DRAFT

June 28, 2006

Mr. Steve Kelley, FAA NAR
c/o Nessa Memberg
12005 Sunrise Valley Drive, MS C3.02
Reston, VA 20191

Re: Draft Environmental Impact Statement - New York/ New Jersey/ Philadelphia Metropolitan Airspace Redesign - Comments By Sound Shore Communities

Dear Mr. Kelley:

We represent the Sound Shore Communities of Westchester County, New York, including the Village of Larchmont, Town of Mamaroneck, Village of Mamaroneck, City of New Rochelle, Town of Pelham, Village of Pelham, Village of Pelham Manor, City of Rye, Town of Harrison, and Village of Port Chester, (collectively "Sound Shore Communities") as well as the Quiet Skies Committee of WRAIN ("WRAIN"). The following constitute the Sound Shore Communities' and WRAIN's comments on the Draft Environmental Impact Statement ("DEIS") prepared by the Federal Aviation Administration ("FAA") for the New York/ New Jersey/ Philadelphia Metropolitan Airspace Redesign ("Project") pursuant to the requirements of the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.* ("NEPA").

The citizens of the Sound Shore Communities and WRAIN are deeply concerned about the Project's undisclosed potential to increase the disproportionate noise burden that already results to the Sound Shore Communities and WRAIN from arrivals on La Guardia Runway 22 and departures on Runway 4 under the procedure that eliminates over-the-water routing. The DEIS, however, does not provide data sufficient to allow the public, including Sound Shore Communities and WRAIN, to make an informed determination about the Project's impacts. Instead, among other things, it: (1) omits any data or analysis of the air traffic impacts of operations from 119 airports in the study area, even some that meet the purported test of jet/IFR operations, such as Allaire and Danbury Airports, so as to artificially inflate the apparent benefits of the Project; (2) entirely omits data concerning the altitudes of aircraft or their departure headings on the proposed new routing, such that a competent analysis of the Project's noise impacts is not possible; (3) omits analysis of the Project's noise impacts on communities not now subject to overflights; (4) declines to discuss alternatives with fewer impacts such as the

improvement of airport groundside facilities that have the potential to reduce groundside congestion and consequent delay, thereby satisfying one of the major purposes of the Project; and (5) fails to acknowledge or analyze the impacts of the interdependent connected actions at the region's airports made necessary by the growth in traffic allowed by the Project.

Most notably, the DEIS entirely omits any discussion of mitigation for the Project's inevitable impacts. Instead, the FAA asks the public to do its job of developing reasonable mitigation measures. First, and most importantly, many of the Project's impacts can and should be entirely avoided by maintaining the over-the-water departure for Runway 4 at LGA without any change or compromise. Second, and without waiving their objections to the absence from the DEIS of the over-the-water departure for Runway 4 at LGA or other such mitigation measures, the Sound Shore Communities and WRAIN recommend that the Project incorporate, at minimum, the following measures, to compensate the Sound Shore Communities and WRAIN for the new noise impacts that are revealed, but remain unanalyzed, in the DEIS:

(1) issue a written directive that requires the use of the LDA approach when LGA is operating Runway 22, potentially with an off-set, stating that "The LDA approach for LGA Runway 22 is designated as the primary approach during periods when the ceiling is at or above 1000 feet AGL and the visibility is at or above 3 nautical miles."

    (a) provide controller/supervisor briefings regarding the use of the LDA directives;

    (b) monitor controller/supervisor compliance with the LDA directives;

(2) develop and implement an ILS approach, to be used when the weather does not permit use of the LDA, that is off-set from the Runway 22 centerline, and places the ILS final approach course off shore over Long Island Sound;

(3) an RNAV-GPS approach to Runway 22 that uses off shore navigation points which would place the final approach course over the water;

(4) a published visual approach, using existing topographical information or by installing visual equipment such as lights on markers in and around the Sound, that will keep aircraft off shore to the extent possible during good weather conditions;

(5) increase in the altitude at which aircraft turn on final approach; and

(6) increase in the crossing altitude at YOMAN by a significant amount.

I. THE PROJECT WILL NOT ACHIEVE ITS PURPOSE AND THE NEED FOR THE PROJECT IS EXAGGERATED BY FLAWED MODELING.

NEPA's implementing regulations, 40 C.F.R. § 1500 *et seq*. ("CEQ Regulations") require that each EIS "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. Here, the stated purpose of the Project is " to increase the efficiency and reliability of the airspace structure and the ATC system," DEIS, Ch. 1, p. 1-27, and the Project is needed "to accommodate growth while maintaining safety and mitigating delays, and to accommodate changes in the types of aircraft using the system." *Id*.

A. The Project as Currently Structured and Reflected in the DEIS Does Not Achieve its Purported Purpose.

The DEIS catalogues a number of "efficiency" and reliability issues at which the Project is purportedly aimed. The DEIS, however, contains no data to support the way the "fixes" proposed, either individually or collectively, will solve these problems.

1. Operational Inefficiencies.

First, the DEIS states that the "access to en route airways is restricted by downstream congestion." [Ch. 1, p. 1-21]. Downstream congestion, however, may be caused by the number of aircraft entering the system from airports outside the Study Area, not because of any inherent design flaws in the NY, NJ and PHL airspace.

Second, the DEIS states that EWR and LGA final approach courses are restricted and do not allow for optimal aircraft sequencing to the runways. [Ch. 1, p. 1-21]. However, the DEIS fails to explain how the final approach courses to these airports are restricted.

