airspace System – over Olmsted Falls’ contrary views, we cannot say that the FAA’s determination was unreasonable.

292 F.3d at 272. FAA's traffic forecasts in this case should similarly be found to be reasonable.

In *City of Los Angeles v. FAA*, 138 F.3d 806 (9<sup>th</sup> Cir. 1998), the Ninth Circuit had earlier upheld FAA's demand forecasting approach in connection with a terminal expansion project at the Burbank-Glendale-Pasadena Airport. FAA had explained that terminal expansion would "barely affect usage" because demand "depends much more on location, runways and ticket prices" than on the terminal. *Id.* at 807-08. Petitioners argued that "a safer, more comfortable terminal must surely attract some passengers who would otherwise use another airport." *Id.* The court rejected this argument:

At first glance this argument has some appeal, but on closer examination the FAA's explanation makes sense. . . .

The FAA supports its estimates with studies of other airports and its accumulated experience nationwide. The cities cite mainly common sense. Sometimes common sense may trump implausible expert claims, . . . but not in a case like ours where common sense can support either conclusion.

*Id.* at 808. Here, Petitioners' reliance on "basic economic principles" (Br. 26) and the "irrefutable reality" (Br. 31) that reducing delay will increase demand is insufficient to demonstrate that FAA's demand forecasting was arbitrary or capricious.

**3. Passenger and Carrier Demand in the New York City Market is Less Responsive to Delay Than It Is in Other Markets.**

FAA also reasonably assumed that continuing delays at the levels expected between 2000 and 2011 would not materially suppress passenger demand under the Future No Action Alternative. FAA explained that the historical pattern in the Region indicated that there would be some growth in traffic between 2000 and 2011 despite significant delays at the major airports. FAA's specific experience was, and continues to be, that passengers and carriers accept a level of delay in the New York City market that they do not accept elsewhere.

As summarized in the BCA Guidance (at 39), FAA ordinarily considers average delay of 10 minutes per operation to be severe, and expects "a flat or only slightly escalating rate of growth once delay reaches 20 minutes." In the New York City market, however, FAA found that aviation demand was less responsive to delay than it was elsewhere. Notably, when some of the restrictions of the "High Density Rule" (which had artificially limited traffic since the 1960s) were eliminated at LaGuardia in 2000,

[t]he result was a huge expansion of traffic: LGA was working as many as 1590 operations per day, at an airport where 1280 operations means running the maximum-capacity configuration for sixteen hours straight with no wasted spaces in the arrival or departure streams. Delays were enormous – in November, 28% of all delays in the country were at LGA, according to FAA's OPSNET database. This

was an extraordinary case, but it makes the point that flying to New York City is extraordinarily valuable. Airlines will accept delays here that they would be unable to tolerate elsewhere.

FEIS App. N (AR 9304 at pdf 2361).<sup>25/</sup>

FAA's subsequent experience fully supports its assumption of continued growth in flight operations in the Region through 2011, with or without airspace redesign. Continental, for example, did not reduce the number of flights at Newark when passenger volume decreased following September 11, 2001, but instead substituted smaller aircraft despite continuing large delays. *Id.* The passengers tolerated the delays and Continental guarded its "market share against encroachment by a competitor." *Id.*

Indeed, Petitioners provide two examples that support FAA's projections of growth in New York City area traffic (unrelated to Project implementation) despite continuing delays. In their Argument I.C, Petitioners point (Br. 33) to FAA's 2008 Orders establishing limits (or "caps") on hourly take-off and landing slots at Kennedy and Newark. FAA intervened because carriers did not unilaterally reduce flights in response to mounting delays. Petitioners' Argument I.F (Br. 44) cites

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<sup>25/</sup> In its Order establishing caps at LaGuardia upon the statutorily mandated expiration of the High Density Rule on January 1, 2007, FAA discussed the carriers' addition of hundreds of flights in 2000 despite the average delay for arriving flights soaring from 15.52 minutes in March to 37.86 minutes in September. 71 Fed. Reg. 77854, 77855 (Dec. 27, 2006).

approvingly the Port Authority's projections of a 40% increase in air passenger traffic and a 70% increase in air cargo traffic from 2005 to 2020 at Newark, Kennedy and LaGuardia. In its comments, the Port Authority acknowledged that "traffic is expected to increase over the next fifteen years." FEIS App. N (AR 9304 at pdf 2666).<sup>26/</sup>

#### **4. The BCA Guidance Does Not Apply.**

Petitioners improperly rely (Br. 27-28) on the BCA Guidance, which they never referred to in comments during the EIS process. The BCA Guidance is not applicable to air traffic projects. It implements legal requirements to consider benefits and costs in approving discretionary grants of \$5 million or more to fund capacity-related airport projects under the Airport Improvement Program. 49 U.S.C. § 47115(d)(1); BCA Guidance at 1. Moreover, the BCA Guidance does not even require an induced demand analysis *for the airfield and terminal projects to*

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<sup>26/</sup> Petitioners point (Br. 28-29) to a sentence in the FEIS (at 2-5) in which FAA states that, if carriers were required to utilize larger aircraft as a congestion management measure, "more aircraft would quickly be scheduled to use the capacity that becomes available and the benefit of fewer aircraft would disappear." This is because airlines typically schedule flights in response to passenger demand for travel at certain hours, and airlines would likely switch some flights from less desirable hours to the peak hours in place of the consolidated flights. Petitioners' inference that carriers would similarly schedule a significant number of additional flights in response to the delay reduction expected from airspace redesign is not warranted.

*which it applies*: “Although the phenomenon of ‘induced demand’ is real, due to uncertainty in the data, its analysis is at the airport sponsor’s option.” *Id.* at 41.

Nevertheless, Petitioners urge application of the BCA Guidance’s rule-of-thumb” (Br. 33), which suggests a 2% increase in passenger demand for each 3-minute saving from the project. *Id.* Even if this rule-of-thumb applied to this project, which it does not, it would not avail Petitioners. FAA predicted in 2011 a 3-minute reduction in average arrival delay (22.9 minutes for Future No Action and 19.9 for Integrated Airspace with ICC), and a 4.1-minute reduction in average departure delay (23.3 minutes for Future No Action and 19.2 for Integrated Airspace with ICC). Addendum B. Delay savings in the 3-4 minute range would be expected to induce a passenger demand increase in the 2-3% range.<sup>271</sup>

Experience suggests that this modest increase in passenger demand could well translate into an even smaller percentage increase in the number of flight operations. *See* n.18 above. Thus, even if it were appropriate to tailor passenger demand forecasts for each alternative at each airport, the tailoring would lead to at most modest changes in the predicted number of flight operations in 2011.

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<sup>271</sup> Petitioners incorrectly state (Br. 33) that the BCA Guidance recommends a 2% increase in “operations” for each 3 minutes of delay savings. The recommended 2% increase is in *passenger* projections, not *flight operation* projections. BCA Guidance App. C, Table C.1.

In *City of Los Angeles v. FAA*, the court said that NEPA did not require FAA to undertake the induced demand analysis suggested by petitioners for the terminal project. 138 F.3d at 808 (“We don’t require an agency to quantify all possible effects, particularly not those that are likely to be minor.”). FAA has complied with NEPA here by reasonably explaining its approach to traffic forecasting:

FAA modeling incorporated the best estimates of all these effects. The economy demands air travel to New York City, and carriers will serve that demand despite long delays. An airspace redesign is a relatively small change to the aviation system, so we do not expect radical changes in airline schedules in response to it. The large delay changes in the operational analysis are the result of small efficiency improvements close to the limit of a fixed-capacity system.

FEIS App. N (AR 9304 at pdf 2361). Petitioners provide no reason to believe that quantifying any minor change to the relative benefits or relative environmental impacts of the alternatives would have materially changed FAA’s comparison of alternatives.

#### **5. Induced Demand Would Not Undermine FAA’s Air Quality Analysis.**

Petitioners present six pages of general argument on the concept of induced growth (Br. 26-31) but only one specific reason as to why it matters.<sup>28/</sup> They

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<sup>28/</sup> Petitioners merely mention (Br. 31) “noise” impacts without explaining how induced demand could affect the noise analysis. As explained in our Argument I.F.2, while adding a modest number of flights to the Mitigated Preferred Alternative could result in some additional census blocks with significant  
(continued...)

challenge (Br. 31-32) FAA's conclusion that the Project would not adversely affect air quality. FAA calculated that the Project would reduce fuel consumption as compared to Future No Action at the forecast 2011 AAD traffic level by 194,437 kg (about 63,380 gallons) per day. FEIS App. R at 7. Petitioners assert that the Project would consume 0.83% less fuel than Future No Action, assuming the same traffic level,<sup>29/</sup> and assert that if the traffic level were increased to account for induced demand, there might in fact be no reduction in fuel consumption. This argument is unpersuasive.

First, as explained above, Petitioners cite no authority distinguishing the cases described above upholding FAA's traffic forecasting for airspace redesign and similar projects without factoring in "induced demand." Second, FAA's decision did not turn on a *reduction* in fuel consumption. ROD 41-44. FAA would still have selected Integrated Airspace with ICC even assuming, without conceding, that the proposed airspace redesign alternatives and the Selected

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<sup>28/</sup>(...continued)

impacts, the noise mitigation strategy would eliminate any such significant impacts.

<sup>29/</sup> FAA does not disagree with Petitioners' figures in their footnote 14 except for their calculation of a 0.83% reduction in fuel consumption (the reduction in fuel from implementing the Project divided by the total fuel consumed by the modeled flights under the Future No Action Alternative). Among other things, that number is not meaningful due to limitations in modeling flights more than 200 miles from New York City, as explained in App. R at 12.

Alternative cause a *de minimis* increase in emissions. ROD 1, 56. Third, the Fuel Burn Analysis does not support any inference that the Project is likely to cause a more than *de minimis* increase in emissions at a slightly higher level of traffic.

As Petitioners point out (Br. 99), the Fuel Burn Analysis includes fuel consumed both above and below the mixing height, but it is the fuel consumed below the mixing height that affects local air quality. As explained in Statement of Facts Part C, the Project can be expected to achieve a greater percentage reduction of emissions below the mixing height than the overall percentage reduction of emissions throughout the flights (0.83%) given the particular benefits of expedited departures below the mixing height.<sup>30/</sup>

**6. FAA's Response to a Comment on the FEIS Does Not Call into Question the Traffic Forecasts.**

Petitioners fault (Br. 29) FAA's response (ROD 51) to a comment on the FEIS dated August 22, 2007 (ROD App. D at D-2) asserting that the forecast levels of traffic at Newark are too high. FAA prepared technical responses to FEIS

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<sup>30/</sup> Petitioners suggest a different challenge to the fuel consumption analysis in footnote 13 (Br. 32). It appears they are arguing that if FAA *overestimated* the level of traffic in 2011 (for reasons that have nothing to do with the demand/delay relationship), traffic could be *below* the "break-even point" and the Project would not reduce fuel consumption. As explained above, there is no "break-even point" relevant to local air quality. The Selected Alternative should benefit local air quality whatever the traffic level.

comments while finalizing the text of the ROD, issued September 5, 2007. One response included an observation about Newark's throughput during peak hours: "Without dual arrivals, actual traffic at EWR may remain at the current plateau . . . ." Although the response did not include a citation, the agency here was referring to FEIS App. C, Fig. 9-20 at 9-33 ("EWR 2011 End of Arrival Push"), which shows the projected 2011 schedule of arrivals ("arrival demand") and the projected hour-by-hour throughput of arrivals under the different alternatives. The Future No Action line looks like a plateau, but the Integrated Airspace with ICC line has peaks showing some arrivals shifting to earlier hours, "greatly reduc[ing] the number of night arrivals." FEIS App. C at 9-32. This discussion, while perhaps not artfully drafted, does not call into question FAA's forecasting methodology.<sup>31/</sup>

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<sup>31/</sup> Later (Br. 37-38), Petitioners also point out an error in this response concerning Newark operations on the 90P Days in July 2006 and July 2007. The consultant tasked with responding to the comment inadvertently picked up the number from the "tower" column (which includes overflights) in the OPSNET database, not the "airport" column (which includes only arriving or departing flights). This led to the erroneous statement that Newark traffic had leveled off at the forecast 2006 level rather than at the lower 2005 actual level. However, as explained in Argument I.D below, the 2006 forecasts, despite being higher than actual 2005 traffic levels, were still sufficiently accurate to support the operational and environmental analyses. FEIS App. B.2.

**C. FAA Properly Rejected Congestion Management as a Project Alternative.**

Petitioners' argument (Br. 33-36) that FAA improperly eliminated one group of alternatives – congestion management programs – from more detailed analysis is without merit.<sup>32/</sup> From the outset of this ambitious effort, FAA clearly articulated its goal: modernizing the airspace “to increase the efficiency and reliability of the airspace structure and ATC system, thereby accommodating growth while enhancing safety and reducing delays in travel.” FEIS 1-25. Contrary to Petitioners' assertion (Br. 35), the 20 words before “reducing delays in travel” are not mere surplusage. The FEIS (2-69 to 2-81, App. C at 9-1 to 9-39) describes the eight desired system improvements by which the alternatives were evaluated, qualitatively and quantitatively. Addendum B. Delay may be “the primary *measure* of the operational efficiency of the airspace system” (FEIS 2-72 (emphasis added)), but reducing delay is not the only important *objective* of the airspace redesign. As FAA explained in rejecting the City of Elizabeth's stay request:

The routes into and out of the major airports in the area constitute a complex, three-dimensional network of rigid altitude fixes, narrow arrival corridors and equally precise departure paths with multiple intersecting flows of traffic, and heavy air traffic controller workloads

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<sup>32/</sup> GAO considered this issue and concluded that FAA evaluated a reasonable range of alternatives. GAO Report 08-786 (Resp. Motion, Ex. A) at 73-77.

as each aircraft must respond to many changes in heading, altitude, and airspeed that are required as they safely thread their way into and out of the region. ROD at 7-8, see also ROD at 2-3 and FEIS at 1-8. Making this airspace more efficient will enhance its safety as well. ROD at 8.

Letter from McCartney to Scagnelli (Jan. 8, 2008) at 4 (Pet. RJN Ex. J).

A congestion management program relieves congestion *on the ground* at a specific airport by artificially limiting the number of flights that can take off during any given hour. Congress has found that artificial restrictions on air travel “are not in the public interest,” and “should be imposed to alleviate air traffic delays only after other reasonably available and less burdensome alternatives have been tried.” 49 U.S.C. § 47101(a)(9)(A) and (B). Accordingly, FAA concluded that “congestion management programs . . . should be considered only as a last resort to reduce delays in the national airspace system.” FEIS 2-6.<sup>33/</sup>

Moreover, FAA’s 2008 Orders, cited by Petitioners (Br. 33), imposing limits on hourly take-off and landing slots at Kennedy and Newark to address increasing delays, during Summer 2007, *support* FAA’s rationale. The Kennedy Order states that “this Order is not intended to create a long-term solution to congestion at JFK.” 73 Fed. Reg. at 3513-14. “[T]he intermediate and long-term priority is to

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<sup>33/</sup> Congress has to date also chosen to address aviation’s environmental impacts through means other than artificial restrictions on air traffic. *See, e.g.*, Pet. Br. at 6 n.7.

expand airport and airway system capacity and to increase the efficient use of existing resources,” including the Airspace Redesign Project. *Id.* at 3516. *See also* Newark Order, 73 Fed. Reg. at 29551 (schedule limitations are a “short-term vehicle to preserve realistic scheduling at EWR while longer term solutions are applied to relieve EWR’s congestion and delay”). *See also* WR/ROD 9-10 (schedule limits are not a replacement for airspace redesign because they are positive as to only two criteria, negative as to two other criteria and without effect as to the remaining four criteria).

The two cases cited (Br. 34-35) for the proposition that an agency must consider an alternative even if it would satisfy only one of multiple objectives are distinguishable on the ground that the different objectives in the cited cases were readily separable, not interrelated as they are here. *See Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 667 (7<sup>th</sup> Cir. 1997) (rejecting an EIS for a proposed new large reservoir that would provide water to two communities because the Corps never considered two separate water sources and there was no necessary relationship between the two communities’ water needs); *I-291 Why? Assn. v. Burns*, 372 F. Supp. 223, 252-53 (D. Conn. 1974) (granting preliminary injunction against new highway because existing routes should have been considered to connect I-91 and I-84 southwest of Hartford even if that alternative

would not relieve local congestion, a separate objective that could be solved by a separate project). In contrast, taking action to address any of the Region's airspace problems would necessarily affect the other interrelated characteristics of the single system, both positively and negatively. Thus, any approach that would address only airport delay, in disregard of, or at the expense of, other system characteristics, was not a "reasonable" alternative to airspace redesign.

In essence, Petitioners suggest it would be acceptable for FAA to retain inefficiencies in the sky if capacity on the ground at the busiest airports is capped to lessen delay. This makes no sense.

**D. Actual Traffic Data from 2005 and Subsequent Years Do Not Warrant Restarting the Operational and Environmental Analysis.**

Petitioners' next contention (Br 36-38) is that FAA should have reinitiated the operational and environmental analysis in 2006 after it obtained actual traffic data for 2005. Overall, the 2006 AAD forecast was 6% above 2005 actual traffic and the 2006 90P Day forecast was 8% above 2005 actual traffic. FEIS App. B.1 at 7, 27.

