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## Attachment A

### FEIS Comments and Responses

The FAA received six comment letters on the FEIS. Although not required, the FAA reviewed the comments and to the extent the commenter raised a substantive new issue, the FAA herein provides a response.

Two of the comment letters were from federal agencies – the U.S. Environmental Protection Agency (USEPA) and the U.S. Army Corps of Engineers. One state agency – the Pennsylvania Department of Environmental Protection (PA DEP) – also provided a comment letter to the FAA. It is important to note that extensive coordination occurred with federal and state agencies during the EIS process to define protocols, or analysis methods, and to discuss environmental analysis results.

As an example, the FAA coordinated with the USEPA and PA DEP extensively during the development of the EIS' air quality analysis. In addition to the *Air Quality Assessment Protocol* prepared and circulated in February, 2006; the FAA held a series of coordination meetings and conference calls with the USEPA Region III and PA DEP on June 9th, July 23rd, and August 27th in 2008; September 30th and November 17th in 2009; and February 23rd, March 24th, and June 4th in 2010. The 2008 pre-DEIS meetings previewed the EIS and General Conformity analysis methods and results. The 2008, 2009, and 2010 sessions were all used to provide the USEPA and PA DEP with (a) recurrent opportunities to review and comment on updates to the study, any technical adjustments to the analyses, and the preliminary results of the work; (b) reach inter-agency consensus on the approaches and issues; (c) and allow the FAA to complete the EIS Air Quality analyses and the General Conformity Determination in a manner mutually acceptable to the FAA, USEPA, and the PA DEP. None of the agency representatives in attendance objected to methods or results during these meetings.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

September 27, 2010

Ms. Susan McDonald  
Harrisburg Airports District Office  
Federal Aviation Administration  
3905 Hartzdale Avenue, Suite 508  
Camphill, PA 17011

RE: Philadelphia International Airport Capacity Enhancement Program Final Environmental  
Impact Statement, August 2010 CEQ # 20100334

Dear Ms. McDonald:

In accordance with the National Environmental Policy Act (NEPA) of 1969 and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) offers the following comments regarding the Philadelphia International Airport (PHL) Capacity Enhancement Program (CEP) Final Environmental Impact Statement (FEIS). Based on our review of the Draft EIS, EPA rated the environmental impacts of both build alternatives in the DEIS as EC (Environmental Concerns) and the adequacy of the impact statement as 2 (Insufficient Information).

According to the FEIS, Alternative A was chosen as the preferred alternative since it meets the Purpose and Need by adding capacity and significantly reducing delay in all weather conditions in the long term; allows greater flexibility of construction phasing, or scheduling; maintains a crosswind runway; minimizes disruption of local surface transportation and does not result in construction impacts to Interstate 95; has less average annual delays during the prolonged construction period; significant environmental impacts can be avoided or minimized with mitigation. Alternative A will result in the loss of approximately 82 acres of wetlands (46.7 of these acres are within the former Philadelphia Water Department sludge lagoons and federal jurisdiction has not been determined), 23 acres of waterways, and 24.5 acres of the Delaware River and will require construction in a FEMA-mapped floodplain. It will also directly impact 534.1 acres of upland grassland (410.1 mowed and maintained and 124.0 acres of old field), and 68.6 acres of upland woodland which is located along the shoreline of the Delaware River. This alternative would also increase the amount of pavement by 122 acres. The FEIS states that environmentally there is no clear distinction between the two build alternatives but Alternative A would result in an average delay of 5.2 minutes in 2025 as compared to 19.3 minutes under the No-Action Alternative. Construction for the CEP was originally scheduled to begin in 2008 and be completed in 2020 after a 13 calendar year construction period. It is now projected that

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construction would start in 2013 and be completed in 2025

Alternative A would have five runways connected by a redesigned and more efficient taxiway system. Runways 8-26, and 9R-27L (renamed) would be extended and a new runway 9R-27L would be constructed. This alternative reconfigures and upgrades the existing terminal complex and include relocation of the UPS facility and part of the USACE Fort Mifflin Dredge Disposal Facility, closure of Hog Island Road, the Sunoco Hog Island Warf would be closed and its functions replaced by extending the existing Sunoco Fort Mifflin Pier.

According to the EIS minimum mitigation goals for Alternative A would include: 81.7 acres of vegetated wetland, of which 66.1 acres would be palustrine; and 15.6 acres would be riverine (freshwater tidal). Replace lost functions of state-listed endangered species habitat, flood flow alteration, sediment/toxicant retention, and fish and shellfish habitat (riverine), replace 23.1 acres of non-tidal waterways providing of state-listed endangered species habitat, flood flow alteration, sediment/toxicant retention, and fish and shellfish habitat, replace lost functions associated with approximately 24.5 acres of Delaware River intertidal and subtidal habitats. Aquatic mitigation must comply with the April 10, 2008 40 CFR Part 230 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. It should also be noted that mitigation ratios may vary depending on the type of mitigation proposed and the type of impact. The project team should work closely with state and federal agencies to develop an acceptable mitigation package to address all environmental impacts, including those to listed species and their habitats. Mitigation commitments should be documented in the Record of Decision.

F-101-001

F-101-002


F-101-003

EPA is also concerned about the impacts to the Delaware River. The FEIS does not provide information on the type of impact and construction methods for the work in the Delaware River. Impacts may vary depending on the construction design. NOAA's National Marine Fisheries Service documents some of these concerns in their letter to FAA dated July 26, 2010 regarding Essential Fish Habitat. According to the letter, the CEP will adversely affect the spawning success and the quality for the nursery habitat of residential anadromous fish species and thus directly, indirectly, and cumulatively, impact the EFH for bluefish by reducing the availability of prey. Temporary and permanent impacts should be avoided and minimized.

F-101-004

In general the DEIS and FEIS lack sufficient detail to evaluate potential impacts in several areas. EPA continues to have the following environmental concerns regarding this project. We disagree with the position stated in the EIS that Alternative A would have a minor impact on common wildlife species using these habitats, and that the loss of intertidal emergent wetlands in the project area would not result in a severe loss of this critical habitat given the close proximity and abundance of similar habitat in the John Heinz National Wildlife Refuge. Given the urban setting of the airport, aquatic habitats and habitat diversity are very important to support the flora and fauna of the area. In addition, since there are compatibility issues with wetlands being constructed in the vicinity of the airport, significant functions may be lost to the area and other habitats may be further degraded. It is very important that impacts be avoided and minimized.

Enterprise Avenue Landfill Site, which lies underneath Runway 8-26, was formerly used for the disposal of incineration residue, fly ash, and bulky debris. In 2002, the City of Philadelphia and EPA entered into an Administrative Order by Consent (AOC) that requires the

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## F-101-001

As stated in Section 10.6 of the ROD, aquatic mitigation will comply with the April 2008 Final Rule on Compensatory Mitigation. It is understood and reported in both the FEIS (Section 6.6.3) and the ROD (Section 10.6) that compensatory mitigation for wetland ROD impacts will be required at a ratio of *at least* 1:1. The City of Philadelphia, as the entity responsible for final design and permitting of the CEP, will work closely with state and federal agencies to develop an acceptable mitigation package for impacts to aquatic resources and state-listed protected species. The FEIS, in Chapter 6, outlines the mitigation measures that FAA requires the City to implement.

## F-101-002

Construction in the Delaware River required for portions of new Runway 9R-27L and for the extension of the Sunoco Pier was described in Section 5.11.5 of the FEIS. Based on discussions with the NMFS subsequent to the FEIS, the construction method for the Runway is described in more detail in Section 10.6 of the ROD. At this time it is expected that the area of fill will be enclosed with steel sheeting (a cofferdam) that will be supported by steel piles. The area will be dewatered and excavated and a solid fill structure will be constructed behind the sheeting, which will be left in place. Sunoco is responsible for extension of its Fort Mifflin Pier and the construction method (solid fill, cofferdam or pilings) will be determined by Sunoco for the Pier as part of the final design and permitting process. Detailed information on the construction methods, impacts, and mitigation for any temporary construction impacts will be developed by the City and Sunoco and provided in the respective Section 404 and State permit application packages.

## F-101-003

Subsequent to the filing of the FEIS, FAA has had extensive consultation with NMFS concerning impacts to essential fish habitat. This consultation



City to treat and monitor the groundwater contaminants at the Enterprise Avenue Landfill Site (Site). In 2008, this enforcement document was modified to allow the City to study the groundwater. The groundwater extraction wells were temporarily shutdown, additional monitoring wells were installed, and the City is currently monitoring the groundwater to evaluate its natural degradation. The study is expected to take a few years to complete.

EPA is concerned about the impact of the proposed action to the monitoring wells and groundwater treatment at the Site. For example, the EIS discusses that groundwater monitoring wells, installed to evaluate known releases, would be destroyed as part of the proposed construction of Alternatives A and B; unremediated releases may be inaccessible for continued monitoring and/or remediation; and the proposed alternatives would likely require the treatment system to be shut down temporarily, creating a period of time in which the release would not be actively remediated or hydraulically controlled.

Given that the evaluation and remediation of the groundwater are requirements pursuant to the AOC between the US EPA and the City, any deviation to the approved work plan and/or destruction of groundwater monitoring wells may not occur without pre-approval by EPA of a revised work plan in accordance with the terms of the AOC. Accordingly, any exacerbation or release of hazardous substances in the groundwater as a result of the airport enhancement project is subject to enforcement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Therefore, the impact on the Enterprise Avenue Landfill Site remedy and a detailed plan to address the protectiveness of the remedy must be provided.

**F-101-005**

Because of the increased loading on the landfill, the EIS states that it is likely that both Alternatives A and B would require reconstructing the landfill cap; the additional weight from the fill from both Alternatives A and B may also cause the migration of groundwater contamination from the landfill containment system; and the current remediation system will need to be modified or replaced to accommodate the added height of the ground surface. Based upon these statements, the airport enhancement project anticipates that the Enterprise Avenue Landfill Site landfill cap will be affected. The effectiveness of the cover cannot be impaired and any Site activities must take measures to preserve the effectiveness of the cover, including during any construction. A detailed plan to address the protectiveness of the remedy must be provided. Additionally, any exacerbation or release of hazardous substances in the groundwater as a result of the disturbance of the landfill cap is subject to enforcement under CERCLA. Please note that additional detailed comments are presented in the enclosed attachment.

EPA would like to again emphasize the necessity that any potential future revision to the landfill cover and groundwater system will require coordination, consultation, and approval by EPA. Renegotiation of the AOC and the Response Plan will also be necessary. This is required before any work begins on the airport enhancement project. EPA would recommend having a meeting with all involved parties to discuss the FAA and City plans to address any necessary modification or potential impact to the remedy.

In general, the air quality modeling analysis performed by FAA did not, as was previously agreed upon, utilize the requisite 5 years of meteorological data when modeling the no action and preferred alternative; FAA continues to present an analysis which is based on one conservative year and continues to decline to model either construction related or air toxic emissions that will

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is documented in Attachment D of the Record of Decision. Measures required to minimize and mitigate for the fisheries habitat functions provided by the filled areas within the Delaware River are documented in Section 10.8 of this ROD, will be developed by the City as part of the final design and permitting process and will be provided in the Section 404 and state permit application packages.

#### **F-101-004**

FAA recognizes EPA's concerns about potential adverse impacts on wildlife habitat. While FAA disagrees with EPA about the potential significance of the habitat impact for the reasons summarized below, we have conditioned approval of this project upon measures to avoid and minimize impacts to wetlands to the extent practicable. Although some portions of the Airport property provide habitat for common wildlife species, the Airport is adjacent to the Heinz National Wildlife Refuge, which contains approximately 1,200 acres of riverine intertidal habitat, upland habitat, and freshwater wetland habitats. The loss of 15 acres of riverine intertidal habitat will not result in a significant impact to the habitat diversity of the area, nor will it result in the loss of species.

Moreover, during the final design and permitting process, any unavoidable impacts to aquatic habitats will be minimized. The permit applications submitted by the City as part of the Section 404 and state wetland permit process will document the steps taken to avoid, minimize, and mitigate for impacts to aquatic habitats.

#### **F-101-005**

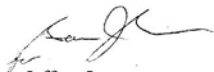
The City of Philadelphia owns the property and, under the Administrative Order by Consent (AOC) for Removal Action (June, 2002) and the Mitigated FONSI with Special Conditions (1994), is responsible for maintaining the cover and the groundwater monitoring systems and for obtaining the approval of EPA prior to implementing any modifications to the response actions. As described in Section 10.10 of the ROD, during the preliminary and final design process, the City will coordinate with the

**F-101-006** result from this project. And finally, the modeling that was performed did not: 1) include the effects from building downwash; 2) adequately categorize the expected increase in mobile source emissions because of the restricted spatial extent of the modeling domain; and 3) adequately estimate the PM<sub>2.5</sub> concentrations in the area since the methodology that was used is expected to significantly underestimate the background PM<sub>2.5</sub> concentrations in the project area. We will continue to work with the project team on air conformity issues.

**F-101-007** The project team should continue to avoid and minimize environmental and community impacts and use green airport and other innovative ideas to reduce the footprint of airport impacts. The use of an environmental monitor to oversee the construction and mitigation should also be documented in the ROD. Please consider comments on Environmental Justice found in the attached detailed comments. EPA appreciates the opportunity to provide comments on the FEIS. If you have any questions regarding these comments, please contact Ms. Barbara Okorn,


**F-101-008** who can be reached at (215) 814-3330.

Sincerely,



Jeffrey Lapp  
Director, Office of Environmental Programs

Attachment

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EPA and, in accordance with the requirements of the AOC, will ensure that the effectiveness of the landfill cover and groundwater monitoring system is maintained during and after construction and that the construction will not result in the release of hazardous substances to groundwater. The City, per its responsibility under the AOC, will coordinate with EPA at appropriate points in the design process and will seek and obtain the approval of the EPA before implementing modifications to the ongoing response actions, including any modifications to the landfill cover and groundwater monitoring system. The City will seek and obtain the approval of EPA for plans to alter the landfill cover and groundwater monitoring system and no construction activities that would impact the remedy and on-going groundwater monitoring at the Enterprise Avenue Landfill will be initiated without first obtaining approval from EPA.

#### **F-101-006**

These comments are repeated individually below in more detail, and to avoid duplication, the individual responses are also provided below. For example, the topic of building downwash is addressed in Response to Comment F-101-034, below. The topic of mobile source emissions is addressed in Response to Comment F-101-037. The topic of background PM<sub>2.5</sub> concentrations is addressed in Response to Comment F-101-038.

#### **F-101-007**

The City, during the final design process, will continue to work to avoid and minimize environmental and community impacts and use "green airport" and other strategies to minimize impacts to environmental resources as appropriate and practicable.

#### **F-101-008**

Specific Comments:

Enterprise Avenue Landfill Site

EPA would like to reinforce the significance of the AOC with the City of Philadelphia and the consequences of any actions that could cause a release of hazardous substances. As stated in the Paragraph 8.13 of the AOC, "In the event that EPA believes that response actions or other current activities at the Site by the City are causing or may cause a release or potential release of hazardous substances, or are a threat to public health or welfare or to the environment, EPA may, at its discretion, immediately halt or modify such response actions or other activities to eliminate or mitigate such actual or potential release or threat."

**F-101-009** Furthermore, if hazardous substances are released during any reconfiguration activities being performed by the FAA at the Enterprise Avenue Landfill Site, the FAA may be considered an "operator" under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and, may be ultimately found as a Potentially Responsible Party (PRP), which could involve paying for or performing cleanup at the Site.

**F-101-010** Section 1.7 – Required Permits and Actions - Table 1-5: The FAA must consult with the US EPA and the City of Philadelphia before undertaking activities at the Site which will cause or may cause a release or potential release of hazardous substances, or are a threat to public health or welfare or to the environment. These activities include, but are not limited to, impairment or destruction of the landfill cap, or interfering with the on-going groundwater evaluation or causing the release or exacerbation of groundwater hazardous substances.

**F-101-011** Section 4.18.3 - Hazardous Materials and Solid Waste - Affected Environment: Enterprise Avenue Landfill is not listed as a potential or confirmed source of subsurface contamination.

Section 5.18.2 – Hazardous Materials, Pollution Prevention and Solid Wastes – Indirect Impacts – Ongoing Release Monitoring and Remediation: As mentioned above, in 2002, the City of Philadelphia and EPA entered into an Administrative Order by Consent (AOC) that requires the City to treat and monitor the groundwater contaminants at the Enterprise Avenue Landfill Site ("Site"). However, in 2008, this enforcement document was modified to allow the City to study the groundwater. The groundwater extraction wells were temporarily shutdown, additional monitoring wells were installed, and the City is currently monitoring the groundwater to evaluate its natural degradation. The study is expected to take a few years to complete.

**F-101-012** Section 5.18.4 – Hazardous Materials, Pollution Prevention and Solid Wastes – Summary of Impacts: Although Enterprise Avenue Landfill Site is no longer on the National Priorities List (NPL), waste has been left in place and groundwater monitoring and treatment is being performed. The proposed activities on the Enterprise Avenue Landfill Site involve destroying groundwater monitoring wells and putting additional loading on the landfill cap that may cause migration of groundwater contamination from the landfill containment system. Therefore, EPA strongly disagrees with the FAA's determination that the impacts would not be considered

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If required by state and federal permits, the City will employ an independent environmental monitor.