Third, the DEIS states that "airspace sectors are currently associated with specific airports which cause an unbalanced use of the airspace, thus requiring excessive communications between controllers." [Ch. 1, p. 1-21] However, there are other solutions to this problem, short of redesigning the airspace, such as balancing the sectors within the facility, delegating airspace, or implementing further air traffic procedures. The DEIS does not reveal whether any of these alternative solutions were explored.

Fourth, the DEIS states that "westbound departures from JFK create delays for westbound departures from EWR and LGA due to in-trail sequences." [Ch.1, p. 1-21]. However, the realignment of airspace does not eliminate the in-trail requirements for traffic entering the high altitude system. Aircraft entering the same center airspace, which is used by aircraft traveling at high altitudes during the cruise portion of their flight, may still be required to be in-trail. This is particularly true if those aircraft have not yet reached their cruising altitude. Therefore it is unclear how these delays will be alleviated by the Project.

Fifth, the DEIS states that "NY Metropolitan Area departures to north departure gate fixes are restricted due to inefficient airspace allocation." [Ch.1, p. 1-21]. However, the DEIS does not provide any supporting evidence that would allow the public to evaluate this claim or any explanation as to how the realignment would resolve the issue.

Finally, the DEIS states that "arrivals to PHL are directed to lower altitudes to maintain separation from arrivals to the NY Metropolitan Area." [Ch. 1, p. 1-21]. Yet, aircraft are restricted to specific altitudes in nearly all complex terminal environments. It is unlikely that the realignment will allow all aircraft to operate at significantly higher altitudes than currently utilized. Further, the DEIS does not provide any information regarding the "new" altitude structures proposed by the Project.

2. Safety Related Inefficiencies.

The DEIS identifies several safety-related inefficiencies in the NY/NJ/PHL Metropolitan Area Airspace. First, "arrivals to HPN from the south cross several traffic flows and create unnecessary complexity." [Ch. 1, p. 1-21]. The DEIS, however, does not disclose how the Project will resolve this inefficiency.

Second, "arrivals for airports to the north of the Study Area must be assigned high altitudes to avoid conflicts with the NY Metropolitan Area traffic. This creates the need to cross several traffic flows in a short distance while descending." [Ch.1, p. 1-21]. To the contrary, crossing busy terminal areas at higher altitudes is common throughout the national airspace system. And, the DEIS does not provide any explanation, or supporting data, as to how the Project will address this issue.

Third, "airspace restrictions require incremental changes in altitude for arrivals and departures causing radio frequency congestion associated with additional control instructions." [Ch. 1, p. 1-22]. Incremental changes in altitude, though, are common throughout the air traffic system and are not unique to the NY/NJ/ PHL area. Until there is a system in place universally that will allow the controller and pilot to communicate without radios, voice communications will be necessary.

Fourth, "departures from EWR to the Caribbean and South America must climb through PHL and ACY traffic resulting in traffic conflicts." [Ch. 1, p. 1-22]. Yet, departures from PHX to LAX must climb through other air traffic operating in the NAS. As long as there are multiple aircraft operating in the NAS, it will be necessary for one aircraft to climb through or descend through the altitude of another. If there were no conflicts, there would be no need for the air traffic control system. The DEIS does not explain how the Project will resolve this issue.

Fifth, "high performance general aviation aircraft operating out of satellite airports are restricted to less efficient altitudes below major airport flows. This creates increased controller workload to resolve traffic conflicts." [Ch. 1, p. 1-22]. This, however, is a common practice

because the larger airports generate a steady flow of traffic. Those aircraft departing from smaller airports are restricted to lower altitudes until they can be sequenced into the route with other traffic. It is unclear how the DEIS would resolve this issue.

Finally, "departures from ISP and ISP satellite airports to the south/southwest conflict with arrivals to the NY Metropolitan Area and north-east bound departures from PHL." [Ch. 1, p. 1-22]. Yet, departures from any airport in the Nation will at some time or another conflict with other aircraft in the area if not controlled. This alleged safety-inefficiency issue is really just a description of the air traffic controller's job.

In short, the DEIS identifies several inefficiencies in the Study Area airspace, many of which are common throughout the national airspace, but fails to either provide evidence supporting the purported inefficiencies or explain how the Project will alleviate these purported inefficiencies. The DEIS, therefore, fails to substantiate the stated purpose for the Project.

B. The Purported Need for the Project is Inflated by Flawed Modeling.

Compounding its vague and unsupported statements of purpose, the DEIS fails to establish by any, let alone substantial, evidence that the need for the Project justifies its purported purpose. Initially, the DEIS states that "the Project is needed to accommodate growth." [Ch. 1, p. 1-27]. The DEIS, however, fails to establish either that growth has occurred, or the way in which the Project will accommodate that growth.

1. The DEIS' Projections are Based on Unrealistic Assumptions.

As a threshold issue, the DEIS' fundamental assumption, *i.e.*, that growth in operations will soon, if unaided by the Project, overwhelm the current system is entirely unsupported by the evidence in the DEIS. Indeed, the DEIS' evidence demonstrates that there has been a decrease in total operations since the DEIS base year, 2000. Therefore, the use of a pre-2001 base year for analysis constitutes a fatal flaw in the DEIS' analysis. Specifically most of the forecasting in the DEIS was completed pre-2001, and therefore assumes that air traffic has returned to pre-2001 levels. [Ch. 1, p. 1-20]. That assumption is not supported by the evidence. For example, there were more than 33,000 fewer combined NY and PHL TRACON operations in calendar year 2004 as compared to the two TRACONs' combined year 2000 operations. Further, operations have not exceeded the calendar year 2000 volume at either of the two TRACONs through the end of calendar year 2004. [*Source*: FAA OPSNET Instrument Operations: Period Report From 1999 to 2004, PHL and N90].