No court has ever applied NEPA to require a never-ending loop of revised traffic forecasting, operational simulation and environmental analysis as each year's new data becomes available. Such an approach would preclude FAA and

other agencies from ever addressing problems that require multi-year analysis.<sup>34/</sup> This Court rejected a similar argument in *Village of Bensenville v. FAA*, 457 F.3d 52, 71 (D.C. Cir. 2006), holding that it was permissible for FAA to use “the best information available when it began its analysis and then checking the assumptions of those models as new information became available.” That is precisely what FAA did here.

FAA saw the suppression of aviation demand following September 11, 2001. In 2005, prior to issuing the DEIS, FAA predicted that, on a national basis, most measures of aviation activity would return to their pre-September 11 levels that year. *See* FEIS 1-20 to 1-21 (citing FAA Aerospace Forecasts Fiscal Years 2005-2016). Then, in 2006, FAA specifically compared the 2006 traffic forecast against 2005 actual traffic and analyzed whether more recent traffic data was likely to change the DEIS’s conclusions. FEIS App. B.2. Petitioners erroneously assert (Br. 37) that FAA only addressed the overall average differences and did not consider the differences at the 21 individual airports. In fact, FAA compared the forecast 2006 AAD and 90P Day traffic counts to the actual 2005 traffic data *at*

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<sup>34/</sup> “A study of this scope and magnitude takes a number of years to fully develop. The noise modeling of future conditions and final alternatives is based on the input data developed from the baseline conditions (2000). Continual revisions of the baseline year would make it impossible to finalize the noise modeling for the study.” FEIS 3-18.

*each airport* on both a total and hour-by-hour basis. FEIS App. B.2 at 4 to 12, 27 to 35. FAA also analyzed the significant increase in regional jets at some airports over what was predicted. *Id.* at 17 to 24.

FAA concluded that the traffic forecasts were sufficiently accurate to “support planning decisions” from both an operational and environmental perspective, in that they “capture[d] the general flow and magnitude of the traffic in a way that can show differences among the proposed alternatives.” FEIS App. B.2 at 57. FAA had previously concluded that “the events of September 11, 2001 and other near-term impacts are considered short-term and are not expected to affect long-term demand at the Study Area airports.” FEIS 1-21. These conclusions are entitled to substantial deference. *See Village of Bensenville*, 457 F.3d at 71.

Petitioners’ narrow focus on the difference between Newark’s 2006 forecast and 2005 actual traffic (Br. 36) is unwarranted. As explained above, while Newark will experience the biggest reduction in average “block time” upon full implementation, the Project will reduce “delay” at all the major airports from the commencement of implementation.<sup>35/</sup> In fact, *LaGuardia departures* are predicted

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<sup>35/</sup> Petitioners’ citations to the FEIS miss the mark. They make no reference to the detailed bar charts depicting delay reductions at each of the major airports (FEIS App. C at 9-20 to 9-27), but instead refer to (1) the “Maintain Airport Throughput”  
(continued...)

to experience the most significant delay reduction in 2011 (about 10 minutes per flight). See FEIS App. C at 9-22.

More recent data, specifically increased traffic and delays during Summer 2007 that led to the adoption of limited schedules for Kennedy and Newark in 2008, indicate that the 2011 forecasts are not significantly overstated. “The limited schedules were very similar to the forecast of the annual average day (AAD) in 2011.” WR/ROD (Resp. Motion, Ex. B) at 8.<sup>36/</sup>

NEPA does not require FAA to make 10-year forecasts with crystal-ball precision. By definition, a forecast is an informed prediction, not a guarantee. Petitioners fail to demonstrate that FAA’s original traffic forecasts were so defective that they should have been replaced with new forecasts based on more recent operations data.<sup>37/</sup>

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<sup>35/</sup>(...continued)

system improvement (FEIS 2-78 to 2-80), (2) “Route Length Changes” (FEIS App. C, Fig. 9-22 at 9-35), (3) discussion of the block time break-even point for Newark arrivals (FEIS App. C at 10-2), and (4) a general explanation on “Interpreting Average Delay,” which uses Newark as an example but does not suggest that Newark is the only airport that would experience a delay reduction (FEIS App. O at 73-78).

<sup>36/</sup> FAA’s inadvertent error in reviewing OPSNET data for Newark’s 90P day in 2006 and 2007 (see Br. 37-38) is addressed in n.31 above.

<sup>37/</sup> While it may not be logically inconsistent for Petitioners to argue both that FAA *underestimated* traffic for the Integrated Airspace with ICC Alternative by  
(continued...)

**E. The FEIS Adequately Addressed Cumulative Impacts.**

Petitioners argue (Br. 38-42) unpersuasively that the FEIS should have included an analysis of the cumulative impacts of (1) the Philadelphia Capacity Enhancement Program (CEP), which could include the relocation and/or extension of the existing runways, and (2) the potential expansion in service at Stewart Airport as a result of the Port Authority's potential acquisition of the operating lease. FAA specifically explained why there was insufficient information to address any future traffic changes resulting from these actions. ROD 46-47; FEIS 4-73 to 4-84. Neither CEQ's regulation requiring consideration of the cumulative impacts of "reasonably foreseeable future actions," 40 C.F.R. § 1508.7, nor any other provision Petitioners cite (Br. 40 n.16), requires anything more. Petitioners once again avoid any reference to pertinent FAA cases. *See, e.g., Town of Marshfield v. FAA* (1st Cir. Dec. 18, 2008), slip op. at 7-8; *City of Oxford, Georgia v. FAA*, 428 F.3d 1346, 1353-54 (11<sup>th</sup> Cir. 2005); *Airport Neighbors Alliance, Inc. v. United States*, 90 F.3d 426, 431 (10<sup>th</sup> Cir. 1996).

Here, FAA explained its treatment of the Philadelphia CEP as follows:

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<sup>37/</sup>(...continued)

failing to account for induced growth, and that FAA *overestimated* traffic for this alternative by failing to predict accurately other trends in aviation demand, the two arguments, as a practical matter, tend to offset each other to some degree.

Because there has been no determination of what the alternatives for this proposed project will look like, there is insufficient information to evaluate cumulative impacts, especially as they relate to noise, at this time. It is noted that the CEP EIS analysis will include consideration of the airspace redesign alternative selected for implementation as a result of this EIS.

FEIS 4-82; ROD 47. Petitioners challenge (Br. 39-40) the “insufficient information” statement; they say there was sufficient information as of March 2005 because FAA addressed the CEP in the cumulative impacts analysis of another FEIS addressing the Philadelphia Runway 17-35 Extension (provided to the Court by Petitioners as RJN Ex. C). It appears that Petitioners did not read their Exhibit C. The cumulative impacts analysis in that March 2005 FEIS does include the proposed CEP on the list of “foreseeable future actions,” but then immediately explains, *in two full paragraphs*, why “[t]he potential future effects of the CEP are speculative and will be considered in detail in the Environmental Impact Statement currently being prepared for that project.” FEIS for Runway 17-35 Extension at 4-205. *See also* WR/ROD (Resp. Motion, Ex. B) at 6 (reaffirming that the CEP alternatives, which by then had been identified, would be evaluated in the CEP EIS taking into account the Airspace Redesign Selected Alternative procedures).

Petitioners also miss the mark in asserting (Br. 40-42) that the Port Authority’s announcement in January 2007 about its plan to purchase the Stewart

operating lease required a new traffic forecast. Notably, the Port Authority did not make a single reference to any plan to purchase that lease in its June 5, 2006 comments on the DEIS. AR 4300 at pdf 2664. In any event, the timing and degree of any consequent traffic increase was simply too speculative to address in the FEIS, as FAA explained:

As of July 2007, the Port Authority was still pursuing the acquisition of the lease and negotiating with both National Express and the State of New York. Even if the purchase is successful, it is unclear whether the airlines will be willing to operate at SWF especially in light of American Airlines recent announcement that they are pulling out of SWF. Therefore, this proposal is not reasonably foreseeable and was not considered in the evaluation of cumulative impacts.

FEIS 4-83; ROD 47.

Moreover, when FAA developed its demand forecasts in 2001, it had already significantly increased the Stewart 2011 passenger demand forecast above the TAF (to about 754,000 enplanements per year) in anticipation of the introduction of low-fare service not factored into the TAF. FEIS 1-19; FEIS App. B.1, Table 4 at B-11. Petitioners point (Br. 41) to the Port Authority's January 2007 press release stating that Stewart's annual enplanements could increase from the current level of 300,000 to its capacity of 1,500,000, suggesting that this growth would occur by 2011. But the Port Authority clearly stated that the increase "will happen over a period of many years":

“No one should expect immediate radical changes,” said Marc La Vorgna, a Port Authority spokesman. “Airport development is a very lengthy process and has to occur incrementally over many years with careful management and timely investments in infrastructure.”

RJN Add. C, Ex. D. Thus, FAA’s forecast of about 754,000 annual enplanements in 2011 does not appear to be out of line with the Port Authority’s own projections (and indeed might even be high). Nothing more is required.<sup>38/</sup>

**F. The FEIS Adequately Analyzed Noise Impacts.**

As required by FAA Order 1050.1E App. A ¶ 14.5 (FEIS 3-25), FAA used the Noise Integrated Routing System (“NIRS”), the “international state-of-the-art broad-area noise assessment” tool. FEIS App. E.2 at E-9.<sup>39/</sup> FAA developed NIRS in 1995 to assess the noise impacts of regional airspace design projects covering large geographic areas. FEIS App. E.2 at E-8 to E-9. The previously developed Integrated Noise Model (INM) is used to estimate noise exposure in the vicinity of a single airport. *Id.*

The specific application of NIRS in this EIS “was developed with unprecedented care and to an extraordinary level of detail” (FEIS App. E.2 at E-8):

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<sup>38/</sup> Contrary to Petitioners’ suggestion (Br. 42), FAA considered the possible environmental effects of increased traffic at Stewart and concluded that airspace redesign would likely still not cause significant noise impacts because “[a]t low altitudes, no changes were desirable or necessary.” FEIS App. Q at 7.

<sup>39/</sup> The noise methodology is described in considerable detail in FEIS 3-18 to 3-34, 4-1 to 4-40, App. D and App. E.

The noise modeling effort undertaken for this EIS was unique. Many factors including the large number of modeled airports and the size of the Study Area contributed to the complexity of the modeling effort. The noise modeling was customized to accommodate and reflect the uniqueness of this airspace redesign. Two examples of this customized approach are:

- Development of tailored computer algorithms to translate radar data into NIRS input, and
- extensive coordination between the noise modelers, airspace modelers, and Airspace Design Team.

FEIS 4-2 to 4-3. This collaboration involved review of each alternative “on an airport-by-airport, route-by-route, and sometimes even a flight track-by-flight track basis.” FEIS App. E.2 at E-7.<sup>40/</sup>

FAA did ten runs of its noise impacts analysis: the 2000 base case (FEIS 3-24 to 3-34, Figs 3.18,3.19), four alternatives at the 2006 AAD traffic level and five alternatives at the 2011 AAD traffic level (FEIS 4-2 to 4-40, Figs. 4.1 to 4.25).

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<sup>40/</sup> FAA input the traffic files into the NIRS model. Flights were modeled using specified runways at all 21 study airports. FEIS 3-27. To ensure accurate depiction of actual flight tracks, FAA studied over 425,000 radar flight tracks, isolating groups of similar flight tracks to create about 7,000 “backbone” flight tracks and about 15,000 associated subtracks (to reflect dispersion from wind, weather, pilot technique and other factors). FEIS 3-30 to 3-31, Figs. 3.16,3.17, App. E.2 at E-27 to E-40.

As required by Order 1050.1E App. A ¶ 14.1a, FAA used the decibel (“dB”), and more specifically the yearly day/night average sound level (“DNL”),<sup>41/</sup> as the metric for loudness. The decibel uses a logarithmic scale because the human ear perceives sound in a logarithmic fashion. FEIS 3-19. FICON has concluded that DNL is the best measure of community annoyance from aircraft noise. *See* FEIS App. E.1 at 8, 10; App. N (AR 9304 at 2353-54,2363); App. Q at 24.<sup>42/</sup>

Order 1050.1E App. A ¶ 14.3 specifies the “significant impact” threshold – an increase of 1.5 DNL or more to 65 DNL or above over noise sensitive areas when compared to the no action alternative for the same timeframe. NIRS calculates noise exposure levels for each populated census block (block) within a study area – in this case 325,682 (FEIS 3-25, Fig. 3.15) – as well as specified grid points in unpopulated areas, and then generates change-of-exposure tables reporting the number of persons significantly affected in each block and plots the location of the affected block on maps. FEIS App. E.2 at E-12 to E-15.

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<sup>41/</sup> DNL averages the magnitude of sound levels generated by all individual events occurring during a 24-hour period, with a 10-decibel penalty for noise events occurring during typical sleeping hours (between 10 p.m. and 7 a.m.). *See* FEIS App. E.1 at 8.

<sup>42/</sup> FAA included a primer on noise, and the metrics used to measure it, in the DEIS and FEIS. *See* FEIS 3-19 to 3-21, App. E.1.

FAA uses NIRS to produce change-of-exposure tables and maps for areas experiencing both significant and “slight to moderate” noise impacts – a change of 3 DNL or more at the DNL 60-65 level, and a change of 5 DNL or more at the DNL 45-60 level.<sup>43/</sup> See Order 1050.1E App. A ¶ 14.5e.

FAA guidelines for significant impacts and the use of DNL have been upheld by the courts for more than 20 years. See, e.g., *Town of Cave Creek, Arizona v. FAA*, 325 F.3d 320, 326 (D.C. Cir. 2003) (citing four cases). More recently, this Court has also recognized the appropriateness of reportable impacts. *Id.*

FAA recognized that the “complexity (number of flight routes, configurations, airports, operations, etc.) of the study creates challenges in reporting noise-modeling results in a useful format for analysis,” and designed tables and graphics “to summarize the data in an easily understandable format.” FEIS App. E.2 at E-7. The FEIS provides a change-of-exposure table and map for each of the design alternatives as compared to the Future No Action Alternative in 2006 and 2011. FEIS 4-10 to 4-40, Figs. 4.1 to 4.25.<sup>44/</sup>

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<sup>43/</sup> The typical range of outdoor background noise in a rural community is about 40-48 DNL and in an urban area about 56-66 DNL. FEIS App. E.1 Fig. E-6 at 9.

<sup>44/</sup> FAA’s Project website also provided links which allowed the public to find the census block for a particular address and obtain the noise exposure tables for each

(continued...)

As explained above, once FAA identified its Preferred Alternative in March 2007, it analyzed possible noise mitigation measures. FEIS 5-1 to 5-39, Figs. 5.1 to 5.18. After eliminating proposed mitigation measures that were not operationally feasible or raised safety concerns, the remaining measures were analyzed using the Route Optimization and Mitigation Analysis (ROMA) tool and the NIRS Screening Tool (NST) through an iterative process of evaluation and adjustment until measures were found that reduced noise impacts without substantial adverse impact on operational efficiency. FEIS App. P at 7-12.<sup>45/</sup>

FAA did not limit its consideration to areas with significant impacts (FEIS 5-2):

FAA considered measures in all areas, not just those areas that experienced a significant impact or a slight to moderate threshold-based noise change as reported in the DEIS. Consideration was given to measures that would affect areas of noise increase that did not receive a significant or slight to moderate noise increase, as well as long standing issues that may be improved with the airspace redesign.

Through this process, FAA was able to eliminate all significant noise increases (and indeed slightly reduce the population at the 65+ DNL level as

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<sup>44/</sup>(...continued)  
alternative for that census block.

<sup>45/</sup> For example, each potential mitigation measure created potential problems with “crossing traffic,” as raising the altitudes for one set of flights to reduce noise could create conflicts with traffic flows to or from another airport using the same altitude range. FEIS App. O at 36.

compared to Future No Action) and greatly reduce the number of newly exposed individuals in the slight-to-moderate increase range. ROD 26-27; FEIS 5-34 to 5-37. Comparing Figures 4.24 (NY/NJ area) and 4.25 (PHL area) to Figures 5.16 (NY/NJ area) and 5.18 (PHL area) reveals the results of FAA's mitigation measures.

**1. FAA Was Not Required to Depict Noise Impacts Through Noise Contours.**

Order 1050.1E App. A ¶ 14.5e, which required the use of NIRS for this Project, modifies the 14 C.F.R. Part 150 guidelines for noise analysis for airspace redesign in two significant ways. First, it expands the area considered for airspace redesign projects to 45 DNL. Second, it expressly provides that “[n]oise contours will not be prepared for the NIRS analysis.” The cited Section 14.4d(1) (Br. 43 n.19) only requires noise contours when the INM model is used for single airport projects. Petitioners' citation to 14 C.F.R. Part 150 guidelines is therefore misplaced. Application of these guidelines would result in noise analysis only for noise sensitive areas experiencing 65 DNL and greater noise levels. There would be no disclosure of noise impacts for large portions of the study area. FAA provides enhanced disclosure in consideration to public response to past air traffic changes. *See* FEIS App. N (AR 9304 at pdf 2362).

## **2. FAA Appropriately Developed Future Conditions Forecasts for 2006 and 2011.**

Petitioners argue (Br. 43-44) that FAA failed to comply with Order 1050.1E App. A ¶ 14.4g – which states that the timeframes for noise analysis “usually selected are the year of anticipated project implementation and 5 to 10 years after implementation” – because it now appears that the last stage of implementation will not be completed until 2012 (after its 2011 forecast). This argument should be rejected. Simply because FAA determined after it developed the forecasts in 2001 that implementation of the Selected Alternative should proceed in stages over five years (ROD 5-6) and the ROD was not actually signed until 2007 does not require restarting the analysis with forecast dates of 2007 and 2012 instead of 2006 and 2011. Petitioners fail to explain how moving the forecast years by one year would make a material difference in the disclosure of impacts, the choice among alternatives, or the development of noise mitigation measures. The years 2006 and 2011 remain “appropriate timeframes” within the meaning of Paragraph 14.4g.