**F-101-009**

See response to comment F-101-005. In addition, although the FAA is approving amendment of the Airport Layout Plan to depict the CEP and may provide federal funding and approval to use passenger facility charges to support the CEP, these funding activities do not render the FAA an operator for the purposes of CERCLA. To the extent the FAA installs or operates navigaids in the vicinity of the landfill, it is not anticipated that these activities will impact the landfill remedy; however, the FAA will coordinate with the EPA prior to the installation of the navigaids.

**F-101-010**

See response to comment F-101-005. Table 11-1 in the ROD lists permits and approvals and notes that the City will renegotiate the Enterprise Avenue Landfill AOC with the EPA.


**F-101-011**

The Enterprise Avenue Landfill is a "known release"; "known releases" are among the items listed in Section 4.18.3 of the FEIS. Figure 4.18-2 of the FEIS clearly shows the Enterprise Avenue Landfill as a source of subsurface contamination.

**F-101-012**

As documented in Section 5.18.4 of the FEIS, the acquisition of land within the footprint of the former Enterprise Landfill for the Project does not constitute a "significant impact" as defined in FAA Order 1050.1E because the Enterprise Avenue Landfill is no longer on the National Priority List. However, as noted in response to Comment 101-005 and in Section 10.10 and Table 11-1 of the ROD, the City will have to assure

<b>F-101-012</b>	significant.
<b>F-101-013</b>	Section 6.7 – Water Quality: Although mentioned in the response to Comment F-001-041, Section 6.7 of the EIS does not describe mitigation efforts to address potential significant impacts as a result of enhancement activities occurring on the Enterprise Landfill to water quality.
<b>F-101-014</b>	Section 3.4.2 – Screening Level 2 – Screening of Preliminary Alternatives – Alternative A: Parallel Runway 8-26 East – Project Costs Relative to Benefits: Although it is noted on p. 3-42 that the cost of environmental mitigation requirements is unknown, this is a problem. Along with a paucity of detail regarding how the Enterprise Avenue Landfill Site cap will be replaced, how long it will take to alter the runway (and tentatively when) and information about abandoning/installing monitoring wells; monitoring plans and sampling, there is little information regarding how much these items will cost.
<b>F-101-015</b>	Section 5.11.3 – Water Quality – Direct Impacts – Changes in Hydrology: Would the Mingo Creek pumping station be affected by any of the alternatives?
<b>F-101-016</b>	Section 5.11.3 – Water Quality – Direct Impacts – Alternative A – Groundwater Impacts: a. Glycol may not have a Pennsylvania Act 2 (PA Act 2) standard but there may be a Risk-Based Concentration (RBC) which could be applicable to the Site. This should be discussed with EPA Superfund Program.
<b>F-101-017</b>	b. A monitoring plan is needed to make sure glycol does not impact the sole source aquifer (SSA) or other sensitive areas and to address how glycol may affect Enterprise Avenue Landfill Site.
<b>F-101-018</b>	c. It is not clear how the seepage will be collected, treated, and discharged. The treatment standards should be noted.
<b>F-101-019</b>	Section 5.11.5 – Water Quality – Temporary (Construction) Impacts: With respect to dewatering noted for Alternatives A and B on pages 5-167 to 5-168, it is not clear how this would affect the Enterprise Avenue Landfill Site. Since iron is an issue, perhaps its treatment should be discussed if there is any modification to the remediation.
<b>F-101-020</b>	Section 5.11.8 – Water Quality – Summary: Same comments as "Groundwater Impacts" p. 5-164 (EPA Comment 8); ditto for Table 5.11-6: "no impact to SSA recharge or quality" is not necessarily true.
<b>F-101-021</b>	Section 5.18.1 – Hazardous Materials, Pollution Prevention and Solid Wastes – Direct Impacts – Alternatives A and B: Fill standards should be discussed with EPA's Superfund Program.
<b>F-101-022</b>	Table 5.21-1 – Summary Comparison of the Environmental Consequences of the Alternatives in 2030: The appropriate regulations should be noted under "Hazardous Materials and Solid Wastes" not just that "all regulations will be followed."
<b>F-101-023</b>	Section 6.7.2 – Water Quality – Minimization and Mitigation: Contaminated Water Discharge-Why were PA Act 2 standards selected; how does the protection compare to other

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EPA of the continued integrity of the landfill cover and the monitoring wells, and to protect against the migration of contamination, as required by the Administrative Order by Consent (AOC) for Removal Action (June, 2002). Section 10.10 of the ROD requires the City to continue to monitor the groundwater and, if necessary, capture and treat any contaminated groundwater from the landfill, and also requires the City, per its responsibility under the AOC, to obtain the approval of the EPA before implementing modifications to the ongoing response actions.

#### **F-101-013**

See Response to Comment F-101-005.

#### **F-101-014**

The FEIS meets the standards required by the Council on Environmental Quality with regard to economic costs. EPA cites no evidence to indicate that the proposed activities on this former landfill site are not feasible. The cost of remedial activities at the Enterprise Avenue Landfill site will be developed during the final design process, as these costs are highly specific to the actual remedial actions that will be undertaken. The design of these remedial actions will be developed by the City in consultation with the EPA as required by the Administrative Order by Consent (AOC) for Removal Action (June, 2002) and as described in response to Comment F-101-005.


#### **F-101-015**

As documented in Section 5.11 of the FEIS, the small increase in runoff to the Mingo Creek Pumping Station will not require any modification to that facility.

#### **F-101-016**

No glycol discharges will occur in the vicinity of the Enterprise Avenue

- F-101-023** standards?
- F-101-024** Section 6.7.2 – Water Quality – Minimization and Mitigation – Aircraft Facilities and Operations: See previous comments re: glycol ; is there a spill plan for petroleum?
- F-101-025** The project team should coordinate with the Federal Emergency Management (FEMA) regarding the placement of fill and design of the proposed runway (9R), and the control discharge to the river through outfalls and tide gates.
- F-101-026** Sole Source Aquifer  
Section 4.11.3 Groundwater: The penultimate sentence of the first paragraph regarding the designated sole source aquifer area is incorrect and misleading. The sentence should be amended to read: “The Airport is not directly over the aquifer, but is within the designated Sole Source Aquifer review area, which includes the portion of the Delaware River basin within two miles of the Delaware River.”
- F-101-027** Section 4.11.3 Groundwater Flow: The final sentence of the final paragraph is misleading and should be amended. The airport is not south of the designated sole source aquifer area; the airport is directly over and within the designated review area.
- F-101-028** Section 5.11.3 Alternative A Groundwater Impacts: EPA’s sole source aquifer program should be consulted early in the design process of the ground water seepage collection and treatment system for the APM tunnel constructed below the water table.
- F-101-029** Section 5.11.4 Indirect Impacts Relocation of Dredge Disposal Facility: EPA’s sole source aquifer program should be consulted early in the design process regarding use of a portion of the dredge disposal facility. Again, we recommend the use of an impervious liner to minimize the infiltration and potential transportation of contaminants to ground water.
- F-101-030** Section 5.11.5 Temporary Construction Impacts: Similar to previous construction projects at the airport, care should be taken when conducting temporary dewatering activities of the surficial aquifer for foundation excavations and trenches. All dewatering activities shall be done in a manner that avoids adverse impact to ground water quality. Furthermore, the pumping water level in the dewatering well(s) should be maintained at the minimum possible depth below the ground surface that will dewater the excavation. The dewatering pumping duration should be limited to the period actually needed to dewater the excavation effectively.
- F-101-031** The fuel storage tanks should be equipped with adequate lightning suppression devices and the fuel farm should be surrounded by a protective and opaque fence.
- F-101-032** Air Quality  
The response to the DEIS comment F-001-045 does not adequately address our comment. FAA indicates that since it was determined that 2005 was the “worst case” year of meteorology of the 5 year period from 2001 through 2008 that all alternatives need only consider impacts using the 2005 year of meteorology. As indicated in our original comment this was not the

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Landfill. The final design of the CEP will incorporate any requirements for glycol discharge as established by the EPA.

#### **F-101-017**

The final design of the CEP will incorporate any requirements for glycol discharge as established by the EPA. No glycol discharges will occur in the vicinity of the Enterprise Avenue Landfill.

#### **F-101-018**

The FEIS addressed the potential effects of the CEP based on a conceptual design. During the final design process, the City will develop a plan to collect, treat, and discharge seepage into the Automated People Mover tunnel. Any seepage will be collected, treated and discharged in accordance with applicable EPA and PA DEP water quality standards. Specific details will be developed during the final design and permitting process.

#### **F-101-019**

Temporary dewatering associated with construction (of the Automated People Mover or other subsurface structures) is not anticipated to affect the Enterprise Avenue Landfill site, since no subsurface structures are proposed in the vicinity of the landfill. Any dewatering effluent will be collected, treated and discharged in accordance with applicable EPA and PA DEP water quality standards. Specific details will be developed during the final design and permitting process.

#### **F-101-020**

As documented in the FEIS, Alternative A (the FAA’s Selected Alternative) will result in a minor increase in the amount of impervious surface over the sole source Aquifer (SSA) review area, and could result in a negligible decrease in recharge of the surficial aquifer layers. As noted in Table 5.11-2 of the FEIS, as a result of Alternative A, the net

**F-101-032** agreement that was reached between FAA and EPA. The agreement was that once FAA determined its preferred alternative that it would evaluate both the No Build and Preferred Alternative with a full 5 year meteorological record.

**F-101-033** We continue to have concerns with the responses to F-001-046 & 047. FAA has indicated that "... It is FAA's present policy and guidance to address HAP's in the form of emissions inventories ..." We recognize that FAA's guidance documents does not address the dispersion modeling of air toxics stating that "...scientific knowledge of these analyses with respect to airports is still very limited<sup>1</sup>." However, it is our firm belief that if an emissions inventory of air toxics can be determined that there should not be any reason to avoid taking the next step and determining the ambient impacts from such emissions. As stated in our original comment there is ample reason to indicate that the state-of-the-science has achieved a level to allow one to reasonably estimate air toxics impacts.

**F-101-034** We disagree with the response to F-001-048. FAA states in its response to this comment that "... building downwash on the plumes from stationary sources (such as the utility plant) were not accounted for in the dispersion modeling." The response indicates that this was not done because the impacts from such sources are "minor." The only justifiable reason for not considering a quantifiable effect on pollutant dispersion, such as building downwash, is if it can be shown that to not account for the effect would result in a conservative (i.e., higher than expected) estimate. This is certainly not the case for stationary source emissions that are affected by building downwash.

**F-101-035** The response to comment F-001-049 does not fully address our original comment. FAA states that "... The assessment of "gridded" receptors ... has been accomplished ... findings will be provided in the FEIS." This information is actually found in Attachment 2 of Appendix H of the Final Air Quality Technical Report, which has been provided. The analysis is significantly lacking. Although both a course grid (500m resolution) was modeled and then at course receptor points where high concentrations were predicted a fine grid (50m resolution) was modeled, the course grid excluded the discrete receptor area. That is, no fine grid modeling was performed around any discrete receptors. Therefore, since many of the highest concentrations were predicted at the discrete receptors and no fine scale modeling was performed at those locations the analysis performed did not adequately respond to our original comment. The analysis did not resolve the concentration gradients in the vicinity of many of the highest predicted concentrations.

**F-101-036** The response to F-001-050 does not address our concern. FAA states in its response to this comment that "The assessment of construction-related emission has been conducted in the form of an emissions inventory ..." The point on my original comment was that the construction of an emissions inventory does not constitute an adequate assessment. Construction-related emissions should be modeled along with the other sources.

**F-101-037** Sufficient information has not been provided in the response to F-001-051 to address our comment. FAA states in its response to this comment that "The regional study area ... is considered to be sufficiently large enough the capture the vast majority of mobile source

<sup>1</sup> Guidance for Quantifying Speciated Organic Gas Emissions from Airport Source, FAA, 9/02/09

increase in impervious surface on the Airport is 122.4 acres, which is approximately 6.7 percent of the current impervious area at the Airport and 3.9 percent of the current airport property. In addition, based on the available soils and geotechnical information, these shallow surficial aquifer layers are not directly connected to the underlying SSA.

#### **F-101-021**

During the final design process, the City, per its responsibility under the Administrative Order for Consent (AOC), will coordinate with the EPA's Superfund Program concerning standards for the fill material used over the Enterprise Avenue Landfill Site.

#### **F-101-022**

Table 5.21-1 is a summary table of environmental consequences and does not address the regulatory requirements. Section 1.3 of the Waste Sites or Contaminated Soils Technical Report, which is available from FAA upon request, clearly identifies the specific regulations applicable to the CEP.

#### **F-101-023**

As noted by PA DEP in their comments, this reference should have been to the water quality standards in Title 25, Chapter 93 of the PA Code. This is noted in the Errata to the FEIS that is included at the front of the Record of Decision.

#### **F-101-024**

The Airport has an existing Spill Protection and Prevention Plan for petroleum, which includes the fuel farm and aircraft refueling operations. This SPPP will be modified as needed for the CEP.

#### **F-101-025**

**F-101-037** emissions ...” There does not appear to have been any analysis performed which would lead FAA to this conclusion; therefore, our original concern remains.


**F-101-038** We continue to disagree with the responses to F-001-052 & 053. FAA states in its response to this comment that “... the focus of the modeling is on airport-related emission sources ... other stationary sources ... are not expected to be effected by the CEP project ... Therefore, these sources are assumed to be adequately covered by the “background” PM<sub>2.5</sub> values ...” Although the CEP sources are the principle focus of the analysis, the EIS does include an analysis this designed to estimate the expected total PM<sub>2.5</sub> concentrations in the area. By adding the maximum PM<sub>2.5</sub> concentrations that have been measured in the area to the modeled PM<sub>2.5</sub> concentrations from the CEP sources is not, as is implied in FAA’s response, a conservative estimate. Rather, because of the close proximity of the utility plant and oil refineries, the methodology used is likely to significantly underestimate the combined PM<sub>2.5</sub> concentrations in the area. As indicated in my original comment FAA should, in addition to the CEP sources, model all “near-by” sources.

**F-101-039** The project team should quantify greenhouse gas (GHG) emissions resulting from the construction and operations and consider the use of techniques to reduce GHG emissions and/or to provide a sink for CO<sub>2</sub>. The use of hydraulic, electrical and hybrid vehicles should be considered.

#### **Environmental Justice**

**F-101-040** The following paragraph appears in Chapter Four of the document, “The concept of race is separate from the concept of Hispanic origin. The U.S. Census directs users of the U.S. Census data to avoid combining race categories with Hispanic. The U.S. Census collects separate data on Hispanic populations in addition to data on minority populations. All minority populations in the study area were considered, and a Hispanic population was identified in the immediate vicinity of the Airport. Therefore, although not required by Executive Order 12898, this analysis addresses minority and Hispanic populations separately.”

This language should be modified, since the Executive does call for analyses of minority and low-income populations. The Executive Order 12898 refers to minority populations and low-income populations. Its intent was to include assessment of all minority populations including Hispanic populations. Since an assessment was in fact conducted for Hispanic Populations, the assessment does in fact address the concern. There is considerable debate over the methods used to assess minority populations in these assessments. Some argue that all minority populations should be combined into a single assessment. Others argue, as is the case here that Hispanic populations be handled separately for the reasons stated in this document. It seems reasonable that any assessment should contain a mechanism for conducting and meaningful, objective assessment of the minority populations. This assessment must be conducting in an objective scientifically defensible, logical, and fair manner that provides meaningful information that can be used to identify at-risk populations located in close proximity to the area under study. This reasoning is the guiding force behind the Executive Order, and any and all assessment designed to address those driving principles is in effect following the intent of Executive Order 12898. Further, it is important that any assessment scheme devised provide the maximum protection for any and all populations under consideration. It is most important that the assessment

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During the final design process, the City will coordinate with FEMA on relevant elements of the project design.

#### **F-101-026**

The FEIS, at Section 4.11.3 is correct and is not misleading because It states “the Airport is not directly over the SSA (sole source aquifer) but is within the review area, which includes streams within two miles of the Delaware River.” This language is consistent with EPA’s statement that the review area includes all lands within two miles of the River, and further, the FEIS acknowledge that the entire Airport lies within the review area.

#### **F-101-027**

The statement in the FEIS is accurate. The Airport is within the review area, and is north of the SSA itself.

#### **F-101-028**

During the final design process and permitting process, the City will consult with EPA’s sole source aquifer program regarding a plan to collect, treat, and discharge seepage into the Automated People Mover tunnel. Any seepage will be collected, treated and discharged in accordance with applicable EPA and PA DEP water quality standards.