Second, the DEIS assumes that the impacts of September 11, 2001, will be short-term. [Appendix B, pp. B-17 - B-18]. The DEIS justifies these optimistic forecasts by referring to other instances where the aviation industry recovered from "system shocks" such as the Cuban Missile Crisis. [Appendix B, p. B-17]. However, the evidence demonstrates that the aviation

industry was devastated by the events of September 11th and that full recovery to pre-2001 levels of operations has not yet occurred.

Third, the DEIS assumes that increased passenger demand will automatically result in increased operations. [Appendix B, pp. B-14 - B-15]. However, to be more efficient, the airlines prefer higher load factors. The airlines, therefore, tend to maximize the operations currently scheduled before adding additional operations. Consequently, increased passenger demand does not always result in an increase in operations.

Fourth, the DEIS assumes that single and multi-engine aircraft do not fly under IFR. However, many multi-engine as well as a number of single engine aircraft fly under IFR. Because the DEIS excludes any non-IFR operations from its analysis, this assumption carves out a significant number of single and multi-engine IFR operations from the existing baseline of IFR operations, thus making the result of the Project appear beneficial, when, in fact, it may have accomplished nothing at all.

Finally, the DEIS states that, "by taking advantage of new technologies and responding to new trends, the Airspace Redesign will increase efficiency and the reliability of the air traffic system." [Ch. 1, p. 1-24]. However, no new technologies are introduced in the DEIS, and no new trends have been identified.

2. The Variables Selected in the DEIS Are Inappropriately Based on Pre-2001 Circumstances.

The variables employed in the DEIS are the same as the assumptions employed in the DEIS, and, therefore, do not accurately reflect the status of the aviation industry. The dependent variable used in the DEIS is the "annual number of passengers." [Appendix B, p. B-10]. The independent variables used are "those economic and demographic drivers that generate passenger demand such as population, employment and airline ticket prices." [Appendix B, p. B-10]. However, where the variables use data from the year 2000, the allegedly best year on record for the Study Area airports [Ch. 1, p. 1-19; Appendix B, p. B-10], the product of the analysis is artificially amplified by engorged baseline data.

3. The Data Used in the DEIS Analysis is Misleading.

The data used in the DEIS is similarly flawed where it: (1) employs data from the year 2000, an anomalous year for the aviation industry; (2) excludes nearly 80% of the regional airports from the analysis, although the operations at these airports can and will effect the Project; and (3) was not calibrated with actual data.

First, the DEIS is fatally flawed where it relies on data from the year 2000. With three exceptions, two of which are forecasts, the data sources relied on by the DEIS either predate the year 2000, or are from the year 2000. [Appendix B, pp. B-5 - B-7 (some are unspecified)]. This

data is now over six years old. Moreover, the year 2000 is the wrong year on which to base the DEIS modeling because it was one of the airlines' best years and therefore overstates operations as well as the impact of the inflated numbers of operations in the National Air Transportation System. [Appendix B, p. B-3].

In Table 4, the DEIS provides a passenger forecast summary for the years 2006, and 2011. However, all of these forecasts are based on year 2000 enplanement data. [Appendix B, p. B-11].[1] However, using the busiest reported year as the modeling baseline ultimately results in an inflated operations forecast.[2]

The data used in the DEIS is also problematic because at least 80% of the airports in the region were excluded from the DEIS analysis. The 21 airports identified were only used for noise analysis, 8 were used for the capacity analysis. The DEIS excludes from the noise analysis the traffic generated by 44 airports within the study area that have instrument approach procedures and 62 airports that do not have instrument approaches. The DEIS also excludes an additional 13 airports from the capacity analysis which results in 119 airports whose traffic is not considered in the DEIS analysis. The model also excludes over-flight aircraft and en route aircraft. As a result, the DEIS modeling is not representative of the actual air traffic in the area either before or after Project implementation.

The selection of some airports to be included in the modeling analysis, while others were excluded, is not adequately explained. First, the DEIS purports to limit its analysis to airports with jet operations. However, while the DEIS included Essex County Airport which has 17 daily operations, including 1 jet operation, the Allaire Airport, with 17 daily operations (8 jets) and the Danbury Municipal Airport, with 15 daily jet operations (2 jets), were excluded from the study. Other airports with jet operations were also excluded from the study. The DEIS states that fractional ownership in jet aircraft will increase at a rate higher rate than commercial aircraft. Accordingly, any airport capable of handling jet aircraft should have been included.

In addition, many of the region's airports were excluded because they are not IFR airports.[3] However, the DEIS fails to acknowledge that the Study Area is Class B airspace, and

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[1] "Airline Operations Forecasts -For each airport with scheduled airline service, current average day airline schedules for Friday, October 13, 2000 were culled from the [Official Airline Guide]." [Appendix B, p. B-11].

[2] "Overall, IFR traffic in the Study Area (including overflights) is expected to grow some 17 percent by 2006 to 3.15M annual operations. This growth is expected to continue at a reduced rate resulting in some 3.41M annual operations by 2011. This is a 27 percent increase over the baseline 2000 conditions." [Appendix B, p. B-14].

[3] "The decision to include or exclude airports was based on the fact that the Airspace Redesign applies to IFR operations. Airports without a significant amount of IFR

that all aircraft in this area are controlled. VFR aircraft in Class B airspace are required to receive services from the TRACON controllers. These aircraft therefore increase controller workload, occupy airspace, and must be considered in any plan that evaluates controller workload, system capacity and/or efficiency, particularly where the DEIS uses the number of radio transmissions and frequency changes as a measure of the Project's benefits. Also, an airport is not required to have an instrument approach or departure procedure in order to be a generating airport for instrument operation.