Nor does Paragraph 14.4g require analysis in some third year of future conditions after 2011. The world will continue to change after 2011 (including perhaps higher traffic levels), but Petitioners fail to demonstrate that FAA’s noise analysis was arbitrary or capricious without an additional set of noise impact projections. In *Town of Cave Creek*, this Court rejected a similar challenge to

FAA's environmental analysis of arrival and departure procedure changes in the vicinity of Phoenix Airport:

The FAA's decision to model the noise effects for five years into the future was sufficient. It becomes more difficult – as well as increasingly inaccurate – to make projections that stretch even further into the future. For example, we do not know what noise levels planes will produce in the future; they are likely to become less, rather than more, noisy. Because of the difficulties and uncertainties involved in modeling noise levels further than the agency did, modeling through 2005 was perfectly reasonable.

325 F.3d at 331.<sup>46/</sup> Here as well, whether there would be more blocks at or above the 65 DNL level after 2011 depends on whether quieter aircraft would offset the increased frequency of aircraft noise.<sup>47/</sup>

Moreover, FAA's mitigation measures can be expected to prevent significant noise impacts even at a somewhat higher traffic level. The shifting of flight paths away from blocks with a significant impact at the 65+ DNL level

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<sup>46/</sup> The "accuracy of forecasts diminishes with time." FEIS App. Q at 17-18. In addition, it would be much more difficult to develop an accurate longer-term forecast for a project like this one involving 21 airports than it would be for a single-airport project.

<sup>47/</sup> Regarding Newark departures, for example, FAA explained that "as EWR operations increase slightly (3.5%) in 2011 over 2006, the fleet mix shifts from older and noisier aircraft like MD-80's, B737-300's, and hushkitted B727's to quieter newer technology aircraft like B737-700's and Regional Jets" such that there can be reductions in noise in areas affected by departure noise even with modest traffic growth. See FEIS App. N (AR 9304 pdf 2364).

(those shown in red on FEIS Figs. 4.24 and 4.25) also benefits nearby blocks with slight-to-moderate impacts at the 60-65 DNL level (those shown in orange), as well as any blocks at the 60-65 DNL level that are not currently marked orange (because they do not experience a +3 DNL change) but that could be marked red at a somewhat higher traffic level. Such areas are located near each other within about 4 miles of a major runway. FEIS Figs. 4.2,4.3,4.5,4.6. As explained above, FAA did not limit consideration of noise mitigation strategies only to the blocks with significant impacts.<sup>48/</sup>

**3. FAA Disclosed Flight Path Changes and Noise Impacts in a Manner Understandable to the Public.**

Quite remarkably, Petitioners challenge (Br. 46-47) FAA's use of the decibel metric, the most commonly used unit of sound loudness, without even attempting to distinguish *Town of Cave Creek* and the decisions cited therein. It is true that "[f]or most of the project area" the maps of noise impacts only show "a relatively large 5 decibel noise change." Br. 46. That is because aircraft noise is below 60 DNL for most of the project area and FAA's accepted threshold for reporting a change in noise exposure between 45 and 60 DNL is 5 DNL. FAA's

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<sup>48/</sup> Petitioners also suggest (Br. 45) that some arrival and departure procedures could change after 2011 independent of this airspace redesign project. That is no doubt true, and the environmental impacts of such procedures will be assessed at the appropriate time.

disclosure of noise impacts is consistent with NEPA documentation of previous airspace redesigns. *See* FEIS App. N (AR 9304 at pdf 2362).

Petitioners' next complaint (Br. 46-47) – that residents near Morristown (MMU), Gabreski (FOK) and Republic (FRG) airports<sup>49/</sup> cannot understand the route maps in Attachment C to the Noise Modeling Technical Report (FEIS App. E.2) – is also curious, because no route changes were proposed at these airports (*see* ROD 17-19) with relatively low levels of IFR traffic.<sup>50/</sup> Thus, there are no significant or reportable noise impacts in the vicinity of these airports, as FEIS Fig. 5.16 makes readily understandable.

Petitioners' final complaint (Br. 47) – that Newark residents were not informed of a planned increase in the use of EWR Runway 29 (the overflow departure runway used from 5:00 to 11:00 a.m. EST), or of the planned implementation of parallel arrival flight paths for the major runways (04L/22R and 04R/22L) – is simply mistaken. FAA disclosed that the rules for Runway 29 would not change,<sup>51/</sup> but that the runway would be used more during peak arrival

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<sup>49/</sup> *See* FEIS Fig. 1.8 for the location of these three airports.

<sup>50/</sup> Projected 2011 AAD operations are 126 at MMU, 4 at FOK and 59 at FRG, compared to, for example, 1,355 at Kennedy.

<sup>51/</sup> Use of departure Runway 29 is limited to light jets and propeller-driven aircraft, and that rule applies as in the Future No Action Alternative. FEIS App. C

(continued...)

times, as Petitioners' citation (Br. 47) to FEIS App. Q at 95 documents. FAA also disclosed the planned use under the Integrated Airspace with ICC Alternative of the main departure runway (04L/22R) for arrivals "when the main arrival runway is busy and the departure runway is underutilized (1615-1815 GMT and 2359-0915 GMT)." FEIS App. C at 3-11; *see also* DEIS 261; FEIS Table 2.4 at 2-60; ROD 18. In both cases, this planned use was taken into account in the calculation of noise impacts.

**4. The FEIS Adequately Analyzed and Presented the Noise Impacts on the City of Elizabeth of Fanned Departures from Newark Runway 22R.**

The City of Elizabeth, NJ received a great amount of attention in the EIS process. Its residential areas of Elizabeth are located within about a three-mile radius of the south end of Newark's primary departure Runway 22R.<sup>52/</sup> FEIS Fig. 3.10. Departures from Runway 22R have for many years headed 190° after takeoff. In order to expedite these departures, FAA proposed fanned departure headings to the southwest (220°, 240° and 260°). The FEIS includes figures depicting the major departure flows from Newark for each alternative, including insets showing the departure paths over Elizabeth. FEIS Figs. 2.5, 2.12,

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<sup>51/</sup>(...continued)  
at 3-10 to 3-12.

<sup>52/</sup> Runway 22L may be used for departures but is almost always used for arrivals.

2.18,2.20,2.28. The FEIS also disclosed the noise effects of these new departure headings in text (FEIS 4-34 to 4-35), figures (Figs. ES.2,ES.3,ES.4,ES.5, 4.2,4.5,4.9,4.10,4.19,4.20,4.24), and an annotated aerial photograph showing the significantly impacted census blocks (FEIS Fig. 4.26).

Because significant and reportable impacts were projected in areas of Elizabeth, that city received particular attention for noise mitigation. FEIS App. O at 16-22; App. P at 14-19, App. Q at 79-101. FAA modified the departure headings. When moderate demand requires additional headings, a 215° heading (which tracks the New Jersey Turnpike) and a 239° heading (which tracks a rail corridor) will be used. In times of greatest demand, a 263° heading will also be used. When demand does not require additional headings, including at night, departures will use the standard, long-established 190° heading, resulting in the same noise impacts in Elizabeth during these periods as under the Future No Action Alternative. *See* FEIS App. P at 16. The effects of noise mitigation are shown at FEIS App. P at 18-19. Mitigation eliminated all significant impacts in Elizabeth *and indeed throughout the Project Area* (*see* Figs. 5.14,5.16).

Below the level of significant impacts, FAA concluded that, in 2011, there will be an approximately one-square mile area of Elizabeth that will receive an increase of 3 DNL or more to the 60-65 DNL level, affecting some 16,803 people.

FEIS 5-30, Fig. 5.16, App. P at 17,19. There will also be a slightly larger area (19,357 people) that will receive an increase of 5 DNL or more to the 45-60 DNL level (*id.*) (along with a comparatively sized area near Philadelphia and larger areas in north central NJ, as shown on FEIS Fig. 5.14).<sup>53/</sup> It was simply not possible to eliminate all slight-to-moderate noise changes and still maintain the operational benefits of the Project.

In addition to disclosing impacts as discussed above, FAA was particularly active in public outreach in Elizabeth, including holding additional meetings near Elizabeth after publication of the Noise Mitigation Report in March 2007.<sup>54/</sup>

**a. FAA Adequately Disclosed the Noise Impacts to the City of Elizabeth.**

Petitioners' complaint (Br. 48) that FAA "obfuscated from the affected public the full extent and degree of the increased noise impacts which result from fanned departure headings off EWR Runways 22L/R" is without merit. Indeed, their own recitation of the noise impacts in Elizabeth belies their contention.

Petitioners' only specific suggestion is that FAA should have reported the number of flights projected to utilize each of the Newark departure headings in addition to

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<sup>53/</sup> At the same time, about 3,202 people living east of I-95 will experience noise reductions because of the fanned departures. FEIS at 5-30 and Fig. 5.16.

<sup>54/</sup> FEIS 6-8; GAO Report 08-786 (Resp. Motion, Ex. A) at 89.

disclosing the “high demand” hours during which each was expected to be used.<sup>55/</sup> But number of flights is not an appropriate metric for describing noise impacts; there is no simple formula for converting number of aircraft into decibels or DNL because there are so many other relevant factors (such as type of aircraft, how close to overhead the aircraft is flying, and time of flight). *See* FEIS App. N (AR 9304 at pdf 2366), App. Q at 24; FAA Order 1050.1E App. A ¶ 14.5f (describing six supplemental metrics, not including number of flights).

**b. FAA’s Traffic Forecasts Provided an Adequate Basis for the Noise Impacts Analysis in Elizabeth.**

At pages 49-50, Petitioners restate their previously presented challenges to the traffic forecasts. These arguments are answered in Arguments I.B and I.D above.

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<sup>55/</sup> Petitioners complain (Br. 48 n.30) that the Noise Mitigation Report does not include “any commitment that [the high demand hours] would be used in practice.” FAA rejected the suggestion for specific traffic thresholds for use of the departure headings, stating that it would be “imprudent” to limit controller discretion in this way: “Reliance on ‘controller judgment, discretion, and experience’ has produced the safest, most efficient air traffic control system in the world. There is no reason that it can’t produce noise mitigation as well.” FEIS App. Q at 85.

**c. FAA Was Not Required to Perform Background Noise Monitoring in Elizabeth.**

This part of Petitioners' Brief (pages 50-53) is based on the mistaken premises that FAA (1) failed to identify significant noise impacts in Elizabeth and (2) failed to provide noise mitigation measures that would benefit Elizabeth. Petitioners attribute these alleged failures to the fact that FAA did not perform ambient noise monitoring in Elizabeth. Of course, FAA recognized, even without noise monitoring in Elizabeth, that the shift in departure headings from Newark Runway 22R would cause significant noise impacts in Elizabeth, and adopted mitigation measures to address those impacts. This mitigation benefitted the entire City of Elizabeth, not just those areas identified as having significant impacts.

Even if that were not so, however, FAA had no obligation to conduct background noise monitoring in Elizabeth or anywhere else. Petitioners acknowledge (Br. 52) that the requirement to consider "cumulative impacts" – Order 1050.1E ¶ 500c(2), implementing 40 C.F.R. § 1508.25(a)(2) – does not require FAA to conduct background noise monitoring. Such an interpretation would be inconsistent with the specific provisions of Order 1050.1E App. A ¶ 14.4f:

Noise monitoring data may be included in an EA or EIS at the discretion of the responsible federal official. Noise monitoring is not required and should not be used to calibrate the noise model.

Petitioners argue (Br. 52-53), however, that since FAA chose to conduct *some* background monitoring, it had to monitor ambient noise in all areas determined through modeling to be close to the 65 DNL threshold (considering only Project-related aviation noise) to determine whether the *total* noise level would be 65 DNL or greater. Petitioners misunderstand the nature of the 65 DNL threshold. The significant impact threshold – a 1.5 DNL increase at or above 65 DNL (Order 1050.1E App. A ¶ 14.3) – is defined by reference to *project-related aviation noise*. Because ambient noise tends to mask project-related aviation noise, “[e]xcluding ambient noise, as is required by federal regulations, tends to increase the size of [project-related] noise changes measured in decibels.” FEIS App. Q at 57. FAA neither has nor intends to develop a numerical standard of significance for changes in total noise. In addition, it would be infeasible for FAA to base its noise analysis on field monitoring and total noise calculations in a geographically large and complex project like this one, even if the monitoring were limited to census blocks in the 60-65 DNL range of aviation noise.

Order 1050.1E App. A ¶ 14.4j recommends noise monitoring in the following limited context:

When a proposed FAA action would result in a significant noise increase and is highly controversial on this basis, the EIS should include information on the human response to noise that is appropriate for the proposal under analysis. Inclusion of data on background or ambient noise may be helpful.

FAA explained its use of noise monitoring for this Project at FEIS 3-21 to 3-24, 4-83 to 4-86, App. D, App. E at E-109 to E-112. Measurements were taken at 16 sample sites throughout the study area in December 2001 and August 2002.

FAA selected monitoring sites in a variety of settings throughout the Study Area:

Rural and urban sites were monitored as well as public parks, historic sites, and residential neighborhoods. The sites were also chosen to span the study area, with particular attention paid to those noise sensitive areas and areas where there have been aircraft noise complaints.

FEIS App. D at D-3. This sampling approach put aircraft noise into context during public meetings in many different communities throughout the EIS process.

Petitioners' lengthy discussion in their Argument II regarding noise impacts on parklands illustrates the breadth of public interest in the Project, including in communities with relatively little exposure to aircraft noise compared to Elizabeth.

FAA's sampling program confirmed that "the changes in noise associated with each project alternative tend to be very small in the context of the total noise environment for locations that are not situated very near a major airport."

FEIS 4-84. FAA's choice of methodology for noise monitoring, like its choice of

other analytical methodologies, is entitled to deference. *Communities Against Runway Expansion*, 355 F.3d at 689. Petitioners fail to demonstrate that additional noise monitoring is either legally or scientifically warranted.

**d. FAA Has Adequately Explained Why Airplanes Cannot Follow Easterly Departure Headings Off Newark Runway 22R.**

Petitioners next argue (Br. 53-55) that FAA's mitigation did not go far enough in that FAA should have given more consideration to headings east of 190°. This argument is without merit. If airplanes departing Newark Runway 22R headed east of 190° they would intersect the paths of airplanes bound to and from LaGuardia and Kennedy, as FAA explained in its response to comments on the Noise Mitigation Report:

Turning east toward destinations to the east would be desirable. However, EWR is the westernmost of the four big New York City airports. For EWR departures to turn left, other controllers would have to create synchronized gaps in the streams of LGA arrivals, JFK arrivals, and JFK departures. This can not be done safely without severe penalties to the efficiencies of the other two airports.

FEIS App. Q at 81.

It would be most surprising, then, if the Port Authority had advocated such a maneuver, as Petitioners assert (Br. 54). In fact, the Port Authority's comment quoted by Petitioners applies to the airspace *north* of Newark, as is evident from

the reference to the “Hudson corridor” and Teterboro Airport. With respect to departures off Runway 22R, the Port Authority recommended the approach adopted by FAA as noise mitigation – using the corridor bounded by the departure headings 190° and 220°, particularly at night. FEIS App. N (AR 9304 pdf 3722).

**G. Preparation of a Supplemental Draft EIS to Address Restoration of Current Routing Affecting Rockefeller State Park Preserve Is Not Required.**

The Integrated Airspace with ICC Alternative proposed to shift northwesterly departures from White Plains/Westchester County Airport (HPN) to the north, exposing some 40 additional persons to slight-to-moderate noise increases (a 5 DNL or more increase within the 45-60 DNL range). FEIS App. P, Table 11 at 58. As part of its noise mitigation package, FAA decided to return the HPN departure tracks back virtually to where they had been. FEIS Fig. 5.2, App. P at 8,56, Figs. 30,31. Proving that no good deed goes unpunished, Petitioners now contend (Br. 55-56) that this mitigation was a substantial change in the proposed action and that, pursuant to 40 C.F.R. § 1502.9(c), required preparation of a supplement to the DEIS.<sup>56/</sup>

Petitioners’ contention is wrong. Because the alleged “new proposed routing” (Br. 55) substantially restores the pre-project (*i.e.*, then current) routing,

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<sup>56/</sup> Rockefeller State Park Preserve is discussed further in Argument II below.

the mitigation is neither a substantial change in the proposed action nor a significant new circumstance that would require supplementation of the DEIS under 40 C.F.R. § 1502.9(c). The mitigation adopted for this component of the Project was, in essence, the no action alternative, on which the public had the opportunity to comment. The public was also given opportunity to comment on the Noise Mitigation Report setting out the mitigation measure at issue. Some commenters did remark on the effect of this mitigation measure on Rockefeller, and FAA responded to the comments in the FEIS. *E.g.*, FEIS App. Q at 68 (AR 9304 pdf 3528, 3551, 3660). No supplemental DEIS is thus required. *See Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 374 (1989) (supplemental EIS is only required where the impacts have not already been considered); *Friends of Marolt Park v. U.S. Dep't of Transportation*, 382 F.3d 1088, 1096-97 (10<sup>th</sup> Cir. 2004).