#### **F-101-029**

Early during the final design process and permitting process, the City will consult with EPA’s sole source aquifer program concerning the abandonment of the Corps of Engineers dredge disposal facility cell. The current conceptual design does not include installing an impervious liner under the Corps disposal cell, since this area will no longer be used to dewater dredge spoils and will no longer receive potential contaminants. However the City may elect to accept your recommendation during the permitting process.



methodology be designed to assure that it does in fact appropriately identify the at-risk populations in the area. This reviewer can not determine if the methodology selected is more protective of the Hispanic populations in the study area than any other type of assessment since no other scheme was provided for comparison. It is the hope of this reviewer that such assessments were made in advance of the preparation of this document, and that the scheme presented is appropriately objective and protective.

**F-101-041**

In addition to figure 4.5.1, it would be most helpful to have figures to show the populations of Environmental Justice concern in juxtaposition to area impacts as a means of assessment cumulative or multiple impacts upon the populations of Environmental Justice concern. Identification of areas of Environmental Justice concern is meaningless, if we do not consider the potential impacts on those populations. Please note the wording of the Executive Order, "To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands." Some effort should be made to relate the location of the areas of potential Environmental Justice concern to areas of potential adverse impact. Where are the floodplains in association to the areas of potential EJ concern? Where are the noise impacts in relation to the areas of potential EJ concern? Where are the construction activities that may produce fugitive dusts in relation to the areas of potential EJ concern? Are there multiple impacts that may take place in relation to the areas of potential EJ concern?

**F-101-042**

Section 5.5.4 Impact Assessment, is described in the document as follows: "This section identifies and explains whether environmental justice populations exist within the area of potential significant impacts and then assesses if these populations would experience disproportionately high and adverse impacts." The discussion in this section seems to focus on the issue of disproportionate impacts, but does not address those that are adverse. Are there potentially adverse impacts? If so, where are they localized? What are they?

**F-101-043**

The following paragraph states, "The City of Philadelphia owns a community garden east of the Airport near the Philadelphia Water District lagoons. The City intends to relocate the community gardens prior to the commencement of construction of the CEP. This change in land use is part of the No-Action Alternative because the City has been trying to relocate the gardens for a number of years. Because this land would not be in use as a community garden at the time of the CEP acquisition and construction, there is no potential for the acquisition of this land to affect an environmental justice community." Is it not reasonable to assume that any activities that take place on this land will have an impact upon the community? What is going to take place as a part of the CEP? Will there be construction? Will there be truck traffic? Will there be noise? Will there be fugitive dusts?

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### **F-101-030**

The City shall address these concerns as required during the permitting process.

### **F-101-031**

The City, as the entity responsible for final design and construction, will incorporate these recommendations into the final design and construction specifications and will comply with all relevant safety requirements for the fuel storage tanks.

### **F-101-032**

In accordance with the Air Quality Assessment Protocol (Comments from 9.28.05 Agency Meeting and Responses); as discussed in the Air Quality Technical Report; and re-stated in the DEIS Response to Comment F-001-045, the assessment of the "worst case" years of meteorology conditions was performed for Alternative A (the Preferred Alternative) using the latest five years of available meteorology data (i.e., 2004 to 2008). From this analysis, the year 2005 was determined to represent the worst-case meteorological conditions and was also applied to the No-Action condition.

In response to this comment, the same five years of meteorological data has now also been analyzed for the No-Action condition. The outcome has verified that the year 2005 was also the worst-case for this No-Action scenario. More information is provided in Attachment G of the ROD.

### **F-101-033**

The PHL CEP EIS assessment of air toxics (also known as HAPs) in the form of an emissions inventory is fully consistent with current FAA policy and guidance in connection with this matter (see *FAA Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources*,



which was reviewed by EPA and FAA/EPA *Recommended Best Practices for Quantifying Speciated Gas Phase Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet and Turboprop Engines*, 2009). Additionally, the emissions inventory approach and the rationale for using it in support of the CEP EIS is documented in the Air Quality Assessment Protocol which was prepared and circulated to regulatory agencies, including the USEPA, in February 2006.

#### **F-101-034**

In addition to the response to comment F-001-048 in the FEIS, it is also important to note the following information:

- The airport air quality model used for this analysis (i.e., the FAA's Emissions & Dispersion Modeling System (EDMS) does not include direct provisions for simulating building downwash associated with stationary source emissions at airports. Notwithstanding this factor, EDMS is the FAA-required model and employs EPA-preferred models for emission quantification and dispersion, such as MOBILE6, NONROAD and AERMOD for conducting airport-related air quality analyses (see FAA Order 1050.1E, CHG1, Environmental Impacts: Policies and Procedures and Title 40 CFR Part 51 Appendix W, Guideline on Air Quality Models.)
- AERMOD, the dispersion component of EDMS, can be invoked to simulate building downwash after creating the EDMS files as the reviewer suggests. However, in this EDMS application, only the boiler emissions are simulated and the other airport emission sources (i.e., aircraft, GSE, APUs, etc.) which are vastly more significant, are not simulated using the building downwash method.
- The topography and gradient of the airport is relatively flat and, with the exception of the main terminal area, the buildings are not very high and are mostly isolated from one another thereby reducing the effects of building downwash.
- The new boilers at the utility plant will be modeled with building downwash later during the PADEP permitting process when more is

known about their design and operational characteristics (including the location(s) and height(s)).

**F-101-035**

In addition to the information contained in Appendix H of the Air Quality Technical Report and provided in response to Comment F-001-049, the following should also be noted:

- The coarse and fine gridded receptor assessment revealed that the discrete receptors represented the sites of highest modeled concentrations on, and adjacent to, the airport.
- The assessment also revealed that while the predicted concentrations within a grid array may vary by receptor location, the differences are less than 4 percent.
- Most of the maximum concentrations for the discrete receptors are predicted to occur at the main terminal curbsides, with contributions primarily from motor vehicles, GSE, and aircraft (in that order).
- There are numerous (about 20) receptors representing the terminal areas, both departure and arrival curbsides, parking areas, and other public access areas. This density of receptors is considered to be equivalent to a gridded array of receptors in this area.

Overall, over 600 receptor locations were analyzed and the conclusions of the analysis would not be expected to change if additional receptors were added.

This approach is fundamentally consistent with the Air Quality Assessment Protocol insofar as (1) discrete, course grid and the fine grid receptor modeling were conducted; (2) the analysis confirmed that the discrete receptors are representative of the highest concentrations modeled; and (3) the density (i.e., total number and proximity) of the discrete receptors in the terminal area were essentially equivalent to both a course and a fine grid analysis.

**F-101-036**

The assessment of construction-related emissions in the form of an emissions inventory was conducted in compliance with the project-specific Air Quality Assessment Protocol (see Section 6: Construction Impacts). More specifically, the approach called for estimating construction “emissions” to compare to the General Conformity Rule “applicability” thresholds. In other words, the Protocol only calls for an emissions inventory and does not call for dispersion “modeling.”

In addition to the construction vehicle and equipment emissions, excess emissions associated with airfield delay periods were also included in the emissions inventory as “other sources.”

Because the results of the construction emissions inventory meet the requirements of the General Conformity Rule when combined with the emission reduction credits and offsets, dispersion modeling is not considered to be necessary.

**F-101-037**

To clarify FAA's response to Comment F-001-051 in the FEIS, the reference to the "study area that is sufficiently large enough to capture the majority of mobile source emissions" pertains to both airport-related and background traffic motor vehicles operating in the vicinity of the airport. Specifically, the motor vehicles operating on these local and regional roadway networks (i.e., I-95, Industrial Highway, Bartram Ave., and Island Ave.) and the smaller roadways adjoining the airport were included in the emissions inventory and dispersion model so that Impacts are accounted for in both the emissions inventory and dispersion modeling analyses. This approach is consistent with the Air Quality Protocol.

In addition, motor vehicles (and their emissions) traveling to and from PHL on the regional and local networks are accounted for in the area-

wide emissions inventory prepared by PA DEP and others in support of the Transportation Improvement Plan (TIP) and, ultimately, the State Implementation Plan (SIP). Therefore, the motor vehicle emissions traveling to and from PHL are accounted for in both the regional emissions inventory and the airport dispersion model.

**F-101-038**

While it is possible that other nearby non-airport sources of emissions contribute to PM<sub>2.5</sub> levels at PHL, the contributions will not differ whether the CEP projects are implemented or not. In other words, these other sources will contribute equally under both the build and no-build (No-Action) conditions. The method used was a reasonable and acceptable method for estimating non-airport sources in airport air quality analysis. The method recommended by EPA is commonly used for permitting stationary sources, such as power plants. Based on this set of conditions, the modeling of PM<sub>2.5</sub> concentrations for the CEP EIS was adequately conducted.

**F-101-039**

The topics of GHG emissions and climate change are emerging. Of growing concern is the impact of proposed projects on climate change. Greenhouse gases are those that trap heat in the earth's atmosphere. Research has shown that there is a direct link between fuel combustion and greenhouse gas emissions. Therefore, sources that require power/fuel at an airport are the primary sources that would generate greenhouse gases. Aircraft are probably the most often cited air pollutant source, but they produce the same types of emissions as motor vehicles. As reported in Section 9.7 of the ROD, the Intergovernmental Panel on Climate Change (IPCC) estimates that global aircraft emissions account for approximately 3.5 percent of the total quantity of greenhouse gas from human activities and the U.S. General Accounting Office reports that aviation accounts "for about 3 percent of total U.S. greenhouse gas emissions from human sources". Based on FAA data,

operations activity at PHL, relative to aviation throughout the United States, represents less than 1% of U.S. aviation activity. Therefore, assuming that greenhouse gases occur in proportion to the level of activity, greenhouse gas emissions associated with existing and future aviation activity at PHL would be expected to represent less than 1% of U.S.-based aviation-generated greenhouse gases or 0.3% of the total U.S.-based greenhouse gases from human sources. Based on the above reasons, greenhouse gas emissions were not quantified. Under current FAA and USEPA guidance there is no threshold of significance that pertains specifically to airports.

#### **F-101-040**

The analysis of impacts to environmental justice populations was carried out as required by FAA Order 1050.1E, Appendix A Section 16 of Executive Order 12898, and U.S. DOT Order 5610.2. The analysis evaluates impacts to minority populations and low-income populations. Hispanic populations were also evaluated, as these Spanish-speaking populations may not otherwise be recorded as a minority. The U.S. Census directs users of the Census data to avoid combining race categories with Hispanic (a person could identify themselves as both Hispanic and Black, Asian, or other race categories). Therefore, the analysis addresses minority and Hispanic populations separately and the Hispanic population was not added to the total minority population to avoid the possibility of double counting. However, results of the environmental justice analysis indicate that even if the impacted Hispanic minority population was added to the impacted non-Hispanic minority population the aggregate population would not be disproportionately affected by Alternative A.

#### **F-101-041**

The discussion of impacts to Environmental Justice populations in the FEIS, and as shown in the FEIS figures, accurately depicts the location of these populations in relationship to impacts of the CEP. As

documented in the CEP, all of the impacts of the project (with the exception of noise and property acquisition) occur on airport property or in adjacent areas which are clearly identified in the FEIS.

**F-101-042**

The FEIS identifies all significant adverse effects to environmental justice populations. These significant adverse impacts are then used to determine whether there is a disproportionate impact, which is the standard defined by the EPA's Office of Environmental Justice: "Fair treatment means that no group of people... should bear a disproportionate share of the negative environmental effects..." As documented in the FEIS, environmental justice populations experience significant adverse noise impacts from the CEP, but this impact is not disproportionate.

**F-101-043**

These gardens are located in an industrial area between the wastewater treatment plant and the Schuylkill River. There are no residential areas on the west side of the Schuylkill River - the entire area is industrial. The nearest residences are approximately two miles to the east.

Construction of the CEP will have no impact on the environmental justice communities that may have used the Community Gardens because the City of Philadelphia intends to relocate these gardens regardless of, and independent from, the CEP.

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Regulatory Branch

SUBJECT: CENAP-OP-R (PHL Capacity Enhancement Program FEIS)

Ms. Susan McDonald  
Federal Aviation Administration  
3905 Hartzdale Avenue, Suite 508  
Camp Hill, Pennsylvania 17011

Dear Ms. McDonald:

We are providing comments on the Final Environmental Impact Statement (FEIS) dated August 2010, which has been prepared pursuant to the National Environmental Policy Act (NEPA). This FEIS has been prepared by the Federal Aviation Administration to address the Capacity Enhancement Program at the Philadelphia International Airport.

The FEIS contains sections that address a myriad of issues associated with the proposed project. However, as noted in our previous comments on the DEIS, we have tried to focus our comments on those sections and/or issues that are most relevant to our technical expertise. Accordingly, we have focused on issues relevant to wetlands and waters of the United States.

Sections 4 and 5, Wetlands and Waterways: An approved jurisdictional determination has been completed for the airport property. This jurisdiction determination was based upon a detailed site specific survey and reflects the Corps' determination of federally regulated wetlands waterways in accordance with current Department of the Army regulations and policies. This determination does not address other wetlands and waterways within the study area. Further, the mapping effort for wetlands and waterways in the study area, that were not included within the approved JD, has been based upon GIS databases and other resource materials with a limited amount of field verification. This resource information will require refinement as the FAA continues through the planning and design process toward a formal application for a Department of the Army permit application. In addition, it may be premature to identify any of these resource areas as non-federally regulated wetlands and waterways since that determination requires site specific information and has not been specifically addressed by our office.

F-102-001

F-102-002

F-102-003

It should be noted that acreages and impacts predicted in this document are estimations which have been generated with the goal of making accurate relative comparisons during the NEPA process. As more detailed investigations are conducted through the planning and design process these current estimations may be modified. It should be further noted that a designation as a non-federally regulated wetland or waterway does not necessarily alter its consideration in the FEIS process and should be reserved until sufficient detail is available for the development and review of a Department of the Army permit application.

**F-102-001**

The City of Philadelphia is responsible for final design and permitting and will be the applicant for the Department of the Army Permit. The City understands that further consultation with the USACE and a Jurisdictional Determination will be required for off-site wetlands.

**F-102-002**

The City of Philadelphia will be the applicant for the Department of the Army Permit, and will be responsible for final design and permitting. The City understands that further consultation with the USACE will be required to quantify the wetland impact as the final engineering designs are developed.

**F-102-003**

The City of Philadelphia will be the applicant for the Department of the Army Permit, and will be responsible for final design and permitting. The City understands that further consultation with the USACE will be required regarding the jurisdictional determination for off-site wetlands.



**F-102-004**

As noted in the FEIS, the construction alternatives described in the FEIS have only been studied as concepts and have not been scrutinized in any detailed construction context to determine if additional reductions in impacts can be identified. As additional project details are developed, a coordinated review of the preferred alternative should be conducted to identify additional measures to avoid and/or minimize wetland impacts where practicable.

**F-102-005**

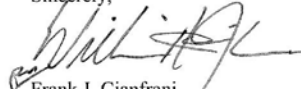
Section 6, Mitigation: The FEIS describes a number of potential mitigation sites along the Delaware and Schuylkill Rivers. Since there is limited detailed information for many of these potential mitigation sites, the Record of Decision for this FEIS should include a commitment to include all necessary mitigation sites and measures to assure that the adverse effects resulting from the proposed action would be minimal. This should also include a commitment to continue coordination with the respective State and Federal resource agencies to develop and refine all necessary mitigation measures.

**F-102-006**

During the mitigation site inspections on March 29, 2007 we expressed concern with many of the potential wetland mitigation sites located along and within the Delaware River relating to the perpetual protection of these sites. Our mitigation program requires a perpetual deed restriction, conservation easement, or similar land protection mechanisms for mitigation sites to assure their continued protection. As the project planning process continues, the development of a detailed mitigation program for this project should address this issue, including all submerged lands that are owned and held in trust by the Commonwealth of Pennsylvania.

We apologize for our delay in providing these comments and look forward to continuing our cooperative effort through this process. If you should have any further questions or comments on this subject, please contact Mr. Edward Bonner of this office at 215-656-5932.

Sincerely,

  
Frank J. Cianfrani  
Chief, Regulatory Branch

**F-102-004**

During the final design process, the City will continue to coordinate with the Corps and PA DEP to identify additional measures to avoid and minimize wetland impacts where practicable, and to mitigate for unavoidable wetland impacts.

**F-102-005**

The City will continue to coordinate with the Corps and DEP to develop the appropriate measures to mitigate for unavoidable impacts to aquatic resources as required by the 2008 Final Rule on Compensatory Mitigation. In addition, more information on the mitigation sites is included in Attachment F to the ROD.

**F-102-006**

During the final design and permitting process, the City will develop a detailed mitigation program that includes a mechanism for the permanent protection of each of the mitigation sites that are part of the final permit package, including all submerged lands that are owned and held in trust by the Commonwealth of Pennsylvania.