Furthermore, the criteria used to determine whether an airport qualified as an "IFR airport" is internally inconsistent in the DEIS. In one instance, the DEIS states that an airport qualifies as an IFR airport if it handles 20 IFR operations annually. [Ch. 1, p. 1-14]. In another instance, the DEIS states that an airport is an IFR airport if it handles 20 IFR operations daily. *Id.* This internal inconsistency is misleading and precludes any cogent analysis of the inclusion or exclusion of area airports from the DEIS analysis.

The DEIS data also omits general aviation and military aircraft. This omission is inconsistent with the DEIS' statement that, "the corporate aviation market, which is generally identified as business executive transportation via small jets and turboprop aircraft is expected to grow at a more robust rate than scheduled airline service. This is primarily due to the success and growth of fractional ownership programs where business or individuals purchase a portion of an aircraft and share its use with other owners." [Ch. 1, p. 1-18; Ch. 1, p. 1-24]. If general aviation traffic is expected to increase at the rates projected in the DEIS, then it is unclear why general aviation airports with less than 20 IFR operations per year, or 20 IFR operations per day, were eliminated from the capacity and noise analysis. Moreover, military aircraft, at a minimum, are present in the same air space and therefore should be accounted for.

In addition, the DEIS does not state whether its models have been calibrated with actual data. The DEIS simply states, regarding airport statistics, that "data were requested from selected airports on annual operations and passengers as well as connecting rates and other airline statistics." [Appendix B, p. B-7]. The DEIS does not clarify whether any such data has actually been obtained or if it has, whether or not it was used in the analysis.

4. The DEIS Modeling Results Are Therefore Unrealistic.

Based on the foregoing methodological errors, the resulting DEIS projections are unrealistic. Given the current runway, taxiway, terminal, and gate infrastructure at JFK, LGA, EWR and PHL it is unlikely that the number of instrument operations projected for the year 2020 can be accommodated. [Ch. 1, p. 1-21]. For example, JFK would have to handle 4,475 operations per day or 186 operations per hour to accommodate the projected 1,633,421 operations. LGA and EWR projections are equally unrealistic.

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traffic were not modeled because there will be little or no change to their operations as a result of the Proposed Action." [Executive Summary, p. ES-9].

The DEIS model results also mask the Project's actual impacts. First, the DEIS fails to disclose the Project's impacts because over-flight aircraft and en route traffic were excluded from the TAAM model. Unless and until these operations are analyzed, the full impact of the Project is unknown. Second, although the DEIS acknowledges the rate at which general aviation is growing, the DEIS methodology excludes non-IFR operations. If only IFR traffic activity at 21 airports is evaluated, the true impact of those operations is reduced because VFR traffic is not considered. The introduction of VFR traffic may cause extended traffic patterns and increased noise and aircraft overflight impacts. The exclusion of VFR traffic can result in an apparent reduction in delays which, in turn, artificially inflates the perceived benefit of the Project. The exclusion of VFR traffic can also reduce the impacts of the Project at individual airports, thereby making the Project appear to be less environmentally intrusive. For this reason, the analysis of impacts and improvements should consider all traffic. The exclusion of any segment will artificially inflate or deflate the impacts and benefits of the Project.

Finally, much of the Study Area is Class B airspace which requires all aircraft flying within that airspace to be in contact with and under the supervision of air traffic control. The elimination of VFR aircraft significantly inflates the efficiencies gained by the proposed actions by reducing the number of aircraft presumed to be in the airspace.

C. The Project Will Not Meet the Purported Need to Reduce Delay.

The DEIS states that the Project is also needed to reduce delays in the Project area. [Ch. 1, p. 1-27]. The evidence in the DEIS, however, demonstrates that the majority of delays suffered in the Project area are caused by factors that are not addressed by the Project, such as controller employment issues, weather, scheduling, sequencing, routing, and in-trail issues.

First, the fundamental problem of delay upon which the "need" for the Project is predicated, may not exist. The sudden jump in delays in 2004, categorized in the DEIS as due to "other" or "center volume" may have been a result of controller labor disputes entirely unrelated to airspace congestion. The evidence shows that while there were only 285 delays in 2001, 158 in 2002, 174 in 2003, there was a sudden jump to 5,402 in 2004 even though operations were down. The FAA has instituted a number of initiatives in the employment area [personnel policies] that were not well-received in the past two years. One should not assume that these delays are due to some inefficiency in the design of the airspace that functioned with few delays through 2003 and then suddenly became inefficient in 2004. The evidence in the DEIS illustrates that the increase in delays used to justify the Project is not due to airspace inefficiencies.

Also, weather is a major cause of aircraft delay in this airspace. According to FAA OPSNET data for the years 1999-2004, LGA was ranked third in total delays with 171,826 delays. Weather was the main cause of delay, accounting for 105,935 or nearly 62% of all delays. The DEIS acknowledges this, and states that among the major causes of delay in the study area are severe weather conditions that occur during periods of heavy traffic, reducing flexibility for aircraft re-routing, and creating poor access to departure routes at LGA and HPN.

[Ch. 1, p. 1-24]. Severe weather during periods of heavy traffic reduces the flexibility for aircraft rerouting because experienced pilots will avoid routes experiencing severe weather. Moreover, severe weather conditions limit all access to departure routes. Weather delays are unavoidable, and it is not clear how they will be mitigated by the Project.[4]

Extant evidence also demonstrates that many challenges in today's air traffic system are a result of airline scheduling practices that often result in several aircraft being scheduled to arrive or depart at the same time. The airlines are often responsible for many of the inefficiencies which impact the air traffic system. It would appear that the system users have an obligation to refine their schedules and distribute demand throughout the day in order to make the airspace more efficient. However, historically, as soon as air traffic management improvements have been made, the airlines have again over-scheduled so that the improvements are negated. It is unclear how this Project will mitigate delays caused by airline scheduling.