None of the cases Petitioners cite (Br. 55) provide persuasive support for their position that a supplemental DEIS is required in this instance. In *Dubois v. U.S. Dep't of Agriculture*, 102 F.3d 1273, 1292 (1st Cir. 1996), the agency adopted a substantially different alternative that had never before been considered or disseminated for public comment. In contrast, the restoration of the current route for HPN departures is hardly the adoption of a new and unconsidered alternative. And while the court in *California v. Block*, 690 F.2d 753 (9<sup>th</sup> Cir. 1982), held that

the changes in the proposed action at issue in that case were substantial, its rejection of the district court's standard requiring supplementation for slight modifications directly supports FAA's position here. 690 F.3d at 770-71. Indeed, courts have routinely recognized that "agencies must have some flexibility to modify alternatives canvassed in the draft EIS to reflect public input," without having to circulate a supplemental draft EIS describing the proposed action. *Half Moon Bay Fishermans' Marketing Ass'n v. Carlucci*, 857 F.2d 505, 508 -509 (9<sup>th</sup> Cir.1988) (quoting *California v. Block*, 690 F.2d at 771). See also *Arkansas Wildlife Federation v. U.S. Army Corps of Engineers*, 431 F.3d 1096, 1102 (8<sup>th</sup> Cir. 2005).

#### **H. FAA Properly Assessed the Project's Environmental Justice Impacts.**

FAA fully complied with environmental justice directives set forth in Executive Order 12898, CEQ's *Environmental Justice: Guidance under the National Environmental Policy Act* (Dec. 10, 1997), and DOT Order 5610.2. ROD 27-28; FEIS 3-16 to 3-18, 4-40 to 4-48, Figs. 4.26, 4.27, 5-38 to 5.39, App. I. FAA concluded that there would be a disproportionate noise impact on minority populations near Newark and LaGuardia, and that there would be a significant (though not disproportionate) noise impact on minority populations near Philadelphia. ROD 28; FEIS 4-44,4-46. However, with noise mitigation,

significant noise impacts would be eliminated by 2011. ROD 28; FEIS 5-38 to 5-39.

Petitioners argue: (1) that FAA should have utilized a different standard for determining whether a noise impact on a minority or low-income population is significant (Br. 58-59); and (2) that deferral of the ocean routing component of noise mitigation for Newark Runway 22R departures leaves the minority populations in Elizabeth with significant noise impacts (Br. 59-62). The first argument is legally unsupportable and the second argument is factually incorrect.

As to the first argument, environmental justice analyses of noise impacts are routinely conducted by FAA and other transportation agencies using the established thresholds utilized here. Petitioners must do more than propound questions (Br. 59) about substandard housing<sup>57/</sup> and elevated rates of hypertension to demonstrate that FAA's methodology is arbitrary or capricious.

As to the second argument, the 190° heading for Newark Runway 22R departures is currently being utilized during low demand hours, including at night; this path over Elizabeth is the *status quo*, resulting in the same night-time noise impacts in Elizabeth as the Future No Action Alternative. The night-time ocean

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<sup>57/</sup> Petitioners' question regarding substandard housing does not appear to be relevant where, as here, the only environmental justice populations were based on minority composition, not low-income status.

routing procedure was designed to benefit communities to the south and west of Elizabeth. *See* FEIS App. P at 15-16. Whether planes turn east over Raritan Bay 15 miles south of Elizabeth has absolutely no effect on Elizabeth, just as long as they clear the Elizabeth area.

**I. NEPA Does Not Require a Noise Mitigation Compliance Monitoring Plan.**

Petitioners incorrectly argue (Br. 62-65) that: (1) FAA was required to include a noise mitigation monitoring plan in the ROD, and (2) FAA has impermissibly decided that it will not implement the ocean routing component of noise mitigation for Newark Runway 22R departures.

First, Order 1050.1E ¶ 512b, implementing 40 C.F.R. § 1505.2(c), provides that a monitoring program shall be adopted “where applicable for any such mitigation.” As 40 C.F.R. § 1505.3(a) suggests, mitigating “conditions” are typically imposed in the context of federal approvals of grants or permits to third parties and serve to ensure compliance by those third parties, rather than actions undertaken by the federal agency itself. A formal monitoring plan is not required for the Project’s noise mitigation measures.<sup>58/</sup> *Cf. Robertson v. Methow Valley*

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<sup>58/</sup> Petitioners point (Br. 62) to a response to a comment on the Noise Mitigation Plan (FEIS App. Q at 33) in which FAA stated that Order 1050.1E requires a compliance monitoring plan and that one would be included in the ROD. As explained above, a mitigation monitoring plan is neither required nor appropriate

(continued...)

*Citizens Council*, 490 U.S. at 332 (NEPA, as a general matter, does not require mitigation but only requires an agency to discuss potential mitigation measures in sufficient detail to ensure that the agency has taken a hard look at the potential environmental impacts of the proposed action).

Second, FAA has made no decision not to implement the night-time ocean routing procedure for Newark (described at FEIS App. P at 15-16).

Implementation of the Selected Alternative is a four-stage process (*see* ROD 5-6), and FAA did not commit to use this procedure in the early stages. In a response to a comment on the FEIS from UPS, FAA explained (ROD 50) that night-time use of Kennedy had increased during Summer 2007 and that those recent arrival rates were not compatible with ocean routing at Newark, stating:

The FAA will carefully monitor traffic levels at JFK after we implement this mitigation measure to determine whether there are new circumstances that make it operationally infeasible. If it is necessary to revise or eliminate this measure then we will reevaluate the FEIS, undertake appropriate environmental review, and amend this ROD.

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<sup>58/</sup>(...continued)

in the circumstances presented here. FAA acknowledges the error in this response, which was made while preparing responses to a large number of comments on the Noise Mitigation Report in a short period of time so that the Final EIS could be released. However, this error does not undercut the analysis in the FEIS or FAA's decision, and thus does not warrant any further environmental documentation or a revision of the ROD.

ROD 50. This is an appropriate procedure. Petitioners' request (Br. 65) for immediate preparation of a supplemental EIS is unwarranted because FAA has not yet made a decision regarding this measure.

Moreover, elimination of the night-time ocean routing element of the mitigation package would not call into question FAA's selection of the Integrated Airspace with ICC Alternative. All significant noise impacts (in Elizabeth and elsewhere) would still be eliminated through other mitigation elements.<sup>59/</sup>

## **II. FAA REASONABLY DETERMINED THAT THE PROJECT WOULD NOT RESULT IN CONSTRUCTIVE USE OF §4(f) PROPERTIES.**

### **A. Background and Standard of Review**

Section §4(f), 49 U.S.C. § 303(c), provides that FAA may approve a project "requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance" or "land of an historic site of national, State, or local significance" only if it finds there is no prudent and feasible alternative to using that land and the project includes all possible planning to minimize harm to such areas. The term "use" includes both

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<sup>59/</sup> Some commenters on the proposed night-time ocean routing supported the mitigation measure and some opposed it. FAA acknowledged the negative aspects of ocean routing, but stated that "this way of doing it" – meaning limiting the procedure to post-10:30 p.m. flights – "has the least deleterious effects." Petitioners take FAA's comment at FEIS App. Q at 88 out of context. Br. 64.

physical use and constructive use from adverse impacts that substantially impair §4(f) resources. See FAA Order 1050.1E, App. A, ¶ 6.2f; 23 C.F.R. § 771.135(p)(4)(ii). To constitute constructive use from aircraft noise “the noise must be at levels high enough to have negative consequences of a substantial nature that amount to a taking of a park or portion of a park for transportation purposes.” *Id.*; see also *Sierra Club v. U.S. Dep’t of Transportation*, 753 F.2d 120, 130 (D.C. Cir. 1985). FAA properly relies upon the land use compatibility guidelines in 14 C.F.R. Part 150 to determine whether noise effects a constructive use where the guidelines are relevant to the value, significance, and enjoyment of §4(f) lands. FAA Order 1050.1E, App. A, ¶ 6.2g; ROD at 32; see also *City of Grapevine v. Dept. of Transportation*, 17 F.3d 1502, 1508-08 (D.C. Cir. 1994); *Friends of Richard-Gebauer Airport v. Federal Aviation Administration*, 251 F.3d 1178, 1191 (8<sup>th</sup> Cir. 2001); *Communities, Inc. v. Busey*, 956 F.2d 619, 623-24 (6<sup>th</sup> Cir. 1992). The Part 150 guidelines provide that parklands devoted to traditional recreational activities are compatible with noise levels of up to 75 DNL; that nature exhibits are compatible with noise levels up to 70 DNL; and that outdoor amphitheatres and music shells are compatible with noise levels up to 65 DNL. FAA Order 1050.1E, App. A, ¶ 6.2g; 14 C.F.R. Part 150, App. A, Table 1. FAA’s Order 1050.1E provides, however, that “[a]dditional factors must be weighed in

determining whether to apply the thresholds listed in Part 150 guidelines to determine the significance of noise impacts on noise sensitive areas within national parks, national wildlife refuges, and historic sites including traditional cultural properties.” *Id.*, App. A, ¶ 6.2i; *see also Allison v. Dep’t of Transportation*, 908 F.2d 1024, 1028-29 (D.C. Cir. 1990).

The redesign Project does not entail any physical use of §4(f) resources. FEIS 3-36 to 3-46, Fig. 3.20, 4-52 to 4-57, 5-41 to 5-127, Figs. 5.19 to 5.45. Based on a thorough analysis and consideration of input from federal and state agencies and public comment, FAA concluded that there is also no constructive use resulting from visual or noise impacts. ROD 28. Consistent with Order 1050.1E, FAA relied primarily upon application of the Part 150 land use compatibility guidelines as the basis for this finding. ROD 31; FEIS 4-56. In response to comments on the DEIS and consultations with the U.S. Department of the Interior and state agencies, FAA also undertook additional analysis of all national parks, national wildlife refuges, and certain state properties identified as potentially affected and having value for their quiet settings. FEIS 5-43; ROD 32-33. Where the difference in noise levels from aircraft for these properties under the selected and no action alternatives in 2011 was less than 3.0 DNL at all points within the property, FAA concluded that no constructive use of the property

would occur. ROD 33; FEIS App. J at J.3. For eight properties where the change was 3.0 DNL or greater, FAA committed in the FEIS to conduct additional review following consideration of mitigation measures. FEIS 5-43. Upon additional review, FAA determined that a quiet setting was not a generally recognized feature of three of the eight sites and reaffirmed the no constructive use determination based on application of the Part 150 noise compatibility standards. ROD 34-35. FAA also confirmed that none of the remaining five properties would sustain constructive use because the noise levels for these properties ranged from 15.5 DNL to 44.0 DNL and noise at these levels is low to extremely low and comparable to ambient noise. ROD 35, App. B.

FAA's §4(f) determination is reviewed under the arbitrary and capricious standard. *Citizens Against Burlington v. Busey*, 938 F.2d 190, 203 (D.C. Cir. 1991).

**B. Petitioners' Contention that the FAA Overlooked or Inadequately Scrutinized State and Local Parks Provides No Basis For Setting Aside the §4(f) Determination.**

Petitioners' primary §4(f) claim is that FAA failed to analyze adequately the Project's noise impacts to non-federal §4(f) resources in the Region. Br. 14, 67-79. Specifically, Petitioners complain (Br. 68) about the absence of express mention of approximately 235 parks and one newly-acquired state forest in lists of §4(f)

properties that appear in the body and Appendices of the FEIS, contending that this omission evidences that FAA ignored its §4(f) obligation. Petitioners also argue (Br. 69-79) that FAA acted arbitrarily by failing to apply to certain non-federal properties (listed Br. 73-79) the additional analysis that FAA conducted for national parks and refuges and certain state §4(f) properties.

**1. Petitioners Have Waived These Objections.**

In *City of Olmsted Falls*, 292 F.3d at 274, this Court held that, because petitioner failed to articulate the argument before the agency, the Court could not consider petitioner's contention that FAA erred by failing to ascertain that a project's impacts to a park constituted constructive use. The Court explained that the governing jurisdictional statute provides that the "court may consider an objection to an order of . . . the Administrator only if the objection was made in the proceeding conducted by the . . . Administrator or if there was a reasonable ground for not making the objection in the proceeding." 292 F.3d at 274 (quoting 49 U.S.C. § 46110(d)). The same result is also compelled by the general administrative law principle that parties must raise their particular objections before the agency in order to avoid waiver. *See, e.g., Id.*, 292 F.3d at 271; *Nevada*, 457 F.3d at 88; *Dep't of Transportation v. Public Citizen*, 541 U.S. 752, 764-65

(2004); *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 558 (1978).

Despite abundant opportunities, Petitioners here cannot identify anywhere in the administrative record where anyone objected to a failure to list in the DEIS or FEIS the properties that appear in Addendum D of its brief, or where they objected to FAA's §4(f) consideration and determination for these properties. Moreover, with one exception (Ardens Historic District, discussed in §II.B.3 below), no commenter recommended replication of the additional analysis for the non-federal properties that Petitioners now focus on. Accordingly, this Court should not consider these arguments. *City of Olmsted Falls*, 292 F.3d at 274.

Were the Court nevertheless to reach Petitioners' arguments on the merits, they would fail for reasons we now explain.

**2. Mention in the FEIS of Every Local Park in the Region is Not Required by §4(f) When Constructive, Non-physical "Uses" Are the Only Possible Impacts to Protected Lands.**

The FAA recognized that there are numerous federal, state, and local §4(f) resources in the Region and assumed all such resources were significant. FEIS 3-36 to 3-37; FAA Order 1050.1E, App. A, ¶ 6.2a. Given this volume, the FAA reasonably did not list every state or local park or open space in the Region in the FEIS. Rather, it specifically listed in the FEIS illustrative federal and state §4(f)

national park and refuges and state parks and forests of significance based on information from state agencies, and those local parks that were in close proximity to major airports or for which concern had been explicitly expressed in comments during the administrative process. FEIS 3-37 to 3-46, App. J; AR 1637.

Listing every conceivable §4(f) resource in the Region in the FEIS is neither reasonable nor required to render a valid §4(f) determination for the Project. Instead, FAA used reasonable screening techniques to identify those parks that might suffer significant noise impacts. FAA initially used two methods to identify and evaluate such properties. One method was to input location data for identified §4(f) properties within census blocks into the noise model and then calculate projected noise values. These properties (listed in the FEIS and/or FEIS Appendices F and J) were identified by FAA's efforts, consultation with States and other federal agencies, or through comments during scoping and on the DEIS. FEIS 4-53.

The second method was to scrutinize the significantly impacted census blocks, defined as census blocks with a 1.5 DNL increase or more in the 65 DNL range, to identify the §4(f) properties located within those blocks by using the Environmental Systems Research Institute (ESRI) database and to evaluate whether the Project had significant impacts on those properties. With this method,

FAA ensured identification and consideration of §4(f) resources that would potentially suffer such substantial increased noise impact as to constitute constructive use under the applicable Part 150 guidelines. Petitioners' criticism wholly overlooks FAA's use of this second method for determining potential significant impacts on §4(f) resources.<sup>60/</sup> FEIS 4-53 to 4-54.

In *Town of Cave Creek*, 325 F.3d at 333, this Court held that FAA was not required to discuss in the FEIS impacts to a potential §4(f) resource where petitioner made no "serious argument" that the FAA's plan would have a significant adverse impact on that property's existing use. *See also Communities, Inc. v. Busey*, 956 F.d at 624-25. Similarly, Petitioners have made no argument, much less a serious argument, that this Project will have an adverse impact sufficient to constitute a constructive use of any of the 236 parks it lists.<sup>61/</sup>

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<sup>60/</sup> Petitioners' reliance upon (Br. 69), *Corridor H Alternatives v. Slater*, 166 F.3d 368 (D.C. Cir. 1999), is misplaced. There, this Court struck down, as contrary to the regulation's plain language, the Federal Highway Administration's interpretation of a regulation as allowing it to defer the §4(f) investigation and determination until after issuance of the ROD on a highway project. *Id.* at 372-73. Here FAA analyzed the §4(f) issue during the NEPA process and determined that no constructive use would result.

<sup>61/</sup> Petitioners complain (Br. 68) that various local government personnel involved with county or local parks were not personally contacted by FAA and suggest that this runs afoul of Order 1050.1E's requirement for consultation with officials having responsibilities for protected §4(f) resources. FAA Order 1050.1E, App. A ¶ 6.2e. Petitioners overlook portions ¶ 6.2e that limit FAA's consultation

(continued...)

Accordingly, they have failed to carry their burden of demonstrating that FAA's §4(f) determination is arbitrary and capricious.

**3. Petitioners Fail to Carry Their Burden of Demonstrating that FAA Acted Arbitrarily by Failing to Conduct Additional Analysis of Certain Local and State Parks.**

Importantly, Petitioners do not contend that the impact to *any* §4(f) resource meets the criteria traditionally employed as defined under 14 C.F.R. Part 150. Rather, Petitioners argue that FAA acted arbitrarily by failing to replicate the additional analysis for the certain non-federal properties that the FAA conducted for “noise sensitive” national parks, refuges, and certain state properties. Br. 73-79. There are several overarching flaws in Petitioners' argument.