October 14, 2010

Ms. Susan McDonald  
Federal Aviation Administration  
Harrisburg Airports District Office  
3905 Hartzdale Drive, Suite 508  
Camp Hill, PA 17011

Re: PA DEP Review of Final Environmental Impact Statement  
Philadelphia International Airport, Capacity Enhancement Program

Dear Ms. McDonald:

In accordance with the National Environmental Policy Act of 1969 (NEPA), the PA Department of Environmental Protection (DEP) offers the following comments on the August 2010 Final Environmental Impact Statement (FEIS) for the Capacity Enhancement Program (CEP) at Philadelphia International Airport (PHL). The comments address issues that involve DEP's statutory or regulatory authorities, and they cover issues that are substantial and serious. Many of these comments are similar to comments that DEP provided after we reviewed the Draft EIS in November 2008. We believe that these issues should be addressed in order for the project to meet the requirements of NEPA.

This letter also provides the DEP comments on the August 2010 Final General Conformity Determination, attached to the FEIS as an Appendix. We look forward to continuing to coordinate with the United States Federal Aviation Administration (FAA) and the City of Philadelphia to address the complex requirements of this program.

Below are our specific comments:

**Chapter 4, Section 4.8, Affected Environment/Wetlands and Waterways:**

- S-101-001** 1. The FEIS, taken as a stand-alone document, does not contain sufficient information to provide a detailed understanding of the distribution of wetland and waterway impacts.
- S-101-002** a. Considering Table 4.8-1: There is a column in the Table that appears to give the total area of each natural resource unit (wetland or waterway unit). However, we understand that many of these resource units are impacted only partially, and the FEIS does not provide a unit-by-unit accounting of the area impacted.

**S-101-001**

The FEIS meets all the requirements of the Council on Environmental Quality (CEQ). In Section 1502.21, CEQ directs agencies to "incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action." Detailed information on wetland and waterways impacts was provided to PA DEP in the Wetlands and Waterways Technical Report, which is incorporated by reference into the FEIS. PA DEP reviewed and commented on the Wetlands and Waterways Technical Report. See also responses to more detailed comments S101-002 through S101-007 and S101-009 through S101-012.

**S-101-002**

Table 4.8-1 of the FEIS documents existing conditions. Table 5.8-1 of the FEIS provides a detailed listing of the impacts to each of these resource units.

S-101-003

- b. Considering Figure 4.8-1: The individual resource units are not labeled on the map, so there is no way for a reader to connect information in Table 4.8-1 (which includes quantitative information) with the locations on the map.

**Chapter 5, Section 5.8.7, Environmental Consequences, Wetlands and Waterways, Regulatory Coordination and Required Permits:**

S-101-004

1. The FEIS is incomplete in that it fails to include a reference the protections provided for Exceptional Value wetlands in Section 105.18a of the Pennsylvania Code (Title 25, Chapter 105). PADEP made this request in our comments on the DEIS, but the FEIS still does not contain this important reference. Section 105.18a contains strong protections for certain resources, and requires substantial demonstrations by permit applicants for projects that impact these resources. While the FEIS does contain a reference to Section 105.16, that Section does not cover all aspects of Threatened and Endangered Species protection.

**Chapter 5, Section 5.8.7, Environmental Consequences, Wetlands and Waterways, Regulatory Coordination and Required Permits:**

S-101-005

1. The FEIS is incomplete in that it fails to include a discussion of the need for a Submerged Lands License Agreement (SLLA) for the new fill in Delaware River associated with the west end of New Runway 9R-27L. This requirement is provided in regulations in Pa. Code, Sections 105.31 and 105.32. In FAA's responses to PADEP's comments on the DEIS, FAA acknowledged the need for this discussion. However, we could find no such language in the FEIS itself. Section 5.8.7 is the section in which this issue should be discussed.

S-101-006

2. The requirement for SLLA has some conditions that depend on the scale of the project. Approval from the Pennsylvania General Assembly may be required if the cumulative impact of this project and earlier ones exceeds 25 acres. The accounting of acres for the current project should include not only the area physically occupied by the project but also areas to which access is restricted. Section 5.8.7 of the FEIS should include a detailed accounting of the quantity of area applicable to this requirement and a discussion of how the regulatory process should be handled.

**Chapter 5, Section 5.8, Environmental Consequences/Wetlands and Waterways, Table 5.8-2:**

S-101-007

1. The FEIS is inaccurate in its classification of natural resource unit SCPD-5. SCPD-5 is a wetland unit of 2.77 acres that will be impacted at a level of 100 percent in Alternative A. Although it is listed as "non-EV" in the EIS, it was never surveyed for Red-bellied turtle because of the possible presence of oil from the Athos spill during the field season when

### S-101-003

The level of detail shown is appropriate for the FEIS. DEP was provided with detailed information on wetland subunits, their delineations and functions in the Wetlands and Waterways Technical Report, which is incorporated by reference in the FEIS. The Council on Environmental Quality in Section 1502.21 says "agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action." PA DEP reviewed and commented on the Wetlands and Waterways Technical Report. The technical reports are available from FAA upon request, should a reader desire additional information.

### S-101-004

The FEIS is complete and meets all of the requirements of the Council on Environmental Quality. The FEIS states that the CEP will require a permit from PA DEP under Title 25, Chapter 105. Chapter 105 includes Section 105.18a. The FEIS further references Chapter 105 several times in the wetlands and waterways Environmental Consequences and Mitigation sections (Sections 5.8.1 and 6.6, respectively). The FEIS discusses exceptional value wetlands in describing the methodology for identifying different types of wetlands in Section 4.8.2 and in Section 5.8.3, which discusses the impacts of the alternatives. Several tables in Section 5.8 also clearly identify exceptional value wetlands. These references are sufficient. The City, as the entity responsible for the final design and permitting of the CEP, understands the requirements of Chapter 105, including Section 105.18a and will address these requirements in its permit application(s).

### S-101-005

The FEIS specifically discusses the need for a Submerged Land License Agreement for relocation of the Sunoco Pier but does not expressly discuss that such an agreement would also be needed for the new fill associated with the proposed new runway. FEIS Section 5.8.7 states

S-101-007

survey work was being done. All of the surrounding wetlands and waterways do harbor the turtle, and so it is reasonable to suspect that the turtles are in SCPD-5 also. The FEIS should note the likely presence of this State-listed species in this resource unit. Eventually, an assessment of the presence of State-listed turtles in this unit will be needed. If the turtles are found there, then 2.77 acres of additional EV wetland impacts will need to be added to the cumulative total for the project. Currently, Table 5.8-2 shows 2.3 acres of non-EV wetland impact in this area. We suggest that the table should acknowledge the potential for 2.8 acres of EV wetland impact in the SCPD area.

**Chapter 5, Section 5.18.1, Environmental Consequences/Hazardous Materials/Direct Impacts:**

S-101-008

1. The FEIS is incomplete in that it does not discuss and provide details concerning the very large quantity of new fill that will be required to build the extension to Runway 8-26. The FEIS should provide an estimate of the quantity of fill needed, and highlight the very significant difference between the amount of material required for Alternative A versus the amount needed for Alternative B. It should also identify potential sources for the material.
2. We note that this Section does mention that it is unlikely a sufficient amount of clean fill will be available to satisfy the needs of this project, and that this fact has regulatory consequences. However, we believe that the FEIS does not address this issue with the specificity and clarity that is commensurate with the challenges posed by finding and importing the huge amount of material that will be required for this project.

**Chapter 6, Section 6.6, Conceptual Mitigation/Wetlands and Waterways:**

S-101-009

1. DEP believes that the FEIS does not identify a practical and feasible conceptual mitigation program for wetlands impacts. This is contrary to the claim made in the FEIS itself. Although the FEIS presents a wetland mitigation concept that is considerably revised from what was presented in the DEIS, many of DEP's earlier comments concerning Chapter 6 are still relevant to the information presented in the FEIS. The information provided is unclear and insufficient. The primary reference for this comment is Table 6.6-2 of the FEIS, which lists "Potential Wetland Mitigation Sites." The comment also addresses the paragraphs that describe and support this Table.
2. The project impacts a significant percentage of the small remnant of freshwater tidal wetlands in the Commonwealth. Furthermore, the resource mitigation goals for this project, given in Section 6.6 as being about 82 acres of wetlands and 48 acres of waterways, are enormous. The preparers of the FEIS do not appear to have taken seriously the very significant challenge that is posed by the need to find mitigation opportunities at this scale.

that "[r]elocating the Sunoco Pier (extending the existing Fort Mifflin Pier to the west and associated dredging) will also require permitting...and would require that the Sunoco Submerged Lands License Agreement and other relevant permits be updated". The FEIS sufficiently discloses SLLA requirements because it states that the CEP will require a permit from PA DEP under Title 25, Chapter 105. Chapter 105 includes sections 105.31 and 105.32 and all other subsections of Chapter 105 that impose requirements relating to SLLAs for new fill.

In any event, consistent with the FEIS Response to comments, the FEIS errata sheet attached to the ROD includes text revising Section 5.8.7 of the FEIS to expressly state that the City, during the final design and permitting of the CEP, must apply for a Submerged Lands License Agreement for the runway fill. This detail is also included in Section 9.8 and Table 11-1 of the ROD.

**S-101-006**

As discussed in the FEIS fill in the Delaware River is not expected to exceed 25 acres, therefore approval from the PA General Assembly is not anticipated. There is no access restriction. As the FEIS explains (see response to PA DEP comment, S-003-067 in the FEIS), there is currently no authorized public access to the Delaware River within the project area, although there are unauthorized locations where fishermen access the shore. There is therefore no loss of public access to the river. It is not possible to provide a detailed accounting of impacts which do not exist. However, the City has made a commitment to consider public access to the shoreline in the design of coastal wetland mitigation areas, as described in Chapter 6 of the FEIS and Section 10.6 of the ROD.

**S-101-007**

The FEIS is accurate and meets all of the requirements of the Council on Environmental Quality because it provides the best possible information that was available at the time of the data collection. PA DEP correctly

S-101-010

3. Table 6.6-2 purports to be a list of potential mitigation opportunities, and it provides some information that is supposed to indicate the size of the available mitigation area at each site. However, several of the areas (in acres) given in the "Mitigation" column of Table 6.6-2 seem surprisingly high, given our knowledge of the sites listed. The FEIS provides no description of how these acreages were determined. DEP is concerned that the quantity (in acres) that is listed as being available for wetland mitigation may be overstated in the FEIS.

S-101-011

4. Similarly, DEP believes that the FEIS understates the challenges that are posed by proposing natural resource mitigation at the proposed sites. In order for a site to be included in this conceptual plan, we believe that two fundamental issues need to be addressed: ownership and contamination. No information is provided concerning ownership of these sites, or whether or not the site owners have been approached to discover their intentions for future site development. This presents us with the possibility that many, perhaps most, of these sites will later be found to be unavailable for use as wetlands mitigation sites. With respect to the issue of contamination, the FEIS acknowledges that environmental cleanup of these sites may be necessary and, in some cases, may be "cost prohibitive." To propose creating wetlands at sites, such as these, presents a considerable technical and regulatory challenge. To suggest that wetland mitigation can take place at these sites, without providing background about site ownership or legacy environmental issues, makes a huge conceptual leap across an array of complex challenges. Therefore, we question FAA's claim that they have demonstrated mitigation of wetlands impacts to be practical and feasible.

S-101-012

5. In addition to the broad issues discussed above, Section 6.6.3 of the FEIS fails to mention the fact that Pennsylvania may require compensatory mitigation for some of the wetlands impacts at an area ratio greater than 1:1, as provided in Pa. Code Title 25, Chapter 105.20(a).

**Chapter 6, Section 6.7.2, Conceptual Mitigation/Water Quality/Minimization and Mitigation:**

S-101-013

1. This section is incomplete in that it fails to mention the requirement for the CEP project to be covered by an Individual National Pollutant Discharge Elimination System (NPDES) Permit for Discharge of Stormwater from Construction Activities. The major components of this permit will be an Erosion and Sediment Control Plan and Post-Construction Stormwater Management Plan, both of which will need to be designed to address the requirements in DEP's Chapter 102 Regulations and companion technical guidance documents. The FEIS addresses both erosion and sedimentation control and stormwater management in a general way, but it should clearly state the need for an NPDES permit for the project.

points out that this wetland was not surveyed for Red-bellied turtles due to the possible presence of oil during the field season when the survey work was conducted.

However, it should be noted that several factors indicate it is not likely that Red-bellied turtles are present in SCPD-5: (a) SCPD-5 is fenced and a tidegate is present upstream, effectively isolating it from adjacent habitat and (b) SCPD-5 has steep sided embankment and water fluctuates with tides.

In any event, in Section 10.8 and Table 10-1 of the ROD, FAA requires that, during the final design phase of the CEP, the City must undertake an intensive pre-construction survey to provide detailed and updated information on the distribution and abundance of protected species, including Red-bellied turtles.

**S-101-008**

Section 5.18.3 of the FEIS further states that PA DEP regulatory requirements would be met, including reviewing the nature and source and quantify of fill materials imported to elevate the east end of runway 8-26. The commenter does not dispute this statement. Section 5.18 of the FEIS discusses mitigation measures in sufficient detail to ensure that there has been a fair evaluation of potential hazardous materials impacts as required under NEPA. Based upon the level of project design, estimates of the amount of fill material are not required under NEPA. Section 5.18.1 of the FEIS states that both build alternatives would require "sizeable quantities of soil fill during construction." In FAA's experience new runway projects typically require obtaining or removing large amounts of fill depending upon the geographic setting of the airport. For example the Port of Seattle used approximately 14 million cubic yards of fill to construct the third parallel runway at Seattle Tacoma International Airport. Although not required, the FAA has added additional information about the quantity and potential sources of fill

**S-101-014** 2. This section contains an incorrect statement in the discussion of the proper handling of construction dewatering discharges. The reference to the "Act 2" standards is incorrect, because "Act 2" has no relevance to the disposal of dewatering flows. When DEP coordinates with the project sponsor on management practices for the handling of construction dewatering, we will consider the water quality standards in Title 25, Chapter 93 of the Pa. Code.

**S-101-015** The FEIS should contain stronger precautions concerning the challenges of disposing construction dewatering flows. We expect that the volumes of construction dewatering associated with the CEP will be far larger than any other project carried out at the airport in recent times. We have tried to keep focus and attention on this issue throughout the environmental impacts assessment process. The implementation challenges associated with it have the potential to cause major difficulties during the construction period.

#### **Air Quality Comments on Final General Conformity Determination**

DEP reviewed the above-referenced FEIS and General Conformity Determination prepared by the FAA for the PHL's CEP in Philadelphia and Delaware Counties, Pennsylvania. Our review was conducted in accordance with Section 176 of the Clean Air Act and its implementing regulation in 40 C.F.R. Part 93, Subpart B (relating to determining conformity of general Federal actions to state or Federal implementation plans) and the Department's General Conformity regulation codified in 25 Pa. Code Subchapter J (relating to general conformity). To this end, detailed comments on the FEIS and the General Conformity Determination for the CEP are offered herein for your consideration.

As you know, the proposed CEP is located in Philadelphia and Delaware Counties, which are included in the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE (Philadelphia-Wilmington-Atlantic City Area) "moderate" ozone non-attainment area for the 1997 8-hour ozone national ambient air quality standard (NAAQS). Additionally, it is important to note that Philadelphia and Delaware Counties are also included in the Philadelphia-Wilmington, PA-NJ-DE Area (Philadelphia-Wilmington Area) which was designated by the U.S. Environmental Protection Agency (EPA) in April 2005 as a non-attainment area for the 1997 fine particulate matter (PM<sub>2.5</sub>) NAAQS; this area was subsequently designated in December 2009 as non-attainment for the 2006 24-hour PM<sub>2.5</sub> health-based standard.

Based on your analysis, the CEP is subject to the General Conformity requirements because direct and indirect emissions of oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOC) during several calendar years for both Alternative A and Alternative B build scenarios are estimated to exceed the *de minimis* thresholds for a moderate ozone non-attainment area, and because NO<sub>x</sub> emissions are estimated to exceed the *de minimis* thresholds for a PM<sub>2.5</sub> nonattainment area. The DEP has reviewed and commented on the FEIS and General

required for the Project to the ROD. Section 6.3 of the ROD clarifies that the Project (Alternative A) will require approximately 7.6 million cubic yards of fill material and Alternative B will require approximately 1.3 million cubic yards of fill. FAA also undertook a study to identify potential sources of fill material, and concluded that the most likely source of fill material would be from Delaware River navigation projects, including the proposed channel maintenance dredging and channel deepening projects.

#### **S-101-009**

The FEIS discusses wetland mitigation in sufficient detail to assure that there has been an adequate evaluation of wetland impacts. PA DEP provides no specific basis for questioning the feasibility of the program and no other agency with jurisdiction expressed similar concerns. See FEIS, Volume 3, Response to Comments, Page 36 (USACE Comments). The conceptual mitigation program outlined in Section 6.6 of the FEIS demonstrates that it is feasible to mitigate for the impacts of the CEP on freshwater wetlands. Table 6.6-2 of the FEIS lists the potential mitigation sites identified by FAA and augmented by the City, which demonstrates that adequate mitigation can be provided for the Project. An updated table in Attachment G of the ROD shows a great deal of more information about the mitigation sites.

During the final design process, the City will continue to coordinate with the resource agencies to develop a mitigation plan that meets Federal and state requirements to mitigate for the unavoidable loss of aquatic resource functions. A sufficient range of feasible mitigation sites exist to satisfy the Project's mitigation requirements.