Sequencing and en route requirements also contribute to delays in the Project region. The DEIS states that "aircraft departing from the NY Metropolitan Area to the Washington Metropolitan Area are sequenced onto the same routes as long-haul destinations (e.g. Los Angeles)." [Ch. 1, p. 1-22]. This, however, is not unique to New York, but rather, is the same with every major airport in the nation. The DEIS also states that, "entering and exiting holding patterns in en route airspace are inefficient because more restrictive en route separation rules are used and require extensive coordination." [Ch. 1, p. 1-24]. Exiting a holding pattern is easier if it is accomplished in the terminal area; however, it is easier for the en route controller to put aircraft into a holding pattern. The coordination between the two controllers is basically the same regardless of who controls the holding pattern.

The DEIS also identifies in-trail restrictions as a cause of delay, particularly that westbound traffic from the NY/NJ/PHL Metropolitan Area is frequently delayed as a result of Chicago O'Hare International Airport related in-trail restrictions. [Ch. 1, p. 1-24]. This airspace realignment project, however, will not resolve the impact of in-trail restrictions on airport flows.

In summary, the basic justification for the Project, the existence of excessive delay, is suspect and the methods proposed to mitigate the suspect delay, even if it did exist, would not serve the purpose and, thus, not meet the stated need.

II. THE DEIS DOES NOT ANALYZE ALL REASONABLE ALTERNATIVES

The alternatives analysis is the "heart of the environmental impact statement." 40 C.F.R. § 1502.14. The DEIS alternatives analysis is deficient where it: (1) utilizes an improper future no action alternative; (2) does not provide enough data, or provides misleading data, to evaluate the proffered alternatives; and (3) fails to analyze other reasonable alternatives.

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[4] Other causes of delay at LGA during this period were caused by equipment (1,818 delays), runways (13,186 delays), and other unspecified causes (17,186 delays).

A. The Future No Action Alternative is Internally Inconsistent.

CEQ Regulation 1502.14(d) requires the alternatives analysis in the DEIS to "include the alternative of no action." "This analysis provides a benchmark, enabling decision-makers to compare the magnitude of environmental effects of the action alternatives." (40 Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026 (1981), Question 3. Here, the DEIS states that "[t]he airspace will operate as it did during existing or baseline conditions (2000)" with the exception of two procedural changes. [Ch. 2, p. 2-13]. However, the Noise Modeling contained in Appendix C states that, "Under the Future No Action Alternative, the airspace operates as it did during **2002**, with a few improvements included that are independent of the large scale airspace redesign proposals." [Appendix C, Section 4, p. 4-1] As a result, it is unclear whether the DEIS Future No action Alternative is based on conditions in the year 2000 or 2002. The DEIS is comparing apples and oranges, and this internal inconsistency accordingly prevents the public from ascertaining the true impacts of the alternatives.

B. The DEIS Alternatives Analysis Is Not Supported By Adequate Data.

The DEIS fails to provide enough data to enable the public to evaluate the Project alternatives. The DEIS is so vague in describing routes, altitudes and numbers of operations on the routes, that it is impossible to determine whether or not the Project will result in impacts. The increase in operations forecast by the DEIS certainly has the potential to impact all of the environs surrounding the Study Areas' airports.

First, the changes to major traffic flows are only shown to just beyond the gates/posts. "Changes to traffic flows further out are not shown." [Ch. 2, p. 2-10]. If, in fact, traffic flows beyond the gate posts were not modeled to determine whether or not they could efficiently integrate with the en route air traffic system, the Project's benefits are inflated. This is because the en route air traffic system requires aircraft separation standards that are greater than the terminal standards. Terminal facilities have the ability to generate more traffic to the center airspace than the center can accept. Departing aircraft in the terminal environment, as an example, can be three nautical miles in trail (disregarding altitude or lateral separation). When the aircraft transition to center airspace, they must be a minimum of five nautical miles in-trail. If the evaluation or modeling effort is terminated prior to achieving the five nautical mile separation required for the center environment, the results are not reflective of the actual acceptance rate of the center. Failure to evaluate the alternative to determine whether or not the center can accept all of the aircraft that the terminal can generate would produce a much higher capacity or efficiency rating than is possible in the live environment.

Second, altitudes are not specified for propeller aircraft or for jet departures. [*See, e.g.*, Ch. 2, pp. 2-24 - 2-25]. The turn radius is also unspecified, and, therefore, there is no indication over which areas those aircraft will fly. This is particularly important information because low flying propeller driven aircraft have the potential to generate a significant amount of noise.

Third, the maps generated ostensibly to illustrate the areas impacted by the various alternatives actually obscure the alternatives' impacts. For example, Figure ES.2 purportedly shows the 2011 Modifications to Existing Airspace Alternative Change in Noise Exposure. However, the scale of this map is so great that the noise impacts on thousands of residents appear as tiny, insignificant dots. The impacts identified in Figures ES.3, ES.4, and ES.5 are similarly obfuscated. At minimum, larger scale maps denoting geographic boundaries should be provided for each of the impacted areas.

Fourth, the analysis of the alternatives fails to address the major causes of delay in the airspace, and therefore does not correlate with the Project's purpose and need. In particular, the Project only minimally addresses changes that can be made to terminal airspace, where most of the delays occur and noise impacts are the greatest. Nor does the alternatives analysis address weather at the destination airport or in the en route system, overlapping routes to destination airports (*i.e.*, flights that transit the NY/NJ/PHL area) and ground delays due to the inability of traffic to enter the overhead stream. It does not address factors such as inadequate infrastructure at destination airports, multiple flights from area airports to the same destination, bunching of flight schedules and flow control implemented by airports not in the NY/NJ/PHL area that cause ground delays and add to congestion.