First, FAA's Order 1050.1E requires FAA to give additional consideration specifically for noise sensitive national parks and national wildlife refuges and certain historic resources. FAA Order 1050.1E, App. A ¶ 6.2i. Here, FAA cast a wide net and identified federal and state parks for additional analysis based on

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<sup>61/</sup>(...continued)

obligations to situations where constructive use is possible. Moreover, FAA has considerable discretion in when and how to consult. In this case, FAA contacted State agencies in the affected regions to solicit their input in identifying state and local contacts and parks of significance. *See* Arguments II.B.4 below. Furthermore, as discussed in Statement § 4 above, FAA undertook an extraordinary outreach effort to notify, and to solicit comment from, local officials and none raised complaint about lack of consultation under ¶ 6.2e concerning §4(f) properties.

discussions with the U.S. Department of the Interior and interested parties (specifically state agencies). The non-federal parks were not identified by these or other commenters as parks with quiet settings and therefore did not meet the initial criteria for additional analysis.<sup>62/</sup>

Second, even accepting Petitioners' unsupported assumption that these are noise sensitive parks and further accepting Petitioners' noise calculations, several of the properties on which Petitioners focus would not experience a 3 DNL noise increase as a result of the Project. Therefore, these lands would not qualify for additional analysis. These include Rockefeller State Park Preserve, Ardens Historic District, and several of the Rockland County parks (Samuel G. Fisher Mount Ivey Environmental Park, Gurnee Park and Amphitheater, and South Mountain Park). *See* Br. Addendum D at 8-10.

Third, accepting Petitioners' calculations, with one exception (Elizabeth River Park, a park FAA specifically considered, *see* Arguments II.B.4 below), properties with an increase of over 3.0 DNL (Devil's Den, Ward Pound Ridge,

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<sup>62/</sup> Petitioners belated attempt to depict these parks as noise sensitive parks that warrant additional scrutiny is unpersuasive. Petitioners simply assert that quiet is a vital characteristic of specific parks (*e.g.*, Br. 76) or assume that use for passive recreational activities such as hiking necessarily means that natural quiet is a generally recognized attribute of the park (Br. 73). However, that does not necessarily follow as illustrated by any number of urban parks where hiking or other passive recreational activity occur.

Kakiat, Monsey Glen, Schwartz Nature Preserve, and Centennial Watershed) would experience aircraft noise levels after implementation of the Project in a range from 31.8 DNL to 40.7 DNL. *See* Br. Addendum D at 8-10. These low to very low noise levels provide more than an ample basis for upholding the FAA's decision. *See* ROD B-4; FEIS App. E at 5; *cf. Allison*, 908 F.2d at 1029-30 (although FAA used inappropriate noise guidance, upholding §4(f) determination on evidence).

#### **4. Petitioners' Discussion of Particular Properties Contains Numerous Errors.**

Petitioners' discussion of properties it claims should have received heightened scrutiny is also unpersuasive because it is riddled with errors and relevant omissions. The following are illustrative.

Devil's Den Preserve. Petitioners' information (Br. 74, Addendum D (RJN K)) indicates this facility is owned by the Nature Conservancy, a private entity. Section 4(f) applies only to publicly-owned parkland and therefore this property is not a §4(f) resource. 49 U.S.C. §303(c).

Connecticut. Petitioners assert (Br. 74-75) that the Connecticut Department of Environmental Protection never received any correspondence or communication from FAA concerning potential impacts of the Project on Connecticut parks and forests and suggest that lack of communication is the State's gravest concern. In

fact, the FAA contacted that Department on several occasions and actively solicited its input. In April 2001, FAA sent letters to the Department's Deputy Commissioner and Bureau of Natural Resources Chief notifying them of upcoming meetings and providing information for communicating comments to FAA about impacts to areas within their jurisdiction and expertise. AR 1593 at pdf 61, 103. Copies of the DEIS were sent to Department officials. AR 1200, 8215, 1593; FEIS 9-13, 9-34. The Department submitted comments in the scoping process, AR 1656, pdf 31, 1052, but did not submit comments on the DEIS. In 2003, FAA contacted the State of Connecticut to provide information about the Project and to request a meeting with the Department. AR 2565, pdf 2, 22; AR 8158, pdf 7. While two other agencies within the State of Connecticut accepted FAA's invitation for a meeting, the Department of Environmental Protection declined. AR 2565 pdf 26; *see also* AR 2599 (followup letters to Connecticut agencies that met with FAA). Finally, in May 2007 the Connecticut Attorney General submitted a comment letter on the Noise Mitigation Report. FEIS App. Q at pdf 3509. In short, Connecticut is in no position today to complain about the FAA's multi-year efforts to communicate with Department officials.

Nevertheless, it states that it is especially concerned about impacts on Centennial Watershed State Forest because of alleged noise increases as high as

5.4 DNL. However, Petitioners' noise calculations are incorrect. *See* Addendum D of this brief. Using correct calculations, the greatest noise increase is from 30 DNL to 31.4 DNL. *Id.* This is a small change that does not warrant additional analysis and 31.4 DNL is a very low noise level, well below any level that could reasonably be considered constructive use.

Union County. The FAA specifically evaluated the Elizabeth River Park, an urban park, and determined that there was no constructive use. AR 9340 at pdf 21. Although this Park would experience a noise increase greater than 3.0 DNL under the Project, under the no action alternative (pre-Project conditions), aircraft noise levels in this park located just west of busy Newark airport were in the range of 50.7 to 54.5 DNL, a level that casts considerable doubt on Petitioners' claim that quiet is a vital characteristic of this park.

Rockefeller State Park Preserve. Petitioners complain (Br. 76) about FAA's efforts to consult with the New York State Office of Parks, Recreation and Historic Preservation. Like Connecticut, New York ignores the ample evidence in the record documenting FAA's efforts to communicate with the Office of Parks and related New York agencies. As early as 2001, the Office of Parks received notices from FAA requesting comments. *See, e.g.,* AR 1200; AR 1593 pdf 107; AR 9304 at pdf 285. In 2003, FAA contacted the New York Department of

Conservation to provide information and request a meeting; FAA met with that Department in December 2003. AR 8740, AR 2565 pdf 27. That meeting included discussion of §4(f) impacts, including impacts to state wilderness areas. AR 2552; FEIS App. L pdf 600; AR 2581. On May 11, 2007, the Director of Resource Management for the Office of Parks sent FAA a letter expressing concerns about potential impact to Rockefeller State Park Preserve from HPN departures. FEIS App. Q, AR 9304 pdf 3660. The Office of Parks received copies of the FEIS, as did the Department of Environmental Conservation. FEIS 9-34; ROD App. C at C-9.

Petitioners are also incorrect in asserting (Br. 77-78) that under the original preferred alternative, no departing aircraft would overfly the Park (citing FEIS Fig. 5.2) and that the Selected Alternative concentrates flights in a narrow corridor directly over the Park. The depiction in Fig. 5.2 and similar figures in Appendix P (at 55, 57) display backbone tracks, *i.e.*, the center of a flight route that is approximately five miles wide. FEIS App. P at 56. Under normal operations, aircraft are not concentrated on that narrow center line. Thus, under the preferred alternative (and the no-action alternative), aircraft would overfly Rockefeller Park. More importantly, in order to mitigate impacts to populated areas, the Selected Alternative shifts the flight path to one that is nearly equivalent to the pre-existing

route. See Argument I.G above. As a result, the selected Project results in only a small, 0.9 DNL increase from pre-existing conditions (the no action alternative is 41 DNL and selected Project is 41.9 DNL). FEIS App. J, Table J.2 (AR 9304 pdf 29). Thus, while noise impacts to Rockefeller do not decrease as they would have under the non-mitigated, preferred alternative (to 37.9 DNL, *id.*), they also do not change from pre-existing conditions to any appreciable extent. Because the increase from the Selected Alternative as compared to no action is slight and less than 3.0 DNL, no additional analysis was warranted.

Ardens Historic District. According to Petitioners' calculations (Br. Addendum D at 9), the Selected Alternative will actually result in noise decreases in the District. Accordingly, Petitioners' assertion that this area qualifies for additional analysis (Br. 78) is inexplicable.

Furthermore, far from "ignoring" (Br. 79) this area, FAA gave it heightened consideration at the request of the Delaware State Historic Properties Official. ROD 30; FEIS 4-49, Fig. 4.28. Ultimately, the area of potential effect on historic resources did not include this area of Delaware because not only were there no significantly impacted census blocks within the State, there were also no moderately or slightly impacted census blocks in Delaware (and Connecticut).  
ROD 30.

Bergen County. Petitioners fail to include these parks in their calculations of noise impacts (Br. Addendum D at 8-10) and inexplicably switches from a reference to Wild Duck Pond to Wood Dale County Park (Br. 79). Thus, they fail to carry their burden with respect to these parks.

**C. Noise Impacts to John Heinz Wildlife Refuge Do Not Constitute Constructive Use.**

Petitioners argue that FAA's finding that there would be no significant increase in noise at the John Heinz Refuge, located in an urban area directly northwest of the Philadelphia airport and adjacent to Interstate 95 (FEIS App. J.3, Ex. 35), is implausible because the record allegedly shows significant noise increases in populated areas around the Refuge. Br. 80, citing FEIS Fig. 4.25. However, the alleged anomaly does not exist. Petitioners rely on the wrong map: Figure 4.25 shows noise impacts for the ICC alternative *without mitigation*, not noise impacts for the Selected Alternative. The correct information for the Selected Alternative, FEIS Fig. 5-18, shows no significant noise increases for populated areas surrounding Heinz.

FAA based its §4(f) determination for Heinz Refuge on noise modeling for 14 points within the Refuge. FEIS 5-108, App. J.3, Ex. 35. This analysis shows that noise within the Refuge would either remain the same or decrease at 11 of the 14 points under the fully implemented Project. Although three of the 14 points

within the Refuge would have noise increases, the greatest difference in 2011 between the Selected Alternative and the no action alternative was 1.2 DNL (at point 12 – 51.1 DNL as compared to 49.9 DNL). FEIS 5-108, App. J.3, Ex. 35. Because any increases at specific sites were less than 3.0 DNL, no further analysis was conducted for the site and FAA found no constructive use.<sup>63/</sup> FEIS 5-108. This finding is thus fully explained, has a reasonable basis supported by the record, and is fully consistent with the FAA’s conclusions with respect to other national parks and national wildlife refuges.

**D. Notice and Comment on Additional Analysis is Not Required.**

Petitioners assert (Br. 82) that FAA violated public notice and comment requirements by failing to allow public comment on the additional analysis for noise sensitive properties summarized in ROD Appendix B. To the contrary, because this analysis simply reinforced and confirmed FAA’s prior conclusion of no constructive use, notice and comment on this analysis is not required.

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<sup>63/</sup> In the near term – prior to full implementation – there will be some locations in the Park with greater than 3.0 DNL changes, but that is temporary and would not result after full implementation of the Project. FEIS App. J.3, Ex. 135. The FAA’s screening criteria of a 3.0 DNL increase was based on a comparison of the no action alternative and selected alternative in 2011, when mitigation would be fully implemented. ROD 33.

As this Court explained in *Building Industry Ass'n of Superior California v. Norton*, 247 F.3d 1241 (D.C. Cir. 2001), “to avoid ‘perpetual cycles of new notice and comment periods,’” a final rule that is a logical outgrowth of the proposal does not require an additional round of notice and comment even if the final rule relies on data submitted during the comment period. *Id.* at 1246 (quoting, *Ass'n of Battery Recyclers v. EPA*, 208 F.3d 1047, 1058 (D.C. Cir.2000)). *Building Industry Ass'n* thus held that additional comment was not necessary due to the federal agency’s reliance on a study that only provided additional support for the same decision the agency had proposed to take. *Id.* See also *Community Nutrition Institute v. Block*, 749 F.2d 50, 57-58 (D.C. Cir.1984); *Air Transport Ass'n v. CAB*, 732 F.2d 219, 224 (D.C. Cir. 1984).

To the extent that Petitioners rely (Br. 83, n.62) on NEPA to contend that comment on the additional analysis for the eight properties was required, its contention still lacks merit. An agency “need not supplement an EIS every time new information comes to light after the EIS is finalized.” *Marsh*, 490 U.S. at 373. The additional analysis described in the ROD was prepared in response to public and government agency comments and simply reinforces the earlier analysis and conclusion. Thus, it does not constitute significant new information that would give rise to an obligation to prepare a supplemental EIS, see 40 C.F.R. § 1502.9.

### **III. The Project Complies with the Clean Air Act.**

#### **A. Background and Standard of Review**

FAA concluded that the Project complied with the general conformity requirements of the CAA, 42 U.S.C. § 7506(c). ROD 56; *see also* FEIS 3-48 to 3-55, Figs. 3.22 to 3.24, 4-68 to 4-70, 5-131 to 5-133. FAA included in the FEIS a study verifying that the Project would decrease the burning of jet fuel, and therefore improve air quality by reducing emissions of pollutants. FEIS App. R.

##### **1. Standard of Review**

FAA's determination that the Project complies with all applicable sections of the CAA is deferentially reviewed and can only be overturned if it is so erroneous as to be arbitrary or capricious. *City of Olmsted Falls*, 292 F.3d at 269. "Even assuming the FAA made missteps . . . the burden is on petitioners to demonstrate that [the FAA's] ultimate conclusions are unreasonable." *Id.* at 271 (quoting *Nat'l Petrochemical & Refiners Ass'n v. E.P.A.*, 287 F.3d 1130, 1146 (D.C. Cir. 2002)) (alterations in original). Even if Petitioners were correct that there were mistakes in the analysis of the projected amounts of fuel that would be consumed as a result of the Project, Petitioners give this Court no reason to remand FAA's decision.

## 2. The Clean Air Act's General Conformity Requirements

The CAA establishes a joint state and federal program to control the Nation's air pollution. *See* 42 U.S.C. § 7409. Under the CAA, the Environmental Protection Agency (EPA) first establishes national ambient air quality standards (NAAQS) for certain pollutants. *Id.* Each state is then required to submit to the EPA a list of all geographic areas that are designated as “nonattainment,” which is defined as “any area that does not meet . . . the national primary or secondary ambient air quality standards.” 42 U.S.C. § 7407(d)(1)(A)(I).

Each State must adopt and submit to EPA for approval a state implementation plan (SIP) providing for the implementation, maintenance, and enforcement of the NAAQS in a designated air quality region. 42 U.S.C. § 7410(a)(1). A SIP must specify emissions limitations and other measures that are necessary to attain and maintain the NAAQS for the relevant pollutants. 42 U.S.C. §§ 7410(a)(2)(A)-(M). Federal agency actions must be consistent with (*i.e.*, “conform to”) these plans once they are approved. 42 U.S.C. § 7506(c)(1). Generally, “conformity” to a SIP means that the anticipated emissions from a proposed activity will not frustrate an implementation plan’s purpose of attaining (and maintaining) the NAAQS. *Id.* § 7506(c)(1)(A). *See also id.* § 7506(c)(1)(B) (specific requirements).

### 3. EPA's General Conformity Regulations

EPA has promulgated regulations to assist federal agencies in determining the conformity of their actions with SIPs. *See* 40 C.F.R. § 93.150 *et seq.* Generally, a conformity determination is required only for proposed federal actions within a maintenance or nonattainment area. If a proposed federal action is located in an area so designated for a particular pollutant, a conformity determination is required for that pollutant (or its specified precursors) where the total emissions caused by a proposed federal action would equal or exceed specified emissions levels, or where the total emissions are deemed to be regionally significant. 40 C.F.R. §§ 93.153(b), 93.153(i). Agencies first determine whether such emission thresholds will be exceeded. If the agency finds that emissions would be below *de minimis* levels, no further analysis is necessary.<sup>64/</sup> *Id.* § 93.153(c)(1). If emissions would exceed *de minimis* levels, a conformity determination must then be completed. *Id.* 93.153(b).

#### a. Some Federal Actions are Exempt or Presumed to Conform.

Neither an applicability analysis nor a full conformity determination is required for every federal action. The General Conformity Regulations exempt all

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<sup>64/</sup> Reference to *de minimis* levels throughout this brief refer only to the General Conformity program, and not all CAA programs administered by EPA.

actions that are below *de minimis* levels established in 40 C.F.R. § 93.153(b), as well as a specific list of broad categories of actions in 40 C.F.R. § 93.153(c)(2) that result in no emissions increases or increases in emissions that are clearly *de minimis*. *Id.* § 93.153(c)(1)-(2). Exempt actions do not require an applicability analysis under § 93.153(b). However, as EPA explained when promulgating these regulations, “[t]here are too many Federal actions that are *de minimis* to completely list in either the rule or this preamble.” 58 Fed. Reg. 63,214, 63,229 (Nov. 30, 1993). EPA listed some additional activities in that preamble that it “believes . . . are illustrative of *de minimis* actions.” *Id.* One such category of actions is “[a]ir traffic control activities and adopting approach, departure and enroute procedures for air operations.”<sup>65/</sup> *Id.*

In addition, federal agencies may also establish categories of actions that are presumed to conform to a SIP. *See* 40 C.F.R. §§ 93.153(f)-(h). For these actions, agencies may operate under a rebuttable presumption that the emissions from the actions will be *de minimis* and will therefore not require a conformity analysis. 58 Fed. Reg. at 63,229. The presumption of conformity for a given action can be overcome on a case-by-case basis, by demonstrating that the specific action would be “regionally significant” or would in fact interfere with the applicable SIP or the

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<sup>65/</sup> An “en route” procedure is one that governs aircraft flying under IFR between the terminal area of origin and the terminal area of its destination. FEIS 1-9.

relevant NAAQS. *See* 40 C.F.R. § 93.153(j). If the presumption is rebutted, an applicability analysis or a conformity determination would then be required. *Id.*

**b. FAA's Presumed to Conform List**

Following the process described in EPA's regulations, 40 C.F.R. § 93.153(g)-(j), including publishing for notice and comment, 72 Fed. Reg. 6,641 (Feb. 12, 2007), FAA published a list of categories of FAA actions presumed to conform to any applicable SIPs. 72 Fed. Reg. 41,565 (July 30, 2007). Consistent with the EPA's Presumed to Conform Rule, 40 C.F.R. § 93.153(j), FAA need not perform an applicability analysis or a general conformity evaluation for activities on the list, subject to qualifications specified in the list itself.