#### **S-101-010**

Table 6.6-2 of the FEIS lists the mitigation opportunities identified by FAA and enhanced by the City, which demonstrates that adequate mitigation can be provided for the Project. An updated table in

Conformity Determination with the objective to minimize the effects that the CEP will have on air quality.

**Comments on the PHL CEP Final Environmental Impact Statement and General Conformity Analysis**

**S-101-016** The requirements of General Conformity do not require FAA to present a plan to reduce emissions of pollutants that are precursors to the formation of fine particulate matter (PM<sub>2.5</sub>) because both PM<sub>2.5</sub> and NO<sub>x</sub> overall project emissions fall below the *de minimis* thresholds when planned mitigation measures taken by the airport before the CEP are factored into the project design. However, the DEP is concerned that in the future emission reductions of PM<sub>2.5</sub>, precursors will probably need to be achieved by sources other than sources at the PHI, to reduce fine particles in the atmosphere that will be caused by the CEP if the FAA does not take action.

**S-101-017** The DEP disagrees with two general statements in the FEIS regarding effects on air quality. The section on Dispersion Modeling Results in the FEIS, page 5-118, states that modeled ambient concentrations of PM<sub>2.5</sub> for the 2006 24-hour PM<sub>2.5</sub> National Ambient Air Quality Standard (NAAQS), increases from 41.3 micrograms per cubic meter (µg/m<sup>3</sup>) for the no-build scenario to 44.0 µg/m<sup>3</sup> in the year 2030 for the preferred Alternative A build scenario. Although both scenarios have modeled concentrations well above the 24-hour PM<sub>2.5</sub> NAAQS, which is 35 µg/m<sup>3</sup>, computer models show that concentrations of PM<sub>2.5</sub> that occur as a result of building Alternative A would cause PM<sub>2.5</sub> concentrations that would increase the severity of an existing violation and could possibly increase the frequency of an existing violation. The FEIS goes on to say in the Cumulative Impacts Section, page 5-139, "[t]he analysis presented in this section shows that, when the effects of Alternative A or Alternative B are added to the effects of other past and future changes in air quality, there would be no serious deterioration of environmental functions." The DEP disagrees with that statement, at least for Alternative A. The DEP also disagrees with the statement made in Section 5.7.8 of the FEIS which states, "[t]he demonstrated compliance with the General Conformity Rules will assure that neither of the Build Alternatives (A or B) will result in a significant adverse effect to air quality." It appears from data presented in the FEIS that air quality will deteriorate in 2030 due to higher concentrations of PM<sub>2.5</sub> in the area of the airport, which will cause an increase in severity and frequency of violations of the 24-hour PM<sub>2.5</sub> NAAQS.

**S-101-018** Page 2-3 of the Final General Conformity Determination discusses the current status of the Pennsylvania State Implementation Plan (SIP) for PM<sub>2.5</sub>. Pennsylvania's revision to the SIP concerning the attainment demonstration for the 1997 PM<sub>2.5</sub> NAAQS was received by the EPA - Region 3 on April 14, 2010, and determined by EPA to be "technically and administratively complete" on April 23, 2010. The attainment demonstration for the 2006 24-hour PM<sub>2.5</sub> NAAQS will be submitted to EPA no later than December 2012.

Attachment G of the ROD shows a great deal of more information about the mitigation sites.

The specific details of wetland mitigation, including final site selection and design, will be developed by the City in coordination with the PA DEP and the USACE during the final design and permitting processes.

**S-101-011**

The conceptual mitigation program outlined in Section 6.6 of the FEIS demonstrates that it is feasible to mitigate for the impacts of the CEP on freshwater wetlands. An updated table in Attachment G of the ROD shows a great deal of more information about the mitigation sites.

Sites that were deemed infeasible due to severe contamination, inability to obtain ownership, or an expected high cost relative to benefit were not included in the mitigation table. Information on ownership is not provided in order to protect the privacy of the owners and to avoid rising costs. To preserve the integrity of the ongoing environmental review process, the City has refrained from initiating land acquisition activities.

During the final design process, the City will continue to coordinate with the resource agencies to develop a mitigation plan that meets Federal and state requirements to mitigate for the unavoidable loss of aquatic resource functions. FAA acknowledges that this is a substantial challenge, but that a sufficient range of feasible mitigation sites exist to satisfy the project's mitigation requirements.

**S-101-012**

Section 6.6.3 of the FEIS and Section 10.6 of the ROD state that compensatory mitigation for wetlands impacts will be required at a ratio of at least 1:1. Further, Section 10.6 of the Record of Decision notes that the final mitigation plan will be coordinated with the USACE and the PA DEP in accordance with the federal rule on Compensatory Mitigation for

**S-101-019**

The DEP believes that FAA should commit to taking steps that would reduce any potential emissions of regulated pollutants and precursors that could adversely impact air quality in the region as a result of direct and indirect emissions from the proposed PHL CEP. These steps could include the purchase of emissions reduction credits (ERCs) for PM<sub>2.5</sub> of the regulated nitrogen oxide (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) precursors that contribute to the formation of PM<sub>2.5</sub>, funding mitigation projects that would reduce emissions of these pollutants so that modeling would show that ambient concentrations of the 24-hour PM<sub>2.5</sub> would not increase in future years, or modifying operations at the airport in future years to reduce emissions. In the General Conformity final rule published by EPA on April 5, 2010, EPA indicated that "the emission reductions from offsets or mitigation measures should occur at the same time as the emission increases from the project" in order to alleviate the impact of the project's emissions. EPA interprets this requirement "to mean that the reductions must occur in the same calendar year as the emission increases caused by the action because the total direct and indirect emissions from an action are collated on an annual basis" (75 FR 17268).

**S-101-020**

The FEIS indicates on page 5-131 that the VOC emissions produced by the CEP for preferred build scenario Alternative A will exceed the *de minimis* level of emissions described in 40 C.F.R. Section 93.153 for an area designated as a moderate ozone nonattainment area located in a transport region. The EIS indicates that these VOC emissions will be completely offset by the purchase of ERCs. Consistent with 40 C.F.R. Section 93.163, VOC emissions that are not contemporaneous with the project must be offset by ERCs in accordance with applicable New Source Review (NSR) ratios for the area. The 1.3 to 1 emission offset ratio is the applicable NSR offset ratio for the five-county Philadelphia area (25 *Pa. Code* Section 127.201(f)). The Philadelphia area continues to be subject to the requirements for "severe" ozone nonattainment areas, consistent with the U.S. Court of Appeals for the District of Columbia's decision in South Coast Air Quality Management District v. EPA, 472 F.3d 882 (D.C.Cir. 2006), *as amended by* 489 F.3d 1245 (D.C.Cir. 2007). Consequently, ERCs which provide "noncontemporaneous" reductions in Philadelphia and Delaware Counties should be offset at a ratio of 1.3 to 1 to ensure that these reductions "provide greater environmental benefit in the long term." 75 FR 17268 (April 5, 2010).

**S-101-021**

The FAA must inform the DEP in a timely manner of the CEP experiences delays in construction, a widening in the scope of the project, or other unforeseen circumstances that may result, during a calendar year, in emissions increases that are greater than emission projections described in the FEIS, General Conformity Determination, or Air Quality Technical Report. Upon a change in the projected emission, the FEIS should be updated using new emissions estimates.

Losses of Aquatic Resources (33 CFR Parts 325 and 332) and the Pennsylvania Code Title 25, Chapter 105.20(a).

**S-101-013**

The FEIS is complete and meets all of the requirements of the Council on Environmental Quality. The FEIS discloses the requirement for a NPDES Permit for Discharge of Stormwater from Construction Activities and compliance with DEP's Chapter 102 regulations in Table 1-5 and Sections 6.6.2 and 6.7.

**S-101-014**

This comment has been addressed; the errata sheet included in the ROD before the Table of Contents provides a correction for the FEIS. The errata sheet included in the ROD correctly references Title 25, Chapter 93 of the Pennsylvania Code.

**S-101-015**

The FAA, as well as the City, as the entity responsible for the final design and permitting of the CEP, understands the DEP's concerns with regard to construction dewatering and the City will address those concerns in consultation with the PA DEP during the final design and permitting of the CEP.

Contaminated dewatering discharge will be stored and disposed of in accordance with Title 25, Chapter 95 of the Pennsylvania Code. As discussed in Section 6.7 of the FEIS and Section 10.7 of the ROD, construction dewatering will require mitigation measures, proper handling of the dewatering discharge, and a permit from the PA DEP.

**S-101-016**

The matter of future PM<sub>2.5</sub> precursor reductions was generally discussed in the Air Quality Technical Report and at meetings as "best



Ms. Susan McDonald

- 8 -

October 14, 2010

We trust that the above comments will be considered by FAA as you document your agency's decisions about this important project. We look forward to continue working with FAA and the City of Philadelphia as this project moves forward.

Sincerely,



David W. Burke  
Watershed Manager  
Watershed Management

cc: Ms. Engel - Vanasse Hangen Brustlin, Inc.  
Ms. Okorn - U.S. Environmental Protection Agency - Region 3  
Mr. Lapp - U.S. Environmental Protection Agency - Region 3  
Mr. Bonner - U.S. Army Corps of Engineers  
Mr. Spotts - PA Fish and Boat Commission  
Mr. Frassetta - PA Department of Conservation and Natural Resources  
Ms. Heffner - PA Department of Environmental Protection  
Ms. Epps - PA Department of Environmental Protection  
Mr. Feola - PA Department of Environmental Protection  
Re 30 (GJS10)285

practices", and as a means to comply with City Ordinances, but not identified as a commitment given the affirmative outcome of the General Conformity Determination with respect to PM2.5.

Based upon the most recent estimates, emissions of PM2.5 (and the precursors) associated with the CEP are within the applicable General Conformity de minimis levels. Therefore, it remains unlikely that further reductions of the PM2.5 precursors will be necessary.

However, the FAA's FEIS, General Conformity Determination, and ROD for the CEP contain commitments to (a) offset ozone-producing NOx and VOC emissions which are also PM2.5 precursors and (b) implement construction period PM2.5 emission-reduction measures.

#### **S-101-017**

PA DEP's disagreement with these statements appears to be based upon a misunderstanding. The dispersion modeling estimates that 24-hour PM2.5 concentrations will be reduced in the future (due mostly to increased motor vehicle emission controls). However PM 2.5 concentrations are projected to continue to exceed the NAAQS, whether CEP is built or not. Relative to the No-Action Alternative, PM2.5 concentrations under Alternative A are estimated to be slightly lower in 2025 and slightly higher in 2030. Moreover, total PM2.5 emission increases caused by the CEP are less than the applicable Clean Air Act General Conformity Rule de minimis levels - indicating that they are compatible with the goals and objectives of the State Implementation(SIP) to bring the Philadelphia area back into compliance with the NAAQS for PM2.5. Given the slight differences between the build and no build alternatives, that all have reduced PM2.5 concentrations compared to current (2006 and 2008) conditions, and that background values used for the modeling already exceeded required standards, the FEIS properly concluded that the cumulative effects of build alternatives would not cause serious deterioration. For these

reasons, the FEIS also accurately stated that the general conformity rules will assure that neither of the build alternatives will cause a significant adverse effect on air quality. Although the SIP for achieving compliance with PM2.5 standards is pending EPA approval, the FAA has taken the hard look required by NEPA and demonstrated that Alternative A meets Clean Air Act general conformity requirements.

The FAA held a series of coordination meetings and conference calls with the USEPA Region III and PA DEP on June 9th, July 23rd, and August 27th in 2008; September 30th and November 17th in 2009; and February 23rd, March 24th, and June 4th in 2010. The 2008 pre-DEIS meetings previewed the EIS and General Conformity analysis methods and results. None of the agency representatives in attendance objected to methods or results during these meetings. The 2008, 2009, and 2010 sessions were all used to provide the USEPA and PA DEP with (a) recurrent opportunities to review and comment on updates to the study, any technical adjustments to the analyses, and the preliminary results of the work; (b) reach inter-agency consensus on the approaches and issues; (c) and allow the FAA to complete the EIS Air Quality analyses and the General Conformity Determination in a manner mutually acceptable to the FAA, USEPA, and the PA DEP.

#### **S-101-018**

With regard to the comments, see Responses to Comment S-101-017 and the following should also be considered: 1) future-year PM2.5 concentrations with the CEP are forecasted to be below the existing levels; 2) PM2.5 emissions with the CEP are less than the General Conformity thresholds, thus demonstrating compliance with General Conformity for PM2.5; 3) CEP-related PM2.5 emissions (and dispersion analysis) do not take credit for the emission reductions achieved through the Airport Emission Reduction Credit/Voluntary Airport Low Emissions (AERC/VALE) program, as these reductions were not required to show compliance with General Conformity (for both construction and

operations) for PM2.5; 4) Construction period PM2.5 emission estimates do not take credit for the emission reductions measures associated with City of Philadelphia Executive Order 1-07 and other measures to which the City has committed; and 5) AERCs obtained by the City through the VALE program amount to a reduction in PM2.5 emissions of about 5.5 tons/year during the construction period and 2.4 tons/year during the operational years, which, again, are not accounted for because General Conformity is met.

#### **S-101-019**

Based upon the air quality assessment conducted for the EIS and General Conformity Determination, all of the steps for reducing CEP-related emissions to required levels have been identified and established. This includes the use of Airport Emission Reduction Credits (AERCs) and the purchase of Emission Reduction Credits (ERCs) to reduce NOx and VOC emissions below their respective regulatory thresholds. There are no requirements to purchase ERCs for PM2.5 (or its precursors) as the project-related emissions of this pollutant are within (i.e., below) the applicable de minimis levels. It is understood that the application of ERCs must be accomplished at the same time as the emissions from the project occur so that they are properly offset.

#### **S-101-020**

The FAA is aware of and has advised the City about the 1.3 to 1 ratio for ERCs and it is documented in Section 10.5 and Table 10-3 of the ROD.

#### **S-101-021**

As stated in the General Conformity Determination, if the Federal Action is changed so that there is an increase in the emissions above the de minimis thresholds a new general conformity determination is required. Appropriate additional NEPA review would be conducted as well. See FEIS Volume 4, Appendix E, Page E-64.



## Interboro School District

Maintained by the Boroughs of Glenolden, Norwood, Prospect Park and Township of Tinicum  
900 Washington Avenue  
Prospect Park, Pennsylvania 19076

Office of the Board of School Directors

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September 10, 2010

Ms. Susan L. McDonald  
Harrisburg Airports District Office  
Federal Aviation Administration  
3905 Hartzdale Avenue, Suite 508  
Camp Hill, Pennsylvania 17011

Dear Ms. McDonald,

As members of the Board of School Directors of the Interboro School District, we are writing to you to share a number of concerns that we have regarding the results of both the updated Noise Compatibility Study and the Executive Summary of the Final Environmental Impact Statement (FEIS) issued by the US Department of Transportation and the Philadelphia Airport.

According to the FEIS, Alternative A has been identified as the preferred alternative for economic, environmental, and technical factors. This alternative involves extension of certain runways, upgrades and reconfigurations to an existing terminal complex, the addition of a new commuter terminal and automated people mover for transporting passengers, relocation of the current UPS facility and the freight railroad, and the Dredge Disposal Facility.

Your report states on page S-9 that Alternative A would "result in greater numbers of people experiencing significant noise impact and the loss of 31.0 more acres of wetlands than Alternative B". The report goes on to explain that Alternative A has been selected as the Preferred Alternative due to increased capacity, reduction of delays, and greater flexibility of scheduling, among other reasons. Alternative A would result, the report states, in significant noise impacts to 832 people and 330 housing units in the year 2025 (with more impact in 2030), and it is further stated that these noise impacts would "exceed the FAA's threshold of significance and would warrant mitigation measures." The Noise Compatibility Study cites the considerable increases in air traffic volume, going from 448,000 flights in 2003 to a predicted increase of 559,000 by the end of this year. This substantial increase in the number of flights has already produced a significant increase in the noise levels for Tinicum Township residents. This potential noise impact directly impacts Tinicum School, located in the noise decibel increase range shown in Figure S-5 of your report. In a letter to you of October 4, 2005, based on a Program Eligibility Report study of sound insulation for the Tinicum School presented to the Division of Aviation, Randolph Jones of the Jones Payne Group stated, "We believe that the Tinicum School is eligible for sound insulation treatments under FAA guidelines as set forth in the Airport Improvement Handbook, Order

L-101-001

5100.38C, Chapter 8, Noise Compatibility Projects.” Mr. Jones goes on to state that noise levels produced by nearby overhead aircraft were loud enough to interfere with speech eligibility in several classrooms with closed windows. With windows opened, the noise levels exceeded interference eligibility levels in all classrooms. As Mr. Jones’ conclusions state, Tinicum School would therefore be eligible to meet the FAA’s criteria for Airport Improvement Project funding to assist with noise insulation of the school. In a memo to you dated October 19, 2005, Mike Jeck, Airport Noise Officer, recommends that an acoustical treatment approach to the school could include architectural and ventilation upgrades to doors and windows, improvements to the roof, and upgrades to the mechanical systems. We remain strongly concerned about the disruption to educational activities at the school as a result of this noise increase, particularly during periods of warmer weather when classroom windows must be opened due to lack of air conditioning.