Finally, there is no data to support the DEIS' dismissal of the Ocean-Routing alternative. In short, the Ocean-Routing alternative is dismissed because it does not meet the Project's purpose and need, yet is retained for detailed analysis. This indicates that the alternatives not considered in the DEIS were eliminated before a detailed analysis could be conducted. Each of the alternatives eliminated from further study, with the exception of Change in Airport Use, have the ability to collectively meet the purpose and need of the Project. The cumulative benefits gained from the eliminated alternatives may have the potential to exceed the benefits of the majority of the Project without the environmental effects. In short, all alternatives should be modeled, and the results of that modeling should determine whether or not an alternative should be eliminated.

C. The DEIS Fails to Analyze Other Reasonable Alternatives.

"Reasonable alternatives are those that are practical or feasible from the technical or economic standpoint and using common sense rather than simply desirable from the standpoint of the applicant." (40 Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026 (1981), Question 2(a)). The existence of "a viable but unexamined alternative renders the EIS inadequate." Muckshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 814 (9th Cir. 1999). Here, the DEIS fails to analyze several reasonable alternatives.

First, the DEIS finds that improvements to airport infrastructure are not a reasonable alternative because they "would do nothing to address the efficiency and reliability of the airspace structure nor would they accommodate growth or mitigate delays in the air...or permit

the FAA to take advantage of emerging technologies for controlling air traffic." [Ch.2, p. 2-3]. To the contrary, improvements in airport infrastructure have the strong potential to improve system efficiency and reduce delays. As illustrated by the exhibits in Chapter 1, airport improvements could reduce the delays attributed to runway, equipment and other causes. There is a direct link between the number of aircraft on the ground and the amount of aircraft delay at the airport. [Ch. 1, p. 1-24] The number of runways and taxiways, separation standards, and general airfield layout directly impact the amount of aircraft that can land or take off. If there are more aircraft waiting to land than the airport can accommodate, they are forced into holding patterns. If there are more aircraft waiting to take off than the airport can accommodate, they are delayed at the gate or on a taxiway. As the DEIS states in Section 2.5.2, "ideally, the airspace route structure can support the maximum capacity of the runways, thus maintaining a steady stream of aircraft in and out of the airport." [Ch. 2, p. 2-13]. Thus, the DEIS acknowledges the strong and reciprocal relationship between "the maximum capacity of the runways" and the efficacy of changes in the airspace route structure. Nevertheless, the interactive relationship of these two variables remains unanalyzed.

Notably, the DEIS also fails to consider the cumulative benefits of congestion management alternatives or technology advancement in addressing the aviation problems in the project area. The cumulative impact of all efficiency enhancing options should be evaluated to determine the amount of improvement that could be gained before any modifications to airspace or procedures are undertaken that will have a detrimental impact on the underlying land uses.

III. THE DEIS DOES NOT FULLY ANALYZE THE PROJECT'S NOISE IMPACTS.

The modification of air traffic routes will move the noise and aircraft over-flight impacts throughout the study area if implemented. The DEIS analysis, however, fails to address the full scope of the Project's noise impacts, and fails to provide mitigation even for noise impacts that are identifiable.

A. The DEIS Noise Analysis Is Not Supported By Its Data.

The DEIS does not provide data sufficient to enable evaluation of the noise impacts of the Project and its alternatives. First, the DEIS does not identify the altitudes along the arrival and departure flight paths, or the number of aircraft using the routes. Without this information, an analysis of impacts is difficult if not impossible. Specifically, the DEIS states that "for simplicity sake, flows to and from the airports are discussed and illustrated in a two-dimensional manner" and "the altitude and number of aircraft in a particular flow are not discussed." [Ch. 2, p. 2-11].

Second, the DEIS states that "the width of the flows shown in the graphics does not indicate the number of aircraft in that flow." [Ch. 2, p. 2-11]. As the graphic descriptions in the DEIS illustrate, however, the departure and arrival gates can be several miles wide which would allow several aircraft to operate on each route side by side and in-trail. By not including the

altitude of aircraft, it is not possible to determine whether or not they will impact areas under the flight tracks.

Third, the DEIS also fails to identify the number of aircraft that will use that flow and does not depict the location of the flight tracks in sufficient detail to determine where the actual impacts will occur. In addition, because the DEIS fails to include in the model data concerning the number of aircraft on these routes, no credible conclusion can be drawn as to whether any of the alternatives accommodate future growth.

Fourth, the DEIS does not provide any information about the Project's gates and posts. The DEIS states that, "the gates, posts, and flows are described to the degree necessary...the specific gates and posts described in this document are not necessarily the same as those used for the purposes of controlling air traffic." [Ch.2, p. 2-11]. In place of utilizing the actual proposed location of proposed gates and locations, the DEIS states that "the gates and posts found in this document were developed specifically to describe and illustrate the various airspace alternatives." [Ch. 2, p. 2-11]. If the specific gates and posts in the DEIS are not those used for controlling air traffic, it is impossible to evaluate the impacts of the proposed airspace realignment. The actual location of the proposed gates and posts should have been used in all examples in order for the DEIS analysis to properly address and evaluate the actual planned actions instead of fictionalized substitutes.

Further, the DEIS' capacity modeling, and the noise analysis based on it, excludes consideration of vitally important data concerning conditions in a representative baseline year, VFR traffic, LGA night flights, and air traffic impacts from the remainder of the 119 area airports, as well as all military traffic. As a result, less than 20% of the area airports are considered in the capacity analysis, and the resulting conclusions obscure the Project's noise impacts.