FAA's Presumed to Conform List contains several different categories of activities. Category 14 presumes that certain changes in air traffic control activities conform if those changes "are designed to enhance operational efficiency (*i.e.*, to reduce delay), increase fuel efficiency, or reduce community noise impacts by means of engine thrust reductions." 72 Fed. Reg. at 41,578. The category also provides that air traffic control "actions that have no effect on air emissions or result in air quality improvements" are presumed to conform to applicable SIPs. *Id.*; *cf.* 40 C.F.R. § 93.153(c)(2).

**B. FAA Was Not Required to Perform a Conformity Analysis for the Project.**

The ROD (at 56) makes the final finding that:

The selected project is an air traffic control activity and adoption of approach, departure, and en route procedures for air operations which is either exempt under 40 C.F.R. 93.153(c) or presumed to conform and not regionally significant under 72 Fed. Reg. 41565, July 30 2007.

Because the Project would decrease emissions as compared to the Future No Action alternative, and therefore emissions would be below the *de minimis* thresholds established in 40 C.F.R. 93.153(b), FAA found the Project exempt from conformity requirements. *Id.* § 93.153(c)(1). Additionally, the Project is presumed to conform as established by FAA's Presumed to Conform List. For both of these legally independent reasons, FAA reasonably determined that it was not required to perform a conformity analysis for the Project.

**1. The Project is Exempt Because any Emissions Will be Below *De Minimis* Thresholds.**

By conducting a fuel burn analysis, FAA confirmed what it believed to be true based on its extensive experience with air traffic control activities designed to enhance efficiency and reduce delay – that emissions would decrease as a result of the Project. *See* ROD 43-44. FAA reasonably concluded that because the Project

would reduce emissions, it was exempt from further conformity analysis. ROD 56; 40 C.F.R. § 93.153(c)(1).

Although Petitioners never directly challenge EPA's General Conformity Regulations in their brief, they state that EPA "lacked express authority under the CAA to make exemptions," Br. 87, suggesting that this flaw undermines both the exemption and the presumption on which FAA relied. Petitioners are incorrect. The EPA Administrator is directed by Congress in the CAA to "promulgate, and periodically update, criteria and procedures for determining conformity" for all federal actions not subject to the separate requirements for transportation projects. 42 U.S.C. § 7506(c)(4)(A). *See* 58 Fed. Reg. 63,214. Furthermore, this Court has expressly upheld the EPA's identification of categories of federal action that would produce, at most, a *de minimis* level of emissions, and are therefore exempt from the requirement to perform a full conformity analysis. *Env't'l Def. Fund v. E.P.A.*, 82 F.3d 451, 466-67 (D.C. Cir. 1996).

In *Env't'l Def. Fund*, petitioners challenged the General Conformity regulations, arguing, *inter alia*, that the establishment of categories of actions for which no conformity analysis was required violated Congress's express admonition that "[n]o department, agency, or instrumentality of the Federal Government shall engage in . . . any activity which does not conform to an

implementation plan.” *Id.* at 465 (citing 42 U.S.C. § 7506(c)(1)). This Court disagreed, finding that Congress’s statement there is not “a position so rigid that it will not admit of a *de minimis* exemption.” *Env’tl Def. Fund.*, 82 F.3d at 466. “The purpose of section 176(c)(1), after all, is not to minimize emissions but to ensure that federal actions conform with state implementation plans.” *Id.* (citing 58 Fed. Reg. 63,215).<sup>66/</sup>

The exemption on which FAA relied here similarly applies only to those federal activities that will not impact the air quality region’s attainment of the applicable NAAQS because the emissions of particular pollutants, if there are any, are at levels specified by EPA to be *de minimis*. 40 C.F.R. § 93.153(b)(1)-(2). Petitioners do not object to the specific *de minimis* levels established by EPA, which were previously upheld. *Env’tl Def. Fund.* 82 F.3d at 467.

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<sup>66/</sup> The exemptions established in 40 C.F.R. § 93.153(c) are wholly unlike those “exemptions” from transportation conformity requirements subsequently rejected by this Court in *Sierra Club v. EPA*, 129 F.3d 137, 138 (D.C. Cir. 1997). For areas that fell to nonattainment status only after 1990, EPA established a 12-month “grace period” during which *all* transportation activities were exempt from the regulatory conformity requirements. *Id.* at 139 (citing 40 C.F.R. § 51.394(d) (1996)). Subsequently, Congress amended the CAA to clarify that the conformity requirements for transportation activities applied to *any* nonattainment area, no matter when they reached that status. *Id.* at 140 (citing 42 U.S.C. § 7506(c)(5)(Supp. 1995)). This Court held that the CAA therefore “did not provide any grace periods or other exemptions for areas redesignated from ‘attainment’ to ‘nonattainment’ status.” 129 F.3d at 140. The case has no impact on the General Conformity *de minimis* exemptions previously upheld by this Court.

## 2. The Project is Also Presumed to Conform.

As described above, FAA found in the alternative that a conformity determination was not required for the Project because it was presumed to conform to any applicable SIP, as described by FAA's own Presumed to Conform List. ROD 56 (citing 72 Fed. Reg. 41,565).<sup>67/</sup> Petitioners present no argument that this presumption could not be applied to the Project. Instead, they challenge the underlying validity of FAA's Presumed to Conform List. Petitioners' arguments are unfounded.

Petitioners' arguments about the presumption of conformity distill to three distinct arguments: (1) EPA cannot authorize agencies to publish lists of actions that are presumed to conform because each project must be evaluated "independently;" (2) FAA was first required to perform a more extensive analysis to determine whether the Project would have "regionally significant impacts;" and (3) FAA's presumed to conform list only applies to air traffic control activities above 1,500 feet above ground level (AGL). On all three points, Petitioners are incorrect.

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<sup>67/</sup> Although, as the FEIS notes, FAA's Presumed to Conform List had not been published in its final form at the time the FEIS was completed, FEIS 4-70, the final list was published on July 30, 2007, prior to the signing of the ROD.

**a. Authorizing a Presumption of Conformity Is Well Within EPA's Interpretive Authority.**

Petitioners appear to challenge the EPA's authority to permit agencies to publish their own presumed to conform lists, for which EPA established procedures in the General Conformity Regulations.<sup>68/</sup> See Br. 90. To the extent this argument overlaps with Petitioners' argument that 42 U.S.C. § 7506(c)(1) requires every "activity," no matter how minor, to be subjected to a conformity analysis, that argument has already been rejected by this Court. *Env'tl Def. Fund*, 82 F.3d at 465-67. Petitioners argue that the need for regulatory flexibility cannot justify the EPA's Presumed to Conform Rule, but this cannot withstand this Court's previous holding that "categorical exemptions from the requirements of a statute may be permissible 'as an exercise of agency power, inherent in most statutory schemes, to overlook circumstances that in context may fairly be considered de minimis.'" *Id.* at 466 (quoting *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979)). The later cases on which Petitioners rely are inapposite and do not upset this principle.

Petitioners rely on *South Coast Air Quality Mgmt. Dis. v. E.P.A.*, 472 F.3d 882 (D.C. Cir. 2006) for the proposition that flexibility in designing a compliance

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<sup>68/</sup> Such an argument would be time-barred by 42 U.S.C. § 1706(c)(1) (CAA's sixty-day statute of limitations).

mechanism is inappropriate, Br. 90-91, but the case does not support their argument. Contrary to Petitioners' description, Br. 90-91, the case has nothing to do at all with the presumption of conformity, nor does it stand for the general proposition that EPA may not promulgate regulations that provide for flexibility in the means by which agencies comply with the CAA. *South Coast* involved EPA's development of the NAAQS for ozone following the 1990 Clean Air Act Amendments, in which EPA proposed a change in the methodology used to measure ozone levels for certain purposes. This Court reviewed EPA's interpretation of a new section of the CAA where Congress had specifically provided a "graduated classification scheme that prescribed mandatory controls that each state must incorporate into its SIP." 472 F.3d at 887 (citing 42 U.S.C. §§ 7511-7511f). This Court held that EPA's interpretation resulting in the use of a different subpart was contrary to Congressional intent and therefore unreasonable, *id.* at 894-95, but the case does not limit EPA's or FAA's ability to provide flexibility in demonstrating compliance with the general conformity requirements.

Nor do Petitioners' selective quotations of *Env't'l Def. Fund, Inc. v. EPA*, 509 F.3d 553 (D.C. Cir. 2007), support their argument. *See* Br. at 90-92.<sup>69/</sup> In that case, petitioners challenged an EPA regulation on the grounds that it did not

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<sup>69/</sup> That case, like *Sierra Club*, concerns the section of the CAA that addresses transportation actions, rather than general conformity.

expressly require compliance with the CAA's prohibition on "delay[ing] timely attainment of any standard or any required interim emission reductions or other milestones in any area." 42 U.S.C. § 7506(c)(1)(B)(iii). The issue in the case was whether that prohibition needed to be expressly included in EPA's regulations governing conformity determinations for transportation projects, or whether that prohibition was implicit in the fact that all such projects must comply with the SIP (which did explicitly impose that requirement). The present case presents no analogous issue.

Petitioners nevertheless rely on that case in arguing that a project's emissions must be considered "independently, not collectively." Br. 90. It is not clear what they believe this phrase requires FAA to do in the conformity context. The Project was, of course, evaluated independently, and FAA determined that its effects would be *de minimis* as defined by EPA. Whereas, in *Env't'l Def. Fund*, this Court was concerned about delayed attainment of the NAAQS based on use of the generalized SIP review process as provided for in the regulations at issue, 509 F.3d at 561, FAA's evaluation of the Project considered the project-specific emissions prior to authorization.

If Petitioners are suggesting that the Presumed to Conform Rule is invalid because it does not require the independent analysis of each project described by

the List, they are wrong. There is no such legal requirement. EPA's authority to presume certain categories of activities will conform to an applicable SIP, absent evidence to the contrary, is well established. *Env't'l Def. Fund*, 82 F.3d at 466-67. Furthermore, when a federal agency publishes a list of such activities, it can only do so by "clearly demonstrating" that the activities would be consistent with the letter of 42 U.S.C. § 7506(c)(1)(B), or by "providing documentation that emissions from the types of actions that would be presumed to conform are below the applicable *de minimis* levels established in 40 C.F.R. § 93.153(b)(1) and (b)(2)." 40 C.F.R. § 93.153(g)(1)-(2). Petitioners do not argue that FAA failed to do so. Thus, both as a general matter and specifically with regards to the presumption on which FAA relied in this case, the specific type of activity was evaluated and determined not to interfere with the achievement of the NAAQS or the SIP goals.

Petitioners' suggestion that the presumption of conformity does not account for variations in the different SIPs and different environmental conditions of the nation's many air quality regions fails to understand the premise of the Presumed to Conform List. Br. 92. While the presumptions authorized by the General Conformity Regulations may be applied in any air quality region in the country, this does not mean that FAA *will* apply them in all regions at all times. Category 14 of FAA's Presumed to Conform List contains numerous important

qualifications to ensure that its application is consistent with all the provisions of 42 U.S.C. § 7506. Air traffic control procedures are presumed to conform only “when modifications to routes and procedures are designed to enhance operational efficiency (*i.e.*, to reduce delay), increase fuel efficiency, or reduce community noise impacts by means of engine thrust reductions.” 72 Fed. Reg. at 41,578. Air traffic activities are also presumed to conform when they “have no effect on air emissions or result in air quality improvements, such as gate hold procedures which reduce queuing, idling, and flight delays.” *Id.* Therefore, by definition, the types of activities that are presumed to conform under Category 14 are those about which there can be no question of conformity, as air emissions either will not be affected or will be decreased, and Petitioners’ concerns are thus misplaced.

**b. FAA Was Not Required To Conduct More Extensive Analysis to Determine the Project’s Regional Significance.**

The Petitioners correctly observe that the presumption of conformity cannot apply to any action that is “regionally significant,” as defined by the regulations. Br. 92-94. However, Petitioners misread FAA’s internal guidance document for environmental compliance to require what would amount to an *ex ante* conformity determination. *See* Br. 92 (citing Order 1050.1E, App. A. § 2.1m). If Petitioners’ reading were correct, *every* action would be subject to a full conformity analysis,

for the purpose of determining whether the action will be “regionally significant.” Yet, identifying an action as “regionally significant” has no other regulatory effect except to require a conformity analysis. Thus, Petitioners propose a regulatory tautology that would not only create an inordinate amount of unnecessary work for agencies complying with the CAA, but would also render 40 U.S.C. § 93.153(j) meaningless.

Petitioners conflate two wholly separate issues when they wrongly state that “FAA, however, dismisses regional significance without analyzing it.” Br. 93. Petitioners’ footnote citation is to FAA’s Presumed to Conform List, and *not* to the Airspace Redesign ROD. Br. 93 n. 70 (citing 72 Fed. Reg. 41,580). Far from dismissing the issue, FAA explicitly found that the Project would not be regionally significant. ROD 44 n. 18, 56. As the ROD explains, it would be mathematically impossible for emissions in the areas affected by the Project to be regionally significant unless they also exceeded the *de minimis* thresholds established by the General Conformity Regulations. *Id.*

Petitioners are actually referring to FAA’s decision not to make a categorical statement about regional significance in its Final Presumed to Conform List, which is a wholly separate issue. *See* 72 Fed. Reg. 41,580. Although the draft Presumed to Conform List proposed that, based on evidence before FAA, any action that was

presumed to conform would also be presumed not to be regionally significant, 72 Fed. Reg. at 6,655-56, this aspect of the List was not adopted when it was finally published. This has no bearing on FAA's obligation to conduct further air quality analysis of the Project.

**c. FAA's Presumed to Conform List Applies to Air Traffic Control Procedures at Any Altitude.**

Petitioners state that FAA's presumption "by FAA's own definition, applies only to ATC procedures taking place over 1,500 feet [AGL]." Br. 94. Petitioners are simply incorrect. FAA's Presumed to Conform List contains no such limitation, but rather applies to "air traffic control activities," including the adoption of "approach, departure, and enroute procedures for air operations," at any altitude. 72 Fed. Reg. at 41,578. While the FEIS does state that FAA's *draft* Presumed to Conform List "formally defines these types of actions above 1,500 feet above ground level (AGL) as de minimis," FEIS at ES-10, Petitioners cannot seriously maintain that this statement is intended to alter FAA's validly promulgated Presumed to Conform List (which was published *after* the FEIS) and the ROD's reliance on it.

**C. FAA's Fuel Burn Analysis Demonstrated that the Project Will Reduce Emissions.**

FAA analyzed how the Selected Alternative would affect the consumption of jet fuel to verify whether its impacts would be *de minimis*. That analysis, described in Appendix R of the FEIS, compared the projected fuel consumption on the annual average day for forecast year 2011 between the Future No Action alternative, the Preferred alternative, and the Selected Alternative (also known as the Preferred alternative with mitigation). The Selected Alternative decreases the burning of jet fuel by 194.4 metric tons on the AAD, when compared with the Future No Action Alternative. App. R 10. This is a projected savings of 23.4 million gallons of jet fuel just in the first year that the Selected Alternative is fully implemented. *Id.* Because less jet fuel is being burned, the Project will result in a decrease in air emissions.

Bizarrely, Petitioners challenge the premise that burning jet fuel directly results in air emissions. Br. 96, 98. *Cf. Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 593 n. 11 (1993) (court may take judicial notice of well-established scientific principles). Appendix R of the FEIS does not quantify this connection specifically because it was never seriously considered that anyone would contest the linkage between jet fuel combustion and the emission of pollutants. As explained below, FAA determined that the only source of emissions

affected by the Project is aircraft, and therefore those aircraft were the subject of the analysis.

Petitioners do not suggest that there is any evidence contrary to FAA's conclusion. "Agency determinations based upon highly complex and technical matters are entitled to great deference." *West Virginia v. EPA*, 362 F.3d 861, 867 (D.C. Cir. 2004) (citations omitted). "This is particularly true when we review the use of computer models because 'their scientific nature does not easily lend itself to judicial review.'" *Id.* at 868 (quoting *Appalachian Power Co. v. E.P.A.*, 135 F.3d 791, 802 (D.C.Cir.1998)). All that is required of FAA's use of predictive models is that it "explain the assumptions and methodology used," and that the agency's explanation bear a "rational relationship to the real world." *West Virginia*, 362 F.3d at 867-68 (citations omitted). It cannot be said that FAA failed to meet that burden in this case.

#### **1. FAA Used an Appropriate Methodology.**

When performing a conformity analysis of a proposed airport project, FAA's internal guidance typically requires use of the Emissions Dispersion Modeling System (EDMS). *See, e.g.*, FAA Order 1050.1E ¶ 2.4c; *see also* 40 C.F.R. Pt. 51, App. W, § 6.2.4(c) (EPA regulation approving use of EDMS for "air quality assessment of primary pollutant impacts at airports or air bases"). EDMS is

designed to study the localized emissions of aircraft and ground equipment at a single airport; it does not address emissions that occur above the mixing height.<sup>70/</sup> It is not, therefore, capable of modeling a complex, multi-airport airspace system such as that designed by the Project.