L-101-002

In addition, 72 housing units in Tinicum Township would need to be acquired, including the entire relocation of the neighborhood west of 4<sup>th</sup> Avenue. The report states that “there is sufficient replacement housing available in Tinicum”, yet despite the alleged availability of replacement housing for displaced residents, this ignores the considerable inconvenience and disruption of a move for those homeowners and their current affiliation with a neighborhood. In addition, an additional 80 businesses would be lost, resulting in the loss of real estate taxes to both Tinicum Township and our school district. You anticipate that \$216,000 of tax revenue would be lost to Tinicum, and that Interboro School District would lose about \$1.8 million (approximately 6% of annual real estate revenue). More revenue would be lost, approximately \$348,000 (approximately 70% of the current total revenue from parking facilities), by the acquisition of three privately-owned parking facilities. We would like to remind you that these are *annual* losses, increasing the tax burden of the residents of Tinicum as well as our three other communities in Interboro, whose taxes will increase by an estimated 6% or more, in order to make up for these losses of revenue. While the FAA acknowledges this loss of revenue, this acknowledgement stops short of providing any recommendations for making the district whole for this significant loss of revenue and the increased burden on all of our taxpayers. The constraints of Act 1 prohibit the district from raising local taxes each year beyond a certain level, thereby increasing the likelihood that much of the lost revenue cannot be made up through local tax increases.

L-101-003

Further, it is stated that children will be minimally impacted by the displacement of homes within Tinicum Township and their subsequent relocation. We believe that the impact of such moves and the disruption of existing neighborhoods carries with it a substantial impact and emotional toll on the families and especially to the children of this community. Your Table S-4 provides conclusions of impact thresholds showing significant adverse effects, most notably in air quality and pollutant emissions, noise impact, construction impacts, floodplains, light emissions, and “disproportionately high and adverse human health effects on minority or low-income populations,...or children.” Additional impact is on traffic in the area, most notably on Essington Avenue.

L-101-004

We ask that you strongly reconsider the proposed Alternative to airport improvements. While we recognize the need to update the airport facilities and to ensure that it remains a world class hub for transportation, so too are the needs of the residents of Tinicum Township a priority. As representatives of the Interboro Board of School Directors, it is our responsibility to ensure that the needs of our residents and taxpayers are met, to the best of our ability, and we find that the current plans for both displacement of residents, noise increases, and loss of revenue for our school system an unacceptable result of airport improvements. At the very least, the results of the Tinicum School Sound Insulation Eligibility Study would seem to warrant mitigation measures be undertaken at the expense of the airport.

L-101-005

## L-101-001

The Tinicum School Sound Insulation Eligibility Study does not address the effects of the CEP. The report cited was prepared as part of the voluntary Part 150 Study, which is separate sound attenuation program, independent of the CEP, but also sponsored by the City of Philadelphia. As a result of the CEP, the Tinicum School will experience a noise level of DNL 62.9 db in 2025, which is an increase of 2.3 dB over the No-Action Alternative. In 2030, the noise level at the Tinicum School will be DNL 63.6 dB, which is 2.8 dB higher than the noise level for the No-Action Alternative. The threshold for a significant impact is a change of 1.5 dB or more at DNL 65 db or higher; therefore, neither of these is considered a significant impact requiring mitigation.

## L-101-002

The FAA acknowledges that the loss of tax revenue, in combination with the limitations on raising taxes imposed by the Pennsylvania Taxpayer Relief Act (Act 1) could affect the Tinicum Township and the Interboro School District.

The matter of prospective losses in tax revenue is between the City and Tinicum Township. The FAA is optimistic that they will work together and resolve this issue.

## L-101-003

Table S-4 is not a summary of impacts associated with the CEP; rather it summarizes thresholds for significant impacts for each resource category was evaluated in the EIS, based on FAA guidance. These thresholds were used to determine if the Project would result in significant impacts to any of the impact categories. Impacts associated with the Project are summarized in Table 5.21-1 of the FEIS.

The FAA acknowledges that the Project will result in impacts to children as a result of residential relocations. However, these impacts are not

Thank you for your consideration of our concerns. We hope that a favorable response will be forthcoming.

Very truly yours,



Christopher Kelley, President  
Interboro School District Board of School Directors

Cc: Mr. Mark Gale, C.E.O., Philadelphia Airport  
Mr. Calvin M. Davenger, Jr., Deputy Director of Aviation, Philadelphia Airport  
Noise Compatibility Program Update, c/o Portfolio Associates

readily quantifiable. As detailed in Section 5.5 of the FEIS, the Project is not anticipated to result in significant health or safety impacts to children.

#### **L-101-004**

The FAA has noted and considered your comment.

#### **L-101-005**

The Tinicum School Sound Insulation Eligibility Study does not address the effects of the CEP. The Study was prepared as part of the voluntary Part 150 Study, which is separate sound attenuation program, independent of the CEP, but also sponsored by the City of Philadelphia.

As a result of the CEP, the Tinicum School will experience a noise level of DNL 62.9 db in 2025, which is an increase of 2.3 dB over the No-Action Alternative. In 2030, the noise level at the Tinicum School will be DNL 63.6 dB, which is 2.8 dB higher than the noise level for the No-Action Alternative. As a result of the CEP, aircraft noise levels at the Alternatives Elementary School in Tinicum will experience a noise level of DNL 60.9 db in 2025, which is an increase of 2.6 dB over the No-Action Alternative. In 2030, the noise level at the Alternatives Elementary School will be DNL 61.6 dB, which is 3.1 dB higher than the noise level for the No-Action Alternative. The threshold for a significant impact is a change of 1.5 dB or more at 65 db or higher; therefore, none of these is considered a significant impact requiring mitigation. The All-State Career, Inc. School on Seminole Street in Tinicum is a property that will be acquired for the Project.

"...I will see you again, and your hearts will rejoice,  
and no one will take your joy away from you."  
--John 16:22

Sept. 1, 2010

Susan,

I received the new  
booklet concerning the  
Phil. Int'l Airport  
expansion.

I am not an engineer  
but nothing makes any  
sense except B&B  
for Philadelphia.

I can't believe  
that you are actually  
filling in a runway to  
build another runway.



**SALESIAN MISSIONS**

2 LEBEYRE LANE, NEW ROCHELLE NY 10801-5710

Wear your hands, reaching out to needy children around the world.

P-101-001

I have 2 questions to ask you.

P-101-002

1. Where are the residents of Tinicum going to go?  
Don't tell me Eastwicks.  
Why don't you live there?
2. Who is going to make up all the money that the The school District, County, and Township is losing?  
Is Philadelphia going to help us. No I don't think so. Good

I only hope I can move to Canada.

Think of what you are doing to Tinicum Township and its residents.

#### P-101-001

As discussed in Section 9.5 of the ROD and Section 5.3 of the FEIS, relocation is expected to take place within the community. FAA determined that Tinicum has sufficient housing stock to permit all households being displaced by the project to relocate to other neighborhoods in the Township.

#### P-101-002

While the FAA cannot force the City of Philadelphia to help make up the money, the FAA would strongly encourage the City to continue negotiating a payment in lieu of taxes agreement for lost tax revenue.



"...I will see you again, and your hearts will rejoice,  
and no one will take your joy away from you."

--John 16:22

*They are losing their jobs,  
homes and you're taking  
homes away.*

*What a disgrace,  
Mary Lesco*



**SALESIAN MISSIONS**

2 LEROUX LANE, NEW ROCHELLE NY 10801-5710

*We are your hands reaching out to needy children around the world.*

----- Forwarded Message -----

From: John Dunkle <jdunkle@prodigy.net>  
To: John Dunkle <jdunkle@prodigy.net>; Thomas J. Sullivan III  
<tjsullivan@thesullivancompany.com>  
Sent: Thu, October 14, 2010 11:36:30 PM  
Subject: Philadelphia Airport Expansion Plan

As a long time resident of Tinicum Township, it seems obvious that we get the raw end of the deal every time the FAA or the Philadelphia Airport Authority gets the bright idea to "improve" the runways.

Although more than two-thirds of the airport is located in Tinicum, we get nothing but the fallout from the fumes and noise of aircraft taking off and landing. It was bad enough before, but since they have changed the flight patterns planes fly at a lower altitude directly over our homes. So what is our compensation for all this added inconvenience? Nothing! Philadelphia gets all the money from landing fees, even from planes that touch down and take off from Tinicum Township. And to add insult to injury, they even collect city sales tax from terminals located entirely in Delaware County. Also, if you are a resident of Delaware County and work out of terminals C,D,E, and F located in Philadelphia, you have to pay Philadelphia wage tax.

Now the airport wants to encroach on the Tinicum residents even more by dislocating 72 long-time tax paying families, further reducing our tax base. All of this to aid some lame brain idea to expand the airport. I think enough is enough and it's time this was ended. So what is the solution? If the FAA insists that the airport needs another runway or taxi area, which I don't believe it does, there is more than enough land for expansion on the Philadelphia side of the boarder. On the East side of runways 17/35 there are acres upon acres of land filled with abandoned and dilapidated warehouses that are weed infested and a health hazard; not to mention a big tax loss for Philadelphia. I say use it and leave us alone. The airport has land from the Schuylkill River to the Delaware River and could even extend runway 17/35 over Eastwick with an underpass for I-95. The approach now is over our houses, so why not over Eastwick?

In closing, I would like to point out that the airport should not be in such a hurry to expand. For one thing, the area population is shrinking and the Atlantic City Airport is taking a good chunk out of Philadelphia air traffic. The airlines based in Philadelphia are flying fewer flights to save money and I see little chance of this changing in the near future. There are better ways to spend \$5.2 Billion, including a better school system. Or Philadelphia could pay Delaware County the sales tax they have fraudulently withheld.

Thank you,

#### **P-102-001**

The EIS rigorously explores and objectively evaluates alternatives that are capable of achieving the purpose and need, including various potential on-airport improvements.

Both on- and off-airport alternatives, as well as non-construction alternatives (i.e., congestion management, technology improvements), were identified and "screened" to determine their ability to meet the project's purpose and need, and to determine if they are reasonable and feasible to implement. The EIS evaluation of alternatives included 29 different airfield configurations. A multi-tiered screening process was established by the FAA to identify those alternatives that could feasibly achieve the Project's goals and that are reasonable. The alternatives screening process is detailed in Section 3.2 of the FEIS.

#### **P-102-002**

The Runway 17-35 Extension Project was completed in May 2009; however, it does not fully address airfield congestion and airport capacity needs in the Philadelphia Metropolitan Area in the long term and delays will continue to grow in the future. Because it is a crosswind runway, extending Runway 17-35 further will not result in additional reductions in delay in the long term.

#### **P-102-003**

As reported in Section 2.4.3 of the FEIS, as a result of the national and global economic recession and its affect on overall aviation demand, the FAA reexamined the validity of the EIS Forecast by evaluating its consistency with FAA's most recent Terminal Area Forecast (TAF). The most recent FAA TAF available for consideration in this FEIS was issued in December 2009. The EIS Forecast meets the FAA criteria for consistency with the most recent TAF and is therefore considered valid. Further, Philadelphia continues to be one of the most delay-prone airports in the National Airspace System. Based on the most recent data

available, PHL was the 18th busiest airport in the U.S. in terms of passengers, reporting a total of 30.6 million passengers in 2009. Additionally, the Airport was the 9th busiest in terms of total aircraft operations, reporting 472,868 in 2009.

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Attachment B  
Section 106 Memorandum of Agreement

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**MEMORANDUM OF AGREEMENT (MOA)  
THE FEDERAL AVIATION ADMINISTRATION AND  
THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER,  
PURSUANT TO 36 CFR SECTION 800.6(b)(1)  
REGARDING THE  
PHILADELPHIA INTERNATIONAL AIRPORT  
CAPACITY ENHANCEMENT PROGRAM  
CITY OF PHILADELPHIA, PHILADELPHIA COUNTY  
AND TINICUM TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA**

WHEREAS, the City of Philadelphia (the City) is proposing the Philadelphia International Airport (PHL) Capacity Enhancement Program (the Project) in the City of Philadelphia, Philadelphia County and Tinicum Township, Delaware County, Pennsylvania, and have identified two Build Alternatives for the Project, described as Alternatives A and B on pages S-6 to S-8 of the *Philadelphia International Airport Capacity Enhancement Program Draft Environmental Impact Statement* (DEIS) dated September 2008; and

WHEREAS, the City is the Project sponsor and the Federal Aviation Administration (FAA) is serving as the Project lead federal agency pursuant to the National Environmental Policy Act (NEPA, codified as 42 USC 4321 *et seq.*), and is the federal agency responsible for compliance with Section 106 of the National Historic Preservation Act, as amended (codified at 16 USC § 470f, herein “Section 106”); and

WHEREAS, the FAA and the City have consulted on the Project with the Pennsylvania State Historic Preservation Officer (PASHPO), the New Jersey State Historic Preservation Officer (NJSHPO) and the Delaware State Historic Preservation Officer (DESHPO), pursuant to 36 CFR Part 800, *Protection of Historic Properties*, regulations implementing Section 106; and

WHEREAS, the FAA and the City, in consultation with the PASHPO, NJSHPO, and DESHPO have determined the Area of Potential Effects (APE) of the Project, as defined at 36 CFR Part 800.16(d) and shown in Figure 4.16-1 of the DEIS. The Direct Impacts APE lies wholly within Pennsylvania, and the Indirect Impacts APE lies within Pennsylvania, New Jersey, and Delaware; and

WHEREAS, the FAA and the City, in consultation with the PASHPO, NJSHPO and DESHPO and pursuant to 36 CFR 800.5(a), have determined that the Project will result in no adverse effect to historic architectural resources; and

WHEREAS, the FAA and the City, in consultation with the PASHPO and pursuant to 36 CFR Part 800.4, have initiated Phase I investigations of archaeological resources, and have documented archaeological investigations conducted for the Project in *Phase I Archaeological Survey Report* (A.D. Marble & Company, September 2008) and *Phases I & IB Underwater Archaeological Investigations Report* (Dolan Research, Inc. July 2008); and

WHEREAS, no archaeological sites have been recorded to date within the Project APE; and

WHEREAS, the FAA and the City, in consultation with the PASHPO and pursuant to 36 CFR Part 800.4, identified several areas within the APE (*Phase I Archaeological Survey Report*, A.D. Marble & Company, September 2008: Figures 6-5 and 8-1) where archaeological sensitivity has not been assessed because impacts are unknown, and where initial geomorphological and/or remote sensing surveys are necessary to determine existing conditions and/or to evaluate archaeological sensitivity once impacts are known; and

WHEREAS, the FAA and the City, in consultation with the PASHPO and pursuant to 36 CFR Part 800.4, identified two sensitive areas for underwater archaeological resources (*Phase I Archaeological Survey Report*, A.D. Marble & Company, September 2008: Figure 6-5, Areas #3 and #5) where Phase I and IB underwater archaeological investigations are required if avoidance of underwater resources is not possible during construction activities; and

WHEREAS, the FAA and the City, in consultation with the PASHPO and pursuant to 36 CFR Part 800.4, conducted underwater archaeological investigations at the two sensitive locations (Area #3 and #5): the Sunoco Pier West Extension/Fort Mifflin Dock and upstream from Little Tinicum Island (Dolan Research Inc. July 2008: Figures 1 through 10); and

WHEREAS, the FAA and the City, in consultation with the PASHPO and pursuant to 36 CFR Part 800.4, concluded no further underwater archaeological investigations were recommended at the Sunoco Pier West Extension/Fort Mifflin Dock (Dolan Research Inc. July 2008:15) and monitoring of one target location (T14) was recommended at the survey area upstream from Little Tinicum Island (Dolan Research Inc. July 2008: Figures 1-10); and

WHEREAS, the FAA and the City, pursuant to 36 CFR Part 800.4, completed Phase I identification testing in one area that is sensitive for terrestrial archaeological resources, identified as Area A (*Phase I Archaeological Survey Report*, A.D. Marble & Company, September 2008: Figure 6-5, identified as Area #1; Figure 7.1, identified as Test Area A) and determined in consultation with the PASHPO that no additional archaeological investigations are necessary at this location; and

WHEREAS, the FAA and the City, in consultation with the PASHPO and pursuant to 36 CFR Part 800.4, identified four additional parcels located outside of the PHL property line that are sensitive for terrestrial archaeological resources, shown as Sensitivity Areas B (#2), D (#4) and F (#6, two parcels) on Figure 6-5 (*Phase I Archaeological Survey Report*, A.D. Marble & Company, September 2008), where property access restrictions prevented archaeological testing and where identification and evaluation-level archaeological testing is necessary once access is granted; and

WHEREAS, the FAA and the City, in consultation with the PASHPO and pursuant to 36 CFR Part 800.4 and 36 CFR Part 800.5(a), will conduct Phase II and III archaeological investigations as necessary, in the four additional parcels identified outside of the PHL property line that are sensitive for terrestrial archaeological resources, shown as Sensitivity Areas B (#2), D (#4) and F (#6, two parcels) on Figure 6-5 (*Phase I Archaeological Survey Report*, A.D. Marble & Company, September 2008). Any intact cultural resources identified during the Phase I investigations will require Phase II evaluation studies if their eligibility for listing in the National

Register of Historic Places (NRHP) cannot be determined on the basis of the Phase I data. If resources are present and deemed NRHP-eligible, a Phase III data recovery plan will be implemented; and

WHEREAS, pursuant to 36 CFR Part 800.6(a), the FAA and the City have consulted with the PASHPO to avoid, minimize, or mitigate adverse effects of the Project on historic properties, and will continue this consultation as the archaeological investigations progress; and

WHEREAS, pursuant to 36 CFR Part 800.6(a), the FAA has consulted with the PASHPO, NJSHPO, DESHPO, Villages of Arden, Ardentown, and Ardencroft (Ardens Historic District), Philadelphia Historical Commission, and National Park Service, Philadelphia Support Office to avoid, minimize, or mitigate adverse effects of the Project on historic properties and will continue consultation with the PASHPO and relevant consulting parties as the archaeological investigations progress; and

WHEREAS, the FAA has involved, and will continue to involve the public, the Tribes, and historic interest groups, as stipulated under the NEPA of 1969, as amended, and the National Historic Preservation Act (NHPA), as amended [16 U.S.C. § 470], and its implementing regulations (36 CFR Part 800) in a manner consistent with the FAA public involvement consultation procedures.