B. <u>The Modifications to Existing Airspace Alternative and Integrated Airspace Alternative With ICC Create Impacts Not Reported Or Analyzed in the DEIS</u>.

The Modifications to Existing Airspace Alternative and Integrated Airspace Alternative with ICC create impacts over previously unaffected communities and specifically those along the Long Island Sound. However, the DEIS does not provide enough information to ascertain exactly what those impacts will be. Because these communities were not previously impacted, and thus not planned for airport compatibility, the impacts on these communities should be reviewed in particular detail.

The Modifications to Existing Airspace Alternative, similar to the Integrated Airspace Alternative with ICC, introduces additional departure headings which include a more direct LGA Ocean Departure procedure. [ES, pp. ES-3 - ES-5]. The benefits and impacts to the underlying communities, however, is entirely unanalyzed by the DEIS. To the contrary, the DEIS finds that

the impacts of this alternative are minor and that there will be no noise increases around LGA and JFK. [Ch. 4, p. 4-8; p. 4-10].

Additional departure headings, however, mean that the aircraft and noise impacts will be spread over a wider area. In areas underlying current departure routes, the noise and aircraft over flight impacts may be reduced. However, those areas that were not previously impacted would be impacted by "fanning" departures. Specifically, the introduction of additional departure headings from LGA Runway 4 and the elimination of the 055 degree over the water route will have significant impacts over a large area north and west of LGA.[5] Additional flights and noise impacts over residential areas can result in diminished property values as well as cause some development projects to become incompatible with airport operations.

The DEIS, however, fails to provide adequate information about the new "fanned" headings. First, the depictions of the proposed headings shown in Figure 2-11, referenced on Chapter 2, p. 2-25, are deceiving in that they do not adequately display the width of the flight track disbursement over the area north and west of LGA that will result from the multiple departure headings that will be used. The DEIS does not identify the headings to be used, nor is there any altitude information provided regarding the departure climb profile. The DEIS fails to provide any data regarding the number of aircraft that will be routed over the gates nor does it indicate whether or not aircraft from other airports will be departing though these gates. Therefore, the DEIS fails to provide sufficient data to make a credible determination concerning the impacts of the changes proposed for any one airport, let alone the cumulative impacts of the airspace changes proposed for several airports.

Of particular concern, however, is the movement of the eastern most flight track from LGA that is routed through the East Departure Gate from over the Long Island Sound, as shown on Figure 2.3, to over the land along the western shore of the Sound. Departing aircraft are very noisy and the movement of the route from over water to over land has the strong potential to adversely impact the communities along the western edge of Long Island Sound. The addition of multiple (unspecified) departure headings for all the departure gates from LGA will widen aircraft over-flight areas and can impact communities that are located several miles away from the airport that were not subject to aircraft noise and over-flights as defined under the Future No Action Airspace Alternative.

Specifically, under the Future No Action Alternative, aircraft departing Runway 4 for the North Departure Gate turn left. The modifications to the existing airspace (Figure 2.11) add additional departure headings which will likely spread the routes flown by aircraft en route to the North Departure Gate further into the residential areas immediately north of the airport. As

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[5] As the DEIS identifies, "aircraft departing from Runways 22R and 4L at EWR, Runways 9L/R and 27L/R at PHL, and Runway 4 at LGA would use new departure headings. Essentially, this means that ATC would be able to direct takeoffs into three or four departure paths rather than the previous one or two." [ES, p. ES-17].

subsequent departure aircraft are "fanned" to the north gate, each succeeding departure will proceed further north in order to turn left and remain outside or in trail of the previous departure. It also appears that the fanning of departures in the airspace modification alternatives spreads the noise in aircraft overflight impacts from aircraft departing in a north configuration at LGA over a much wider area. The exhibits in Figure 2.11 and 2.19 clearly show the movement of routes from over the water to the land and show the wider departure flow with the modified procedures.

Further, Figure 2.12 shows that the EWR departure gates are co-located with the departure gates for LGA. This results in the same route being used for multiple airports which is not necessarily evident when an interested party is evaluating or looking for impacts generated by changes in the airport closest to their residence or area of concern. For instance, the East Departure Gate for EWR shows that aircraft are routed over and along the shoreline on the west side of Long Island Sound. Aircraft on these routes are combined with the LGA traffic destined for the LGA east gate and result in a large number of aircraft flying over residential areas at unspecified altitudes. Since the LGA east gate route was moved from over the water to over the land, the areas underlying these routes will see an increase in aircraft overflights and an increase in noise.

The Modifications to Existing Airspace Alternative also includes a shift in the JFK, LGA, TEB, and EWR South departure gate, and a shift of the PHL East departure gate to the East. The DEIS, however, does not explicitly identify the areas that will be impacted by this shift. The DEIS should clearly identify the impact of the new route by overlying maps with enough detail to determine the areas that will be impacted.

In summary, as an apparent result of these modifications, all of the locations along the western short of Long Island Sound may be impacted by the Project in a hitherto unspecified and unanalyzed manner. Absent such specification and analysis, the DEIS is inadequate.

C. The DEIS Fails to Offer Any Mitigation of the Project's Noise Impacts.

NEPA requires that an EIS discuss the steps that can be taken to mitigate adverse environmental impacts. Specifically,

> The requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of the Act and, more expressly, from CEQ's implementing regulations. Implicit in NEPA's demand that an agency prepare a detailed statement on "any adverse environmental effects which cannot be avoided should the proposal be implemented," 42 U.S.C. § 4332(C)(ii), is an understanding that an EIS will discuss the extent which adverse effects can be avoided. [Citation omitted]. More generally, omission of a reasonably complete discussion of possible mitigation measures would undermine the actionforcing

function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351-352 (1989).