FAA therefore did not rely on EDMS alone. It had already produced extensive operational analyses of the Project (discussed in Appendix C), and these detailed studies provided a baseline for a calculation of fuel consumption. App. R. at 3. These models were produced using an industry leading modeling system known as the Total Airspace and Airport Modeller (“TAAM”). App. C. at xxiii. Simulations of airspace designs modeled by the TAAM produce a quantification of the total jet fuel burned in the simulation. App. R. at 3. However, these numbers were insufficiently precise for FAA’s purposes, and so FAA adjusted the model to more accurately forecast potential emissions from the Project. *Id.* at 3-5.

These modifications to the model, and the reasons why they were made, are described in Appendix R. They were necessary because the operational analyses for each of the full alternatives considered by the FEIS “were simulated with no gate and taxiway modeling.” *Id.* at 4. Using TAAM results by themselves for fuel

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<sup>70/</sup> “The mixing height provides a vertical cutoff for EDMS’s modeling of aircraft emissions.” EDMS 5.1 User Manual at 1-7, available online at [http://www.faa.gov/about/office\\_org/headquarters\\_offices/aep/models/edms\\_model/](http://www.faa.gov/about/office_org/headquarters_offices/aep/models/edms_model/) (last visited Jan. 1, 2009).

consumption modeling was insufficient, because “due to limitations in the structure of TAAM itself,” the model overestimated fuel consumption in some situations, and underestimated in others. It overestimates the fuel consumed during taxi-out delay, which was corrected by using data from the EDMS fuel consumption database. *Id.* at 4; AR 9910. It also overestimates the fuel consumed by planes ordered to slow down in flight, or to hold, in order to absorb delay. *Id.* at 4-5. This was corrected by use of the “fuel-flow integrator,” a system designed by FAA’s consultants and explained in the Appendix. *Id.* at 3-5. Additional assumptions about the behavior of aircraft in delay situations were factored into the analysis as well. *Id.* at 5. All of this served to prevent the analysis from overstating the emissions from the Future No Action Alternative, which prevented FAA from overstating the benefits from reductions in emissions by the Project.

While Petitioners are correct that FAA did not produce a formal “emissions inventory” of the type normally associated with a conformity analysis, Br. at 93, Petitioners fail to identify any manner in which such an inventory would have differed in substance from the analysis of jet fuel consumption that FAA *did* produce. The only changes to emissions sources that resulted from the Project affected aircraft, and FAA’s analysis accounts for fuel burn and therefore emissions produced by aircraft both on the ground and in flight. Petitioners object

that the analysis does not account for an inventory of emissions from equipment on the ground, Br. 97, but this is because those operations were unlikely to vary between the compared alternatives. App. R 12. The analyses of the Future No Action Alternative and the Selected Alternative projected that each had the same number and type of flights, and would therefore involve identical use of the various types of ground equipment.<sup>717</sup> The fuel burn study analyzed only aircraft movements; nothing else changed as a result of the Project.

Given that EDMS, the model preferred by Petitioners, Br. at 96-97, is not capable of analyzing a complex airspace design involving multiple airports, FAA's use of data from EDMS combined with additional information and modeled using an industry-leading tool is eminently reasonable. FAA exercised its expert judgment to determine how to analyze the emissions from this Project in a scenario not considered by its own internal guidance documents. Although Petitioners insist that only use of EDMS could satisfy FAA's general conformity obligations under NEPA, they draw this incorrect conclusion from the same FAA Order that acknowledges airspace design projects such as this one are typically exempt from those conformity requirements. Compare FAA Order 1050.1E ¶ 2.4c with *id.* at A-

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<sup>717</sup> As Petitioners point out, there is a possibility that Auxiliary Power Units would spend less time in operation as a result of reduced delay, Br. at 97 n. 78, which suggests that emissions from the Selected Alternative would actually be slightly less than stated in Appendix R.

5, A-6 ¶ 2.11 (10). The requirement to use EDMS applies to local airport projects not analogous to a large-scale airspace design such as this Project.

Petitioners object to FAA’s methodology by inventing a strawman “Fuel Burn Analysis” which it contrasts to specific modeling systems like EDMS. *See, e.g.,* Br. at 97 n. 76. Petitioners simply misunderstand what EDMS is, in what contexts its usage is appropriate, and the manner in which it was employed in FAA’s study of the Project. FAA’s approach was more than reasonable.

**2. The Project Will Substantially Reduce Emissions Below the Mixing Height.**

Petitioners wrongly claim that “[t]he Record contains no evidence to support FAA’s claim that the Project will not negatively impact emissions below the ‘mixing height.’” Br. 99. As discussed above, the analysis of fuel consumption clearly included fuel consumed below the mixing height, during takeoffs and landings as well as while on the runway. Nevertheless, Petitioners claim, again incorrectly, that studying the total fuel consumed “affirmatively obscures[] the Project’s emissions impacts by an impermissible ‘averaging’” of emissions above and below the mixing height. *Id.* On the contrary, the design of the study understates the most important feature of the Project with respect to air emissions – that nearly all of the benefits will occur below the mixing height, where most pollutants have the greatest impact on human health and the environment.

The Project will reduce departure delays at every major airport in the study area. This can be best seen by the charts in Appendix C. App. C at Tabs. 9-7, 9-9, 9-11, 9-13, 9-15. The Selected Alternative provides the greatest reduction in departure delays. *See* App. C. at 9-39, Tab. 9-14 (line 1). The fuel burn analysis accounted for this decrease in its calculation of taxi times, which in turn projected a decrease in emissions on the ground.<sup>72/</sup> Nothing about the Project would cause an increase in taxi times, as the operational analyses bore out. Therefore, the primary benefit of reduced emissions will be felt below the mixing height, where it matters most for a majority of emissions covered by general conformity.

Nevertheless, as FAA was concerned with emissions as a result of the total Project, it focused on total emissions, which included a great deal of jet fuel consumed in flight above the mixing height. *See* App. R at 12. As most of the fuel consumed by flights is burned while en route between the departure and arrival airports, the percentage of each flight's total emissions reduced by the Project is small because the Project will not make those flights more efficient far from the study area. Transcontinental flights, for example, will burn large amounts of jet

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<sup>72/</sup> Petitioners complain that the specific taxi times produced by the simulations were not provided in the record. The taxi times were based on the operational analyses described in Appendix C and were calculated based on the design of the Project as simulated in TAAM. Petitioners do not demonstrate that this approach was invalid.

fuel both with and without the delay reductions of the Project. Representing the total emissions savings of that entire flight due to the Project, as the fuel consumption study does, therefore understates the true benefit gained from reducing emissions during departure delays below the mixing height.

**3. Petitioners' Other Objections to the Fuel Burn Analysis Are Also Invalid.**

Petitioners conclude by making a series of incorrect, unsubstantiated allegations about the assumptions and design of the fuel burn analysis. The operational and fuel burn analyses presented in the appendices to the FEIS are the results of highly complex and sophisticated models making use of, in some cases, tens of thousands of points of data entered into the model in order to simulate the airspace of the study area.<sup>73/</sup> Petitioners fail to identify any serious errors in FAA's study.

Petitioners suggest incorrectly that the snapshots of traffic files used for the operational modeling of the Project are incomplete. Br. 100. One document is a snapshot of the output directories during the process of building simulations in

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<sup>73/</sup> Including these specific traffic files or other large collections of data in its environmental documents would run counter to the purpose of clearly communicating potential effects to the public. *See, e.g., City of Alexandria v. Slater*, 198 F.3d 862, 870 (D.C. Cir. 1999) (holding that mitigation efforts involving the rerouting of traffic did not require agency to publish in the FEIS the specific dates and routes of road closures).

TAAM for noise modeling, AR 9154, while the other is a record of the final output used in the operational analysis in the EIS. AR 9285. The different organization of the two documents is best explained in a table:

	AR-9154	AR-9285	Comments
<b>Files listed in document</b>	<b>528</b>	<b>494</b>	
Files in both documents	352	352	
Rejected Plans		100	Plan A was included in AR-9285 for completeness, but not used in the EIS.
Duplicated Files		42	Some simulations (e.g. HPN under Ocean Routing) are identical to Future No Action. Output files from these did not appear separately in the data inventory.
A4 configurations	108		The A4 configuration was for noise analysis only. It was not part of the operational analysis, so it is not in AR-9285.
Islip files	28		ISP was combined with JFK in a single simulation for the EIS.
Internal Flights	40		(e.g., flights from PHL to LGA) These are treated separately to inform the noise analysis, but in the operational analysis they are incorporated with their respective airports.
<b>Remainder</b>	<b>0</b>	<b>0</b>	

Nothing is missing from the files included in the administrative record.

Petitioners next object that the Fuel-Flow Integrator is insufficiently explained. (Br. 100.) However, Appendix R explains, in Table 1, how it applied specific assumptions about the fuel consumption of each particular type of aircraft when vectoring due to delays. Petitioners also object that other adjustments made to the simulations run for operational analysis are not sufficiently detailed. Br. 100. However, these adjustments are described throughout § 2.2 of Appendix R,

and Petitioners do not indicate any specific aspect that they do not understand.

Finally, Petitioners allege that the reduction in emissions is within the margin of error for the fuel burn analysis, and is too small to be relied on. Br. 101. The record does not support this argument. Petitioners fail to specify the “multitude of factors and assumptions” that they believe could have contributed to error in the study. Real-world factors that would affect fuel savings on any given day, such as changes in traffic, winds, or temperature, were assumed constant between the Future No Action Alternative and the Selected Alternative, so that the difference between the two when compared would be useful in discerning the results of the Project itself. Petitioners do not identify any particular assumption or variable that it believes could have caused FAA’s ultimate conclusion that emissions would decrease to be incorrect.

This failure pervades Petitioners’ continual demand for more detail in the fuel burn analysis. Petitioners *never* identify a reason for this Court not to defer to the expertise of the agency on these highly technical matters. Petitioners put forth no alternative methodology (save for a misguided argument that FAA could have applied EDMS by itself) nor do they indicate that FAA’s approach was otherwise flawed. Petitioners, therefore, fail to demonstrate that FAA’s decision was arbitrary and capricious.

#### **IV. Petitioners Are Not Entitled to Injunctive Relief.**

FAA has already begun to implement the Project, committing a great deal of resources to training air traffic controllers and restructuring air traffic in the Northeast. Petitioners ask this Court not only to vacate and remand the ROD, but also to “stay implementation of the FAA’s Airspace Redesign until completion of the remand.” (Br. 103.) Should this Court ultimately agree with Petitioners that FAA’s ROD is arbitrary or capricious, FAA respectfully asks that this Court “pay particular regard to the public consequences in employing the extraordinary remedy of injunction.” *Winter v. Natural Res. Def. Council*, 129 S. Ct. 365, 377-78 (2008) (quoting *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312 (1982)). FAA cannot undo changes already made to the nation’s airspace as part of the Project without seriously jeopardizing the long-term viability of that airspace and its ability to adapt to future technologies.

**CONCLUSION**

The petition for review should be denied.

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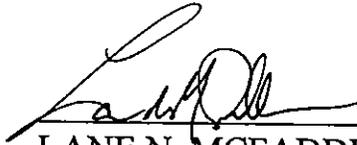
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## CERTIFICATE OF COMPLIANCE

This brief complies with the type limitations of Fed. R. App. P. 32(a)(7) and the volume limitation set by this Court's May 30, 3008, order because this brief contains 28,497 words, excluding the parts of the brief exempted by Fed. R. Ap. P. 32(a)(7)(B)(iii).



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# ADDENDUM

A



**Effective: April 5, 2000**

United States Code Annotated Currentness  
Title 49. Transportation (Refs & Annos)  
Subtitle VII. Aviation Programs  
Part B. Airport Development and Noise  
    ▣ Chapter 471. Airport Development  
        ▣ Subchapter I. Airport Improvement (Refs & Annos)  
            → § 47101. Policies

**(a) General.--**It is the policy of the United States--

- (1) that the safe operation of the airport and airway system is the highest aviation priority;
- (2) that aviation facilities be constructed and operated to minimize current and projected noise impact on nearby communities;
- (3) to give special emphasis to developing reliever airports;
- (4) that appropriate provisions should be made to make the development and enhancement of cargo hub airports easier;
- (5) to encourage the development of intermodal connections on airport property between aeronautical and other transportation modes and systems to serve air transportation passengers and cargo efficiently and effectively and promote economic development;
- (6) that airport development projects under this subchapter provide for the protection and enhancement of natural resources and the quality of the environment of the United States;
- (7) that airport construction and improvement projects that increase the capacity of facilities to accommodate passenger and cargo traffic be undertaken to the maximum feasible extent so that safety and efficiency increase and delays decrease;
- (8) to ensure that nonaviation usage of the navigable airspace be accommodated but not allowed to decrease the safety and capacity of the airspace and airport system;
- (9) that artificial restrictions on airport capacity--
  - (A) are not in the public interest;
  - (B) should be imposed to alleviate air traffic delays only after other reasonably available and less burdensome alternatives have been tried; and
  - (C) should not discriminate unjustly between categories and classes of aircraft;

(10) that special emphasis should be placed on converting appropriate former military air bases to civil use and identifying and improving additional joint-use facilities;

(11) that the airport improvement program should be administered to encourage projects that employ innovative technology (including integrated in-pavement lighting systems for runways and taxiways and other runway and taxiway incursion prevention devices), concepts, and approaches that will promote safety, capacity, and efficiency improvements in the construction of airports and in the air transportation system (including the development and use of innovative concrete and other materials in the construction of airport facilities to minimize initial laydown costs, minimize time out of service, and maximize lifecycle durability) and to encourage and solicit innovative technology proposals and activities in the expenditure of funding pursuant to this subchapter;

(12) that airport fees, rates, and charges must be reasonable and may only be used for purposes not prohibited by this subchapter; and

(13) that airports should be as self-sustaining as possible under the circumstances existing at each particular airport and in establishing new fees, rates, and charges, and generating revenues from all sources, airport owners and operators should not seek to create revenue surpluses that exceed the amounts to be used for airport system purposes and for other purposes for which airport revenues may be spent under section 47107(b)(1) of this title, including reasonable reserves and other funds to facilitate financing and cover contingencies.

**(b) National transportation policy.--(1)** It is a goal of the United States to develop a national intermodal transportation system that transports passengers and property in an efficient manner. The future economic direction of the United States depends on its ability to confront directly the enormous challenges of the global economy, declining productivity growth, energy vulnerability, air pollution, and the need to rebuild the infrastructure of the United States.

(2) United States leadership in the world economy, the expanding wealth of the United States, the competitiveness of the industry of the United States, the standard of living, and the quality of life are at stake.

(3) A national intermodal transportation system is a coordinated, flexible network of diverse but complementary forms of transportation that transports passengers and property in the most efficient manner. By reducing transportation costs, these intermodal systems will enhance the ability of the industry of the United States to compete in the global marketplace.

(4) All forms of transportation, including aviation and other transportation systems of the future, will be full partners in the effort to reduce energy consumption and air pollution while promoting economic development.

(5) An intermodal transportation system consists of transportation hubs that connect different forms of appropriate transportation and provides users with the most efficient means of transportation and with access to commercial centers, business locations, population centers, and the vast rural areas of the United States, as well as providing links to other forms of transportation and to intercity connections.

(6) Intermodality and flexibility are paramount issues in the process of developing an integrated system that will obtain the optimum yield of United States resources.

(7) The United States transportation infrastructure must be reshaped to provide the economic underpinnings for the United States to compete in the 21st century global economy. The United States can no longer rely on the sheer size of its economy to dominate international economic rivals and must recognize fully that its economy is no longer a separate

entity but is part of the global marketplace. The future economic prosperity of the United States depends on its ability to compete in an international marketplace that is teeming with competitors but in which a full one-quarter of the economic activity of the United States takes place.

**(8)** The United States must make a national commitment to rebuild its infrastructure through development of a national intermodal transportation system. The United States must provide the foundation for its industries to improve productivity and their ability to compete in the global economy with a system that will transport passengers and property in an efficient manner.

**(c) Capacity expansion and noise abatement.**--It is in the public interest to recognize the effects of airport capacity expansion projects on aircraft noise. Efforts to increase capacity through any means can have an impact on surrounding communities. Noncompatible land uses around airports must be reduced and efforts to mitigate noise must be given a high priority.

**(d) Consistency with air commerce and safety policies.**--Each airport and airway program should be carried out consistently with section 40101(a), (b), (d), and (f) of this title to foster competition, prevent unfair methods of competition in air transportation, maintain essential air transportation, and prevent unjust and discriminatory practices, including as the practices may be applied between categories and classes of aircraft.

**(e) Adequacy of navigation aids and airport facilities.**--This subchapter should be carried out to provide adequate navigation aids and airport facilities for places at which scheduled commercial air service is provided. The facilities provided may include--

(1) reliever airports; and

(2) heliports designated by the Secretary of Transportation to relieve congestion at commercial service airports by diverting aircraft passengers from fixed-wing aircraft to helicopter carriers.

**(f) Maximum use of safety facilities.**--This subchapter should be carried out consistently with a comprehensive airspace system plan, giving highest priority to commercial service airports, to maximize the use of safety facilities, including installing, operating, and maintaining, to the extent possible with available money and considering other safety needs--

(1) electronic or visual vertical guidance on each runway;

(2) grooving or friction treatment of each primary and secondary runway;

(3) distance-to-go signs for each primary and secondary runway;

(4) a precision approach system, a vertical visual guidance system, and a full approach light system for each primary runway;

(5) a nonprecision instrument approach for each secondary runway;

(6) runway end identifier lights on each runway that does not have an approach light system;

(7) a surface movement radar system at each category III airport;

(8) a taxiway lighting and sign system;

(9) runway edge lighting and marking;

(10) radar approach coverage for each airport terminal area; and

(11) runway and taxiway incursion prevention devices, including integrated in-pavement lighting systems for runways and taxiways.

**(g) Intermodal planning.**--To carry out the policy of subsection (a)(5) of this section, the Secretary of Transportation shall take each of the following actions:

**(1) Coordination in development of airport plans and programs.**--Cooperate with State and local officials in developing airport plans and programs that are based on overall transportation needs. The airport plans and programs shall be developed in coordination with other transportation planning and considering comprehensive long-range land-use plans and overall social, economic, environmental, system performance, and energy conservation objectives. The process of developing airport plans and programs shall be continuing, cooperative, and comprehensive to the degree appropriate to the complexity of the transportation problems.

**(2) Goals for airport master and system plans.**--Encourage airport sponsors and State and local officials to develop airport master plans and airport system plans that--

(A) foster effective coordination between aviation planning and metropolitan planning;

(B) include an evaluation of aviation needs within the context of multimodal planning; and

(C) are integrated with metropolitan plans to ensure that airport development proposals include adequate consideration of land use and ground transportation access.

**(3) Representation of airport operators on MPO'S.**--Encourage metropolitan planning organizations, particularly in areas with populations greater than 200,000, to establish membership positions for airport operators.

**(h) Consultation.**--To carry out the policy of subsection (a)(6) of this section, the Secretary of Transportation shall consult with the Secretary of the Interior and the Administrator of the Environmental Protection Agency about any project included in a project grant application involving the location of an airport or runway, or a major runway extension, that may have a significant effect on--

(1) natural resources, including fish and wildlife;

(2) natural, scenic, and recreation assets;

(3) water and air quality; or

(4) another factor affecting the environment.

CREDIT(S)

(Added Pub.L. 103-272, § 1(e), July 5, 1994, 108 Stat. 1246, and amended Pub.L. 103-305, Title I, §§ 104, 110, Aug. 23, 1994, 108 Stat. 1571, 1573; Pub.L. 103-429, § 6(62), Oct. 31, 1994, 108 Stat. 4385; Pub.L. 104-264, Title I, § 141, Oct. 9, 1996, 110 Stat. 3220; Pub.L. 106-181, Title I, §§ 121(a), (b), 137(a), Apr. 5, 2000, 114 Stat. 74, 85.)

(e) Except as provided in (f) below, the noise exposure maps must also contain and identify:

- (1) Runway locations.
- (2) Flight tracks.
- (3) Noise contours of  $L_{dn}$  65, 70, and 75 dB resulting from aircraft operations.
- (4) Outline of the airport boundaries.
- (5) Noncompatible land uses within the noise contours, including those within the  $L_{dn}$  65 dB contours. (No land use has to be identified as noncompatible if the self-generated noise from that use and/or the ambient noise from other nonaircraft and nonairport uses is equal to or greater than the noise from aircraft and airport sources.)
- (6) Location of noise sensitive public buildings (such as schools, hospitals, and health care facilities), and properties on or eligible for inclusion in the National Register of Historic Places.
- (7) Locations of any aircraft noise monitoring sites utilized for data acquisition and refinement procedures.
- (8) Estimates of the number of people residing within the  $L_{dn}$  65, 70, and 75 dB contours.

(9) Depiction of the required noise contours over a land use map of a sufficient scale and quality to discern streets and other identifiable geographic features.

(f) Notwithstanding any other provision of this part, noise exposure maps prepared in connection with studies which were either Federally funded or Federally approved and which commenced before October 1, 1981, are not required to be modified to contain the following items:

- (1) Flight tracks depicted on the map.
- (2) Use of ambient noise to determine land use compatibility.
- (3) The  $L_{dn}$  70 dB noise contour and data related to  $L_{dn}$  70 dB contour. When determinations on land use compatibility using Table 1 differ between  $L_{dn}$  65-70 dB and the  $L_{dn}$  70-75 dB, determinations should either use the more conservative  $L_{dn}$  70-75 dB column or reflect determinations based on local needs and values.
- (4) Estimates of the number of people residing within the  $L_{dn}$  65, 70, and 75 dB contours.

TABLE 1—LAND USE COMPATIBILITY\* WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

Land use	Yearly day-night average sound level ( $L_{dn}$ ) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
<b>RESIDENTIAL</b>						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
<b>PUBLIC USE</b>						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
<b>COMMERCIAL USE</b>						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
<b>MANUFACTURING AND PRODUCTION</b>						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
<b>RECREATIONAL</b>						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Numbers in parentheses refer to notes.

\*The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

## KEY TO TABLE 1

SLUCM=Standard Land Use Coding Manual.

Y (Yes)=Land Use and related structures compatible without restrictions.

N (No)=Land Use and related structures are not compatible and should be prohibited.

NLR=Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35=Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

## NOTES FOR TABLE 1

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

*Sec. A150.103 Use of computer prediction model.*

(a) The airport operator shall acquire the aviation operations data necessary to develop noise exposure contours using an FAA approved methodology or computer program, such as the Integrated Noise Model (INM) for airports or the Heliport Noise Model (HNM) for heliports. In considering approval of a methodology or computer program, key factors include the demonstrated capability to produce the required output and the public availability of the program or methodology to provide interested parties the opportunity to substantiate the results.

(b) Except as provided in paragraph (c) of this section, the following information must be obtained for input to the calculation of noise exposure contours:

(1) A map of the airport and its environs at an adequately detailed scale (not less than 1 inch to 2,000 feet) indicating runway length, alignments, landing thresholds, takeoff start-of-roll points, airport boundary, and flight tracks out to at least 30,000 feet from the end of each runway.

(2) Airport activity levels and operational data which will indicate, on an annual average-daily-basis, the number of aircraft, by type of aircraft, which utilize each flight track, in both the standard daytime (0700-2200 hours local) and nighttime (2200-0700 hours local) periods for both landings and takeoffs.

(3) For landings—glide slopes, glide slope intercept altitudes, and other pertinent information needed to establish approach profiles along with the engine power levels needed to fly that approach profile.

(4) For takeoffs—the flight profile which is the relationship of altitude to distance from

start-of-roll along with the engine power levels needed to fly that takeoff profile; these data must reflect the use of noise abatement departure procedures and, if applicable, the takeoff weight of the aircraft or some proxy for weight such as stage length.

(5) Existing topographical or airspace restrictions which preclude the utilization of alternative flight tracks.

(6) The government furnished data depicting aircraft noise characteristics (if not already a part of the computer program's stored data bank).

(7) Airport elevation and average temperature.

(c) For heliports, the map scale required by paragraph (b)(1) of this section shall not be less than 1 inch to 2,000 feet and shall indicate heliport boundaries, takeoff and landing pads, and typical flight tracks out to at least 4,000 feet horizontally from the landing pad. Where these flight tracks cannot be determined, obstructions or other limitations on flight tracks in and out of the heliport shall be identified within the map areas out to at least 4,000 feet horizontally from the landing pad. For static operation (hover), the helicopter type, the number of daily operations based on an annual average, and the duration in minutes of the hover operation shall be identified. The other information required in paragraph (b) shall be furnished in a form suitable for input to the HNM or other FAA approved methodology or computer program.

*Sec. A150.105 Identification of public agencies and planning agencies.*

(a) The airport proprietor shall identify each public agency and planning agency whose jurisdiction or responsibility is either

**C****Effective:[See Text Amendments]**

Code of Federal Regulations Currentness

Title 40. Protection of Environment

☐ Chapter V. Council on Environmental Quality

☐ Part 1505. NEPA and Agency Decision-making (Refs &amp; Annos)

**→ § 1505.2 Record of decision in cases requiring environmental impact statements.**

At the time of its decision (§ 1506.10) or, if appropriate, its recommendation to Congress, each agency shall prepare a concise public record of decision. The record, which may be integrated into any other record prepared by the agency, including that required by OMB Circular A-95 (Revised), part I, sections 6 (c) and (d), and part II, section 5(b)(4), shall:

- (a) State what the decision was.
- (b) Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable. An agency may discuss preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions. An agency shall identify and discuss all such factors including any essential considerations of national policy which were balanced by the agency in making its decision and state how those considerations entered into its decision.
- (c) State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program

shall be adopted and summarized where applicable for any mitigation.

SOURCE: 43 FR 55999, Nov. 29, 1978, unless otherwise noted.

AUTHORITY: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and Executive Order 11514 (Mar. 5, 1970, as amended by Executive Order 11991, May 24, 1977).

40 C. F. R. § 1505.2, 40 CFR § 1505.2  
Current through December 31, 2008; 73 FR 80700

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# ADDENDUM

## B

Table 2.6  
**Operational Comparison of Alternatives**  
(The most advantageous operational metric has been shaded and boldfaced)

Purpose & Need Evaluation Criteria	How Measured	Alternative				
		Future No Action	Modifications to Existing Airspace	Ocean Routing Airspace	Integrated Airspace	
					without ICC	with ICC
<b>Reduce Complexity</b>	Jet route Delays + time below 18,000 feet (minutes)	12	12	12	11	<b>10</b>
	Arrival Distance below 18,000 feet (nautical miles)	96	<b>95</b>	99	96	102
<b>Reduce Voice Communications</b>	Max Interfacility handoffs per hour	525	525	521	529	<b>532</b>
<b>Reduce Delay</b>	Traffic weighted arrival delay 2011 (minutes)	22.9	22.6	23.6	22.8	<b>20.9</b>
	Traffic weighted departure delay 2011 (minutes)	23.3	20.9	29.5	20.8	<b>19.2</b>
<b>Balance Controller Workload</b>	Equity of West gate fix traffic counts	0.37	0.37	0.37	0.34	<b>0.30</b>
<b>Meet System Demands &amp; Improve User Access to System</b>	End of day's last arrival push (time)	23:54	23:54	23:54	23:54	<b>23:10</b>
<b>Expedite Arrivals and Departures</b>	Time below 18,000 ft (minutes)	18.5	<b>18.2</b>	18.8	18.2	18.6
	Change in route length per flight (nautical miles) <sup>(1)</sup>	0.0	0.0	4.5	<b>-1.2</b>	3.7
	Change in block time (minutes per flight) <sup>(1)</sup>	0.0	-0.9	3.9	-1.0	<b>-1.4</b>
<b>Flexibility in Routing</b>	Delay saved per flight per day (minutes)	0	0	0	0	<b>12.6</b>
<b>Maintain Airport Throughput</b>	Arrival Max Sustainable Throughputs	223	223	223	223	<b>238</b>
	Departure Max Sustainable Throughputs	238	239	221	240	<b>245</b>

Notes: (1) A negative value indicates a net decrease in the category.

Source: Operational Analysis of NY/NJ/PHL Metropolitan Area Airspace Redesign Alternatives, (MITRE Technical Report - MTR 05W0000025, March 2005, Table ES-1. Summary of Operational Impacts, p. ix.)

# ADDENDUM

## C

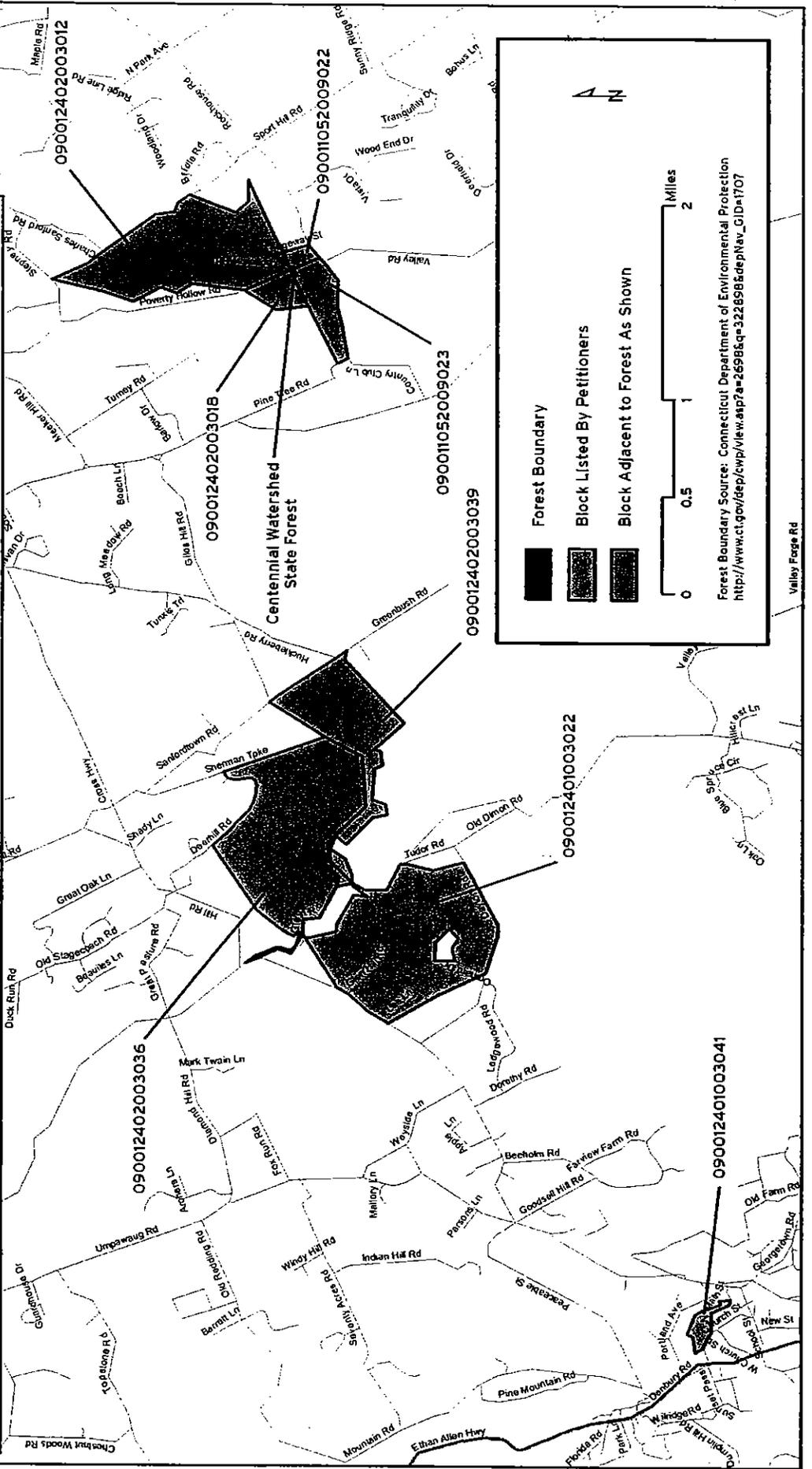
# ADDENDUM

## D

# Centennial Watershed State Forest

Census Block	2006 No Action		2006 Ocean Routing		2006 Modifications to Existing Airspace		2006 Integrated Variation Without ICC		2006 Integrated Variation With ICC		2011 No Action		2011 Ocean Routing		2011 Modifications to Existing Airspace		2011 Integrated Variation Without ICC		2011 Integrated Variation With ICC		
	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	No Action	Mitigation	
9001052009022	32.8	32.7	32.9	32.7	29.6	29.7	29.6	29.7	29.6	29.7	29.6	29.7	29.6	29.7	29.6	29.7	29.6	29.7	29.6	29.7	
9001052009023	32.9	32.8	32.9	32.7	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	
90012402003012	33.0	32.8	33.0	32.8	30.0	30.1	30.0	30.1	30.0	30.1	30.0	30.1	30.0	30.1	30.0	30.1	30.0	30.1	30.0	30.1	
90012402003018	32.9	32.7	32.9	32.7	29.8	29.9	29.8	29.9	29.8	29.9	29.8	29.9	29.8	29.9	29.8	29.9	29.8	29.9	29.8	29.9	31.1

\* Noise Exposure Level in DNL



Forest Boundary  
 Block Listed By Petitioners  
 Block Adjacent to Forest As Shown

0 0.5 1 2 Miles

Forest Boundary Source: Connecticut Department of Environmental Protection  
[http://www.ct.gov/deep/cwp/view.asp?as=2698&op=322698&depNav\\_GID=107](http://www.ct.gov/deep/cwp/view.asp?as=2698&op=322698&depNav_GID=107)

## CERTIFICATE OF SERVICE

Pursuant to Fed. R. App. P. 25(d)(1)(B) and D.C. Cir. R. 27(a)(1), I hereby certify on this 12<sup>th</sup> day of January, 2009, two copies of the foregoing Respondents' Brief for the Federal Respondents were served by first class United States mail, postage prepaid, upon the following counsel of record for Petitioners and *amici*:

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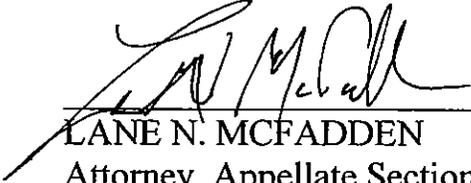
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