The DEIS offers no mitigation measures for either the Project's disclosed or undisclosed impacts, preferring instead to wait for public and agency comment on the DEIS. [ES, p. ES-18]. The DEIS, therefore, fails to comply with NEPA's command that mitigation measures be discussed and evaluated.

Moreover, many of the Project's impacts can and should be entirely avoided by maintaining the over-the-water departure for Runway 4 at LGA without any change or compromise. However, without waiving their objections to the absence from the DEIS of the over-the-water departure for Runway 4 at LGA or other such mitigation measures, the Sound Shore Communities and WRAIN recommend that the Project incorporate, at minimum, the following measures, to compensate the Sound Shore Communities and WRAIN for the new noise impacts that are revealed, but remain unanalyzed, in the DEIS:

(1) issue a written directive that requires the use of the LDA approach when LGA is operating Runway 22, potentially with an off-set, stating that "The LDA approach for LGA Runway 22 is designated as the primary approach during periods when the ceiling is at or above 1000 feet AGL and the visibility is at or above 3 nautical miles."

   (a) provide controller/supervisor briefings regarding the use of the LDA directives;

   (b) monitor controller/supervisor compliance with the LDA directives;

(2) develop and implement an ILS approach, to be used when the weather does not permit use of the LDA, that is off-set from the Runway 22 centerline, and places the ILS final approach course off shore over Long Island Sound;

(3) an RNAV-GPS approach to Runway 22 that uses off shore navigation points which would place the final approach course over the water;

(4) a published visual approach, using existing topographical information or by installing visual equipment such as lights on markers in and around the Sound, that will keep aircraft off shore to the extent possible during good weather conditions;

(5) increase in the altitude at which aircraft turn on final approach; and

(6) increase in the crossing altitude at YOMAN by a significant amount.

IV. THE DEIS FAILS TO ANALYZE THE PROJECT'S CONNECTED ACTIONS.

The Project here is designed to accommodate growth in the NY/NJ/PHL Metropolitan Area, but fails to analyze either the groundside or non-jurisdictional airspace actions that will be necessary to accommodate such growth. Connected actions "are closely related and therefore should be discussed in the same impact statement." 40 C.F.R. § 1508.25(a)(1). Actions are connected if they: (i) Automatically trigger other actions which may require environmental impact statements; (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously; and (iii) Are interdependent parts of a larger action and depend on the larger action for their justification. *Id.*

The DEIS predicts an increase in traffic at the Project area airports, specifically 223,000 additional operations using area airports in the next five years [Ch. 1, p. 1-22], and proposes the Project as a necessary predicate to accommodate that growth. Assuming, for the sake of argument, that such growth will occur (even though the DEIS fails to support that conclusion as set forth above) the DEIS also fails to analyze which airports will handle the increased traffic, the facilities needed to accommodate this growth, or the impact of facilities development. Instead, the DEIS states that, "the Proposed Action does not include any physical changes or development of facilities, nor does it require local or state actions." [Ch. 1., p. 1-25]. It is axiomatic, however, that: (1) if the growth actually occurs; and (2) if the Project is successful in helping the airports to accommodate the growth then, at some point, additional groundside facilities will also be required to accommodate the growth enabled by the Project.

Moreover, the DEIS indicates that the majority of actions associated with a regional realignment of airspace are connected and must proceed simultaneously. For instance, in order to "fan" departures, additional routes must be defined which may result in movement of arrival routes or changes in altitudes along those routes.

Finally, the DEIS demonstrates that traffic at Chicago International can affect air traffic as far away as the NY/NJ/PHL area. [Ch. 1, p. 1-24]. There are few if any changes to major traffic flows that do not result in impacts outside of the affected area. However, the DEIS fails to analyze any potential connected actions in other airspace that may be required to accommodate the realignment of the NY/NJ/PHL airspace.

V. THE DEIS FAILS TO ANALYZE THE PROJECT'S AIR QUALITY IMPACTS.

One of the Project's primary purposes is to increase efficiency so as to meet the needs of an increase in operations of 223,000 in the next five years [Ch. 1, pp. 1-27; 1-22]. Moreover, as set forth above, this projected increase in air traffic must inevitably lead to an increase in groundside facilities to accommodate the concomitant increase in aircraft ground traffic and

associated Ground Support Equipment. The DEIS nevertheless lists air quality as a resource category evaluated for potential impacts, but states that further analysis was not deemed necessary and that the Project is exempt from the Conformity Rule. [ES., p. ES-10; Ch. 4, p. 4-59]. The DEIS cannot have it both ways. Either the Project will result in increased operations, and thus increased ground traffic; or, the Project will fail to increase capacity and will accordingly fail to meet its stated purpose and need. The DEIS provides no data or analysis upon which the determination of which option applies may be made.

VI. CONCLUSIONS.

For all the reasons stated above the Project's environmental impacts fails to comply with NEPA. As a consequence, the Sound Shore Communities and WRAIN request that: (1) the DEIS, and, where necessary, the Project be revised, to cure the existing noncompliance; (2) if full compliance is attainable, the DEIS be recirculated for additional public comment on the revision; and (3) if full compliance is not attainable, the Project be withdrawn. Any further action on the current DEIS, or implementation of the Project will not only visit excessive and unacceptable noise and planning impacts on the Sound Shore Communities and WRAIN, but unreasonable impacts on the region as a whole.

The Sound Shore Communities and WRAIN thank the FAA for the opportunity to comment, and for its anticipated cooperation in this matter.

Sincerely,

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