NOW, THEREFORE, the FAA, the City, and the PASHPO agree that upon the FAA's decision to proceed with the Project, the FAA shall ensure that the following stipulations are implemented in order to determine if the Project will have adverse effects on archaeological resources and to resolve adverse effects if applicable pursuant to 36 CFR Part 800.4 and 36 CFR Part 800.5(a).

## **STIPULATIONS**

All parties to this MOA have reviewed the Project with regard to archaeological resources identification and evaluation issues, and as a consequence of the same, the City agrees to the following stipulations. The FAA shall ensure that the following stipulations are implemented by the City.

### **I. Archaeological Resources**

- A. The City will conduct geomorphological and/or remote sensing surveys in five (5) locations (Target T-14; Areas B (#2), D (#4) and F (#6, two parcels)) within the APE to determine existing conditions and/or to evaluate archaeological sensitivity once impacts are known. Such investigations will be followed by archaeological investigations and/or data recovery investigations if the geoarchaeological assessment indicates such approaches are warranted.
- B. The City will conduct archaeological monitoring of underwater Target T-14 in the area upstream from Little Tinicum Island if avoidance of this resource is not possible during construction activities. If it is determined that this resource will be impacted during construction activities, then a determination of eligibility will be developed for the



resource. In the event that the resource is determined to be National Register–eligible, then an appropriate mitigation plan will be developed in consultation with the PASHPO, the FAA, and the City and implemented.

- C. The City will conduct identification and evaluation-level archaeological testing once property access is granted in areas located outside of the PHL property line that are sensitive for terrestrial archaeological resources. These areas are identified as Sensitivity Areas B (#2), D (#4) and F (#6, two parcels) on Figure 6-5 (*Phase I Archaeological Survey Report*, A.D. Marble & Company, September 2008), and corresponding to the following 2008 Tax Parcels. The tax parcel identifications are provided in Table 1 below:

Table 1: Tax Parcel Identification for Sensitivity Areas

Archaeological Test Area Designation	Owner	Tax Number	Acreage	Phase I Survey
SA B (#2)	Heilwell Property	045S19008	19.13	Incomplete testing
SA D (#4)	unknown	no tax parcel data	8.79	Outstanding
SA F (#6)	Tinicum Township	45-08-014:000	7.6	Outstanding
SA F (#6)	Tinicum Township	45-08-014:000	3.88	Outstanding

SA = Sensitivity Area based on Figure 6-5, AD. Marble & Company, 2008.

- D. The City will conduct Phase II and III archaeological investigations as necessary. Any intact cultural resources identified during the Phase I investigations will require Phase II evaluation studies if their eligibility for listing in the National Register of Historic Places (NRHP) cannot be determined on the basis of the Phase I data. If resources are present and deemed NRHP-eligible as a result of the Phase II investigations, a Phase III data recovery plan will be implemented.
- E. If any human remains and grave-associated artifacts are encountered during the archaeological investigations, the FAA will bring this to the attention of the PASHPO and any federally recognized Tribes that may attach religious and/or cultural significance to the affected property within 24 hours of the discovery. No activities that might disturb or damage the remains will be conducted until all parties have determined whether excavation is necessary and or/desirable. All procedures will follow the guidance outlined in the National Park Service Publication *National Register Bulletin 41: Guidelines for Evaluating and Registering Cemeteries and Burial Places*, the Native American Graves Protection and Repatriation Act of 1990 (PL 101-601), as appropriate, and the PASHPO's *Policy for the Treatment of Burials and Human Remains* (1993).
- F. The City or their consultant will prepare reports on any data recovery excavations, if applicable, for review and comment by the FAA, the PASHPO, and any other consulting parties. The report shall meet professional standards set forth by the Department of the Interior's *Format Standards for Final Reports of Data Recovery Program*

(42 CFR 5377-79) and will be consistent with the Bureau for Historic Preservation/Pennsylvania Historical and Museum Commission's *Cultural Resource Management in Pennsylvania: Guidelines for Archaeological Investigations* (2008) for reports prepared for the PASHPO, and the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation*. A draft report will be completed within one year of the conclusion of fieldwork. Any comments provided by the PASHPO or other consulting parties will be considered in the preparation of the final report. A final report will be completed and submitted within one year of the close of the comment period.

- G. All records and materials resulting from the archaeological investigations that are not privately owned will be curated in accordance with 36 CFR § 79 and the curation guidelines developed by the PASHPO (2006). If the City has not purchased the property at the time of the data recovery excavations, the City shall request that the property owner sign a gift agreement donating the artifacts to the State Museum of Pennsylvania. All records and all artifacts not privately owned will be curated by the City at the PASHPO in Harrisburg, or its designee, following the policies of that institution. The City will be responsible for the curation fee of three hundred-fifty dollars (\$350) per cubic foot.

## II. Administrative Stipulations

### A. Personnel Qualifications

All archaeological work carried out pursuant to this agreement will be by or under the direct supervision of a person or persons meeting at a minimum the *Secretary of the Interior's Professional Qualification Standards for Archaeology and Historic Preservation* (61 CFR Appendix A). All work shall conform with the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation*, and the PASHPO guidelines (2006 and 2008).

### B. Late Discoveries

If any unanticipated discoveries of archaeological sites or historic properties are encountered during the implementation of this undertaking, the City shall suspend work in the area of the discovery, and the FAA shall comply with 36 CFR Part 800.13 by consulting with the PASHPO and, if applicable, Federally recognized Tribes that attach religious and/or cultural significance to the affected property. The FAA will notify the PASHPO and, if applicable, any such Federally recognized Tribes within one working day of the discovery. The FAA, the City, or the PASHPO, as appropriate, and, if applicable, any such Federally recognized Tribes will meet at the location of the discovery within seventy-two (72) hours of the initial notification to determine appropriate treatment of the discovery prior to the resumption of construction activities within the area of discovery.

### C. Review Periods

The review period for all submissions will be thirty (30) calendar days from receipt of submission for review.

### D. Amendments

Any party to this MOA may propose to the FAA that this agreement be amended, whereupon the FAA shall consult with the other parties to this MOA to consider such an amendment. 36 CFR Part 800.6(c)(7) shall govern the execution of any such amendment.

### E. Resolving Objections

1. Should any party to this MOA object in writing to the FAA regarding any action carried out or proposed with respect to the Project or implementation of this MOA, the FAA shall consult with the objecting party to resolve the objection. If after initiating such consultation the FAA determines that the objection cannot be resolved through consultation, the FAA shall forward all documentation relevant to the objection to the ACHP, including the FAA's proposed response to the objection. Within thirty (30) days after receipt of all pertinent documentation, the ACHP shall exercise one of the following options:
  - a) Advise the FAA that the ACHP concurs in the FAA's proposed response to the objection, whereupon the FAA shall respond to the objection accordingly;
  - b) Provide the FAA with recommendations, which the FAA shall take into account in reaching a final decision regarding its response to the objection; or
  - c) Notify the FAA that the objection will be referred to comment pursuant to 36 CFR Part 800.7, and proceed to document the objection and comment. The resulting comment shall be taken into account by the FAA in accordance with 36 CFR Part 800.7(c) (4) and Part 110(1) of NHPA.
2. Should the ACHP not exercise one of the above options within thirty (30) days after receipt of all pertinent documentation, the FAA may assume the ACHP's concurrence in its proposed response to the objection.
3. The FAA shall take into account any ACHP recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; the FAA's responsibility to carry out all actions under this MOA that are not the subjects of the objection shall remain unchanged.

#### F. Objection Resolution Provision

If the City, the PASHPO, or any invited signatory to this MOA should object in writing to any measures or their manner of implementation, then the FAA shall notify the parties of this MOA and take the objection into account, consulting with the objector and, should the objector so request, with any of the parties to this MOA to resolve the objection.

#### G. Review of Implementation

If the stipulations have not been initiated within five (5) years after the execution of this MOA, the parties to this agreement shall review the MOA to determine whether revisions are needed. If revisions are needed, the parties to this MOA shall consult in accordance with 36 CFR Part 800 to make such revisions.

#### H. Sunsetting Duration

If the terms of this MOA have not been implemented by ten (10) years from the date of the signed MOA, this MOA shall be considered null and void. In such event, the FAA shall notify the parties to this MOA, and if the FAA chooses to continue with the Project, shall re-initiate review of the Project in accordance with 36 CFR Part 800.

### III. Termination

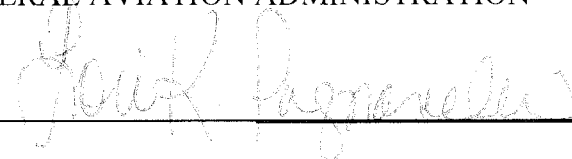
- A. If this MOA is not amended following the consultation set out in Stipulation II.D, it may be terminated by any signatory (FAA, PASHPO) or concurring signatory (the City). The party proposing to terminate this MOA shall so notify all parties to this MOA, explaining the reasons for termination and affording them at least thirty (30) days to consult and seek alternatives to termination. The parties shall then consult.
- B. Should such consultation fail, any signatory (FAA, PASHPO) or concurring signatory (the City) may terminate the MOA by so notifying all parties in writing.
- C. Should this MOA be terminated, the FAA shall either:
  - 1. Consult in accordance with 36 CFR Part 800.6(a)(1) to develop a new MOA; or
  - 2. Request the comments of the ACHP pursuant to 36 CFR Part 800.7(a)(1). The ACHP shall have forty-five (45) days to respond with comments.
  - 3. The FAA and the ACHP may conclude the Section 106 process with a MOA between them if the PASHPO or the City terminates consultation in accordance with 36 CFR Part 800.7(a)(2).

#### IV. Entire Agreement

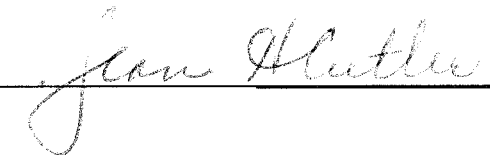
This MOA represents the entire agreement between the signatories and concurring parties to this MOA. Other than the occurrence of unanticipated discoveries as referenced in section III(B) of this MOA, all known obligations of the City and other signatories and concurring parties concerning cultural resources identification, evaluation, and mitigation are set forth in this MOA.

Execution of this MOA by the FAA and the PASHPO, and the implementation of its terms, will be evidence that the FAA has taken into account the effects of the Project on historic properties.

#### FEDERAL AVIATION ADMINISTRATION

By:  Date: 10/5/2010

#### PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

By:  Date: 10/6/2010

CONCUR:

#### CITY OF PHILADELPHIA

By: \_\_\_\_\_ Date: \_\_\_\_\_

IV. Entire Agreement

This MOA represents the entire agreement between the signatories and concurring parties to this MOA. Other than the occurrence of unanticipated discoveries as referenced in section III(B) of this MOA, all known obligations of the City and other signatories and concurring parties concerning cultural resources identification, evaluation, and mitigation are set forth in this MOA.

Execution of this MOA by the FAA and the PASHPO, and the implementation of its terms, will be evidence that the FAA has taken into account the effects of the Project on historic properties.

FEDERAL AVIATION ADMINISTRATION


By: \_\_\_\_\_ Date: \_\_\_\_\_

PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

By: \_\_\_\_\_ Date: \_\_\_\_\_

CONCUR:

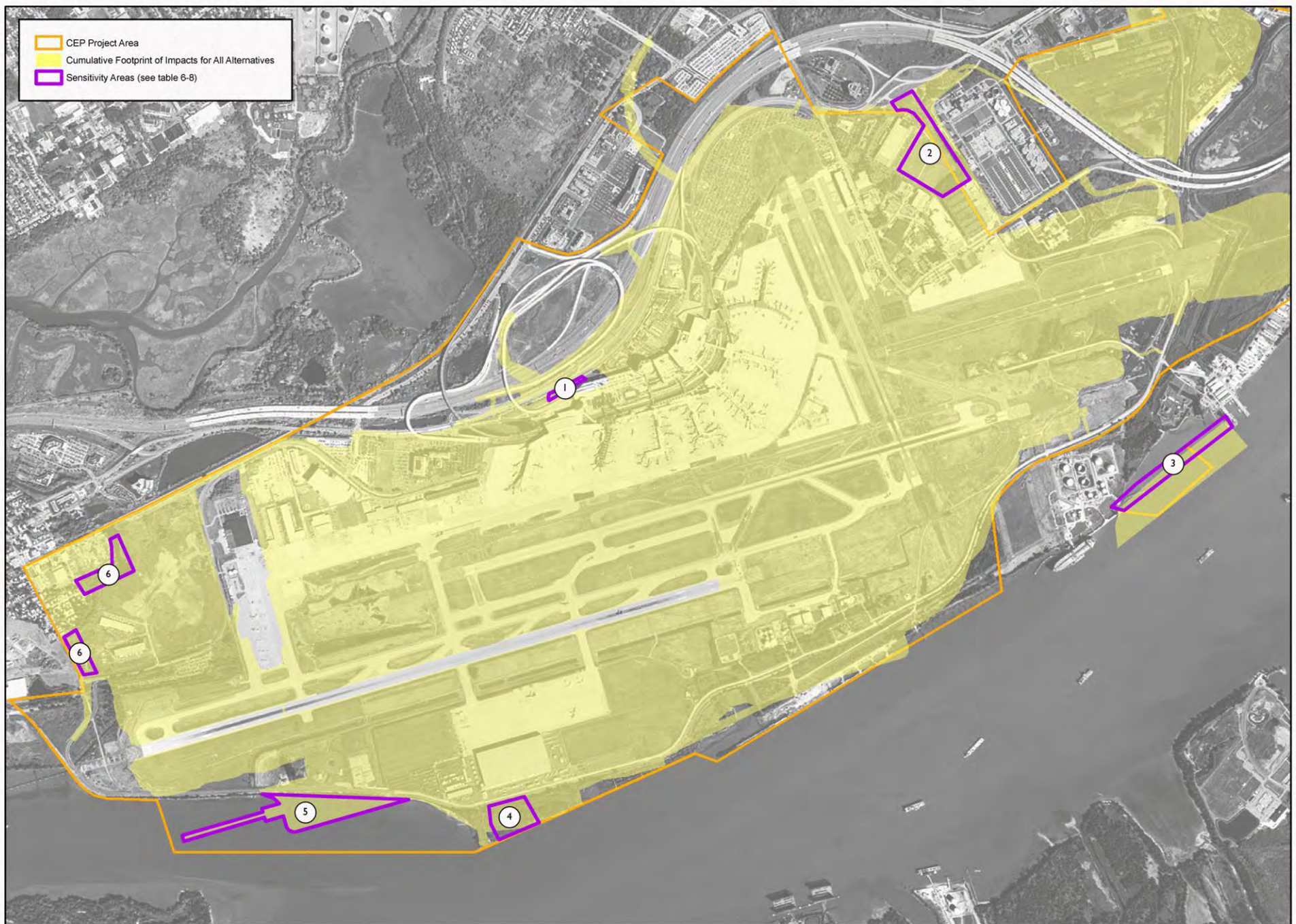
CITY OF PHILADELPHIA

By:  Date: 11/10/10

APPROVED AS TO FORM  
SHELLEY R. SMITH, CITY SOLICITOR

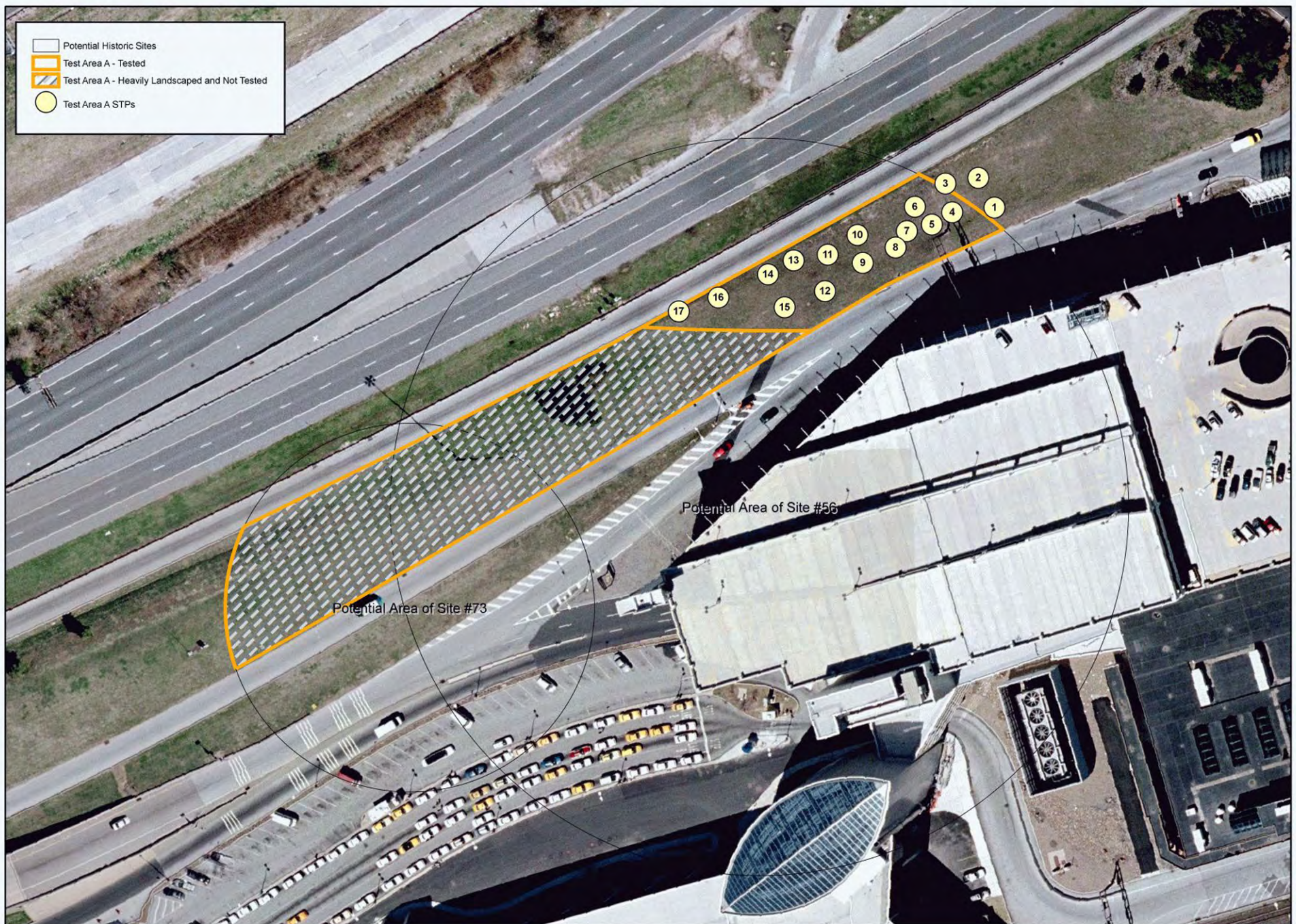
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Senior Attorney



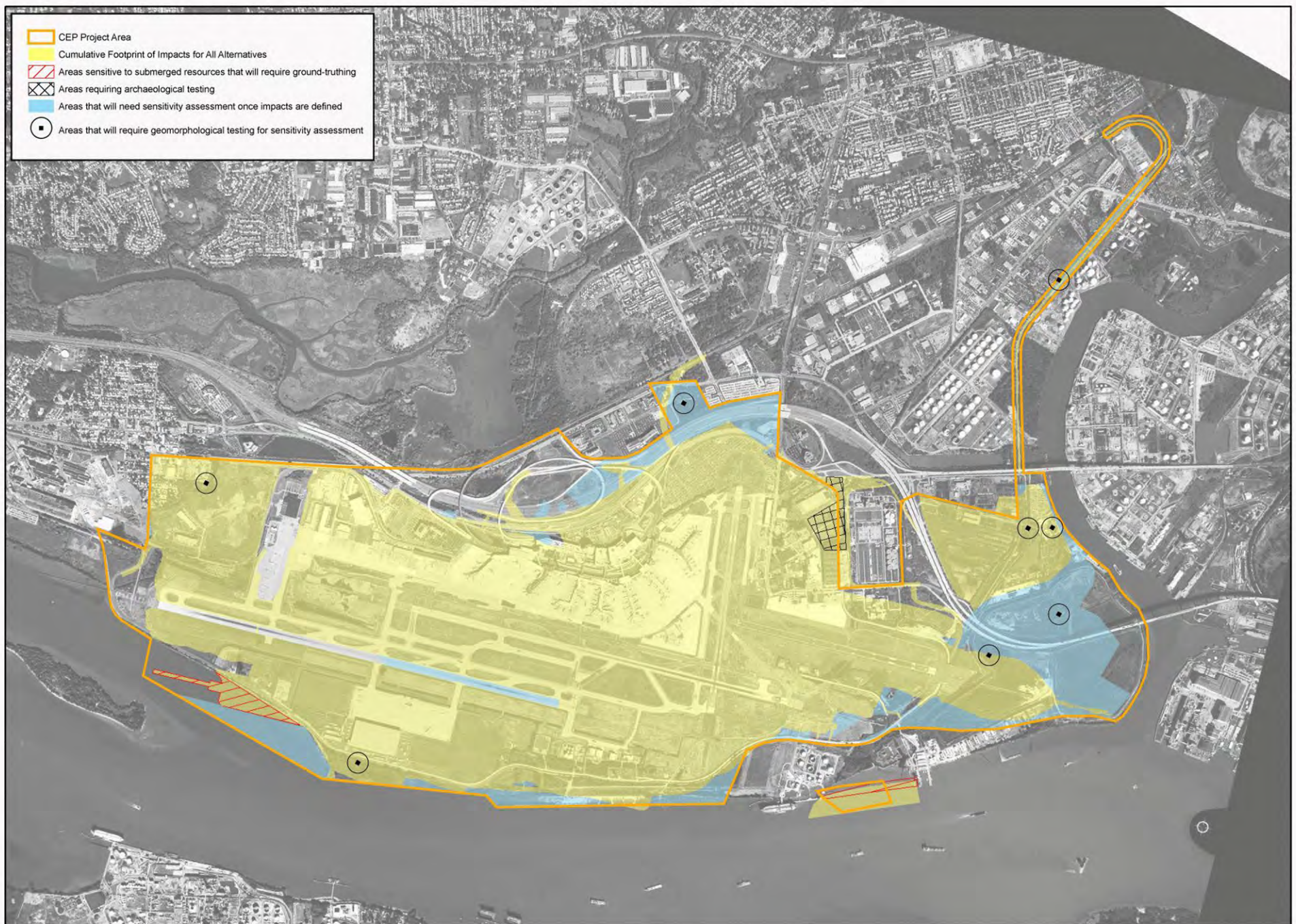


**Figure 6-5**  
**Archaeological Sensitivity Areas**









**Figure 8-1**  
**Areas Requiring Future Archaeological Evaluation**

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**Attachment C**  
**Airport Sponsor Certifications**

1. Certification of a Public Hearing
2. Certification of Airport Master Plan Availability
3. Certification that the Sponsor has advised communities they have the right to petition the Secretary of Transportation about the Project.

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November 12, 2010

Ms. Susan McDonald  
Environmental Protection Specialist  
Federal Aviation Administration  
Harrisburg Airports District Office  
3905 Hartzdale Drive, Suite 508  
Camp Hill, PA 17011

Sub: Philadelphia International Airport Capacity Enhancement Program  
Certification of Public Hearing

Dear Ms. McDonald:

Pursuant to 49 USC 47106(c)(1)(A)(i), this letter hereby certifies that the City of Philadelphia has provided opportunities for public hearings for the consideration of the environmental, social, and economic effects of the Capacity Enhancement Program (CEP). These hearings were held October 20, 21, 22, and 23, 2008. The hearings were held in Essington, Pennsylvania; Wilmington, Delaware; Philadelphia, Pennsylvania; and Paulsboro, New Jersey respectively.

Additionally, since the National Environmental Policy Act (NEPA) process was initiated in 2003, the City of Philadelphia has participated in seventeen public meetings or open house sessions designed to obtain public input. At these meetings, members of the public were provided an opportunity to discuss the CEP with Airport management and staff, to review detailed plans, to learn about the potential environmental, social, and economic impacts, and to gain an understanding of the mitigation strategies being developed.

Please advise if you require any further information regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark E. Gale", written over a horizontal line.

Mark E. Gale, A.A.E.  
Chief Executive Officer

cc: Marla Engel, VHB





Mr. Roger P. Moog  
Manager, Office of Aviation Planning  
Delaware Valley Regional Planning Commission  
190 N. Independence Mall West, 8th Floor  
Philadelphia, PA 19106-1520

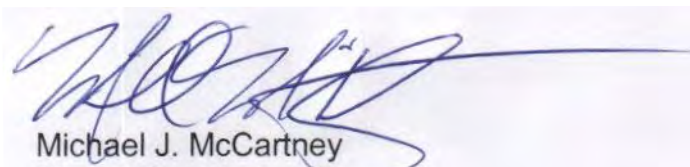
November 9, 2010

RE: Philadelphia International Airport Capacity Enhancement Program  
Certification of Airport Master Plan Availability

Dear Mr. Moog:

The Philadelphia Division of Aviation would like to extend our gratitude for your participation as a member on the Philadelphia International Airport's Master Plan Technical Advisory Committee during the planning process. As the Philadelphia region's Metropolitan Planning Organization, DVRPC plays a vital role in transportation planning for the region. This letter is to notify DVRPC that the Airport Layout Plan and Master Plan can be made available for review if desired. An electronic copy can be provided at a future Regional Aviation Committee meeting. Please feel free to contact me at (215) 937-6727 if you have further questions or require any further information regarding this matter.

Sincerely,



Michael J. McCartney  
Airport Planning and  
Environmental Services Manager

cc: Susan McDonald, FAA  
Calvin Davenger, Philadelphia International Airport

November 12, 2010

Mr. Thomas J. Giancristoforo, Jr.  
President & 1<sup>st</sup> Ward  
Board of Commissioners  
Tinicum Township  
629 N. Governor Prince Blvd.  
Essington, PA 19029

RE: Philadelphia International Airport, Capacity Enhancement Program

Dear Mr. Giancristoforo:

In Accordance with the National Environmental Policy Act, The Federal Aviation Administration (FAA) is completing an Environmental Impact Statement for the Philadelphia International Airport Capacity Enhancement Program.

On April 15, 2010, the FAA issued the Notification of the preferred Alternative (Alternative A), which was published in the Federal Register on April 23, 2010.

The Final Environmental Impact Statement was completed and released in August, 2010.

This letter will serve as your formal advice, pursuant to 49 USC 47106. (c)(1)(A)(ii) that your community has the right to petition the Secretary of Transportation with respect to the Philadelphia International Airport Capacity Enhancement Program

Sincerely,



Mark E. Gale, A.A.E.  
Chief Executive Officer



November 12, 2010

Mr. John Whelan  
Council Chairman  
County Council of Delaware County, PA  
Court House/Government Center  
201 W. Front Street  
Media, PA 19063

RE: Philadelphia International Airport, Capacity Enhancement Program

Dear Mr. Whelan:

In Accordance with the National Environmental Policy Act, The Federal Aviation Administration (FAA) is completing an Environmental Impact Statement for the Philadelphia International Airport Capacity Enhancement Program.

On April 15, 2010, the FAA issued the Notification of the preferred Alternative (Alternative A), which was published in the Federal Register on April 23, 2010.

The Final Environmental Impact Statement was completed and released in August, 2010.

This letter will serve as your formal advice, pursuant to 49 USC 47106. (c)(1)(A)(ii) that your community has the right to petition the Secretary of Transportation with respect to the Philadelphia International Airport Capacity Enhancement Program.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark E. Gale", with a long, sweeping horizontal line extending to the right.

Mark E. Gale, A.A.E.  
Chief Executive Officer

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**Attachment D****Agency Correspondence Since the FEIS**

Contents	Date
Letter from National Marine Fisheries to FAA	July 26, 2010
Letter from FAA to National Marine Fisheries	August 12, 2010
Letter from FAA to National Marine Fisheries	August 27, 2010
Letter from National Marine Fisheries to FAA	September 2, 2010
Letter from FAA to Advisory Council on Historic Preservation	October 7, 2010
Letter from Advisory Council on Historic Preservation to FAA	October 20, 2010
Email from New Jersey Historic Preservation Office to FAA	November 3, 2010
Email from Delaware State Historic Preservation Office to FAA	November 9, 2010
Letter from FAA to Pennsylvania Department of Environmental Protection	December 17, 2010
Letter from Pennsylvania Department of Environmental Protection to FAA	December 17, 2010
Email Between FAA -and U.S. EPA Region 3 (with attachment)	December 22 to 28, 2010
Letter from FAA to U.S. EPA Region 3	December 29, 2010



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UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
NORTHEAST REGION  
55 Great Republic Drive  
Gloucester, MA 01930-2276

HAR-ADO	
JMF	
ODS	
RWH	
SLM	
LRL	
RMW	
GMS	
ESG	
CJC	
ALL	

Susan L. McDonald  
U.S. Department of Transportation  
Federal Aviation Administration  
Harrisburg Airport District Office  
3905 Hartzdale Drive, Suite 508  
Camp Hill, PA 17011

JUL 26 2010

Dear Ms. McDonald:

NOAA's National Marine Fisheries Service (NMFS), Northeast Region, Habitat Conservation Division has reviewed the subject report, received by our office on May 26, 2010. It was prepared by the Department of Transportation's Federal Aviation Administration (FAA) in response to our November 10, 2008 letter in which we offered commentary to FAA's draft environmental impact statement (DEIS) for the Philadelphia International Airport (PHL), Capacity Enhancement Program (CEP).

To summarize, the FAA through a DEIS, evaluated three prospective airfield redevelopment alternatives selecting a preferred 'Build' option; Alternative A.

#### **Fish and Wildlife Coordination Act Comments**

We have carefully reviewed the essential fish habitat (EFH) assessment taking into consideration the previously published companion report entitled, ***Biotic Community Technical Report*** (BCT), which was not part of our original file and only recently obtained by our office. Taken as a whole, both the recent EFH assessment and the BCT report acknowledge many of the relevant issues pertinent to the NMFS regarding the proposed project notwithstanding one distinction.

By determining that the overall impacts to waterways, tidal mudflats, shallow water fishery habitat, and the river bottom in the Delaware River in close proximity to the airport would be minimal, the FAA seems to have overlooked the singularly unique ecological importance of submerged aquatic vegetation (SAV) to the Delaware River ecosystem and, by extension, the function that seagrass habitats perform as nursery areas for many commercially and recreationally important fish species.

SAV in aquatic systems has been well documented as providing shelter and forage areas for fish and invertebrates, food for waterfowl, and detritus for benthic food webs (Catling et al., 1994; Heck et al., 1995; Noordhuis, Van Der Molen, and Van Den Berg, 2002; Rozas And Odum, 1987).



Both the EFH and BCT reports present SAV as providing valuable refuge habitat in the project area for a variety of fish species including American shad (*Alosa sapidissima*), alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), and striped bass (*Morone saxatilis*) and each report explicitly states that SAV was identified in the annual fish surveys and described in the reports as the “most productive riverine habitat surveyed.” The reports further affirm that the “relative abundance of fish...can be directly attributed to the fact that the SAV provides cover for the smaller prey species” and “provides habitat for abundant numbers of aquatic macroinvertebrates, which are a valuable food source for many fish species.” The reports went so far as to identify six dominant aquatic plant species in both the project and local study areas. The only other documented occurrence of viable SAV habitat observed within the tidally influenced freshwater portion of the Delaware River was about 23 miles upriver of the PHL.

The Pennsylvania Environmental Council and its partners have just completed (November, 2009) a shoreline pre-restoration and ecological assessment along approximately 8 miles of Delaware River riverfront in the North Philadelphia area, from the Betsy Ross Bridge upriver to Poquessing Creek. Wild celery (*Vallisneria americana*) or freshwater eel grass, which is a common species of SAV that is widespread in low-salinity estuarine areas (Rozas, L. and T. Minello (2006)) was the dominant SAV and generally found growing in water depths of approximately one foot to 4 feet during low tide conditions.

In other regional studies of SAV beds, particularly the Hudson River Estuary, gut contents of the alosid species alewife (*Alosa pseudoharengus*) a bluefish prey species found congregating near SAV beds, were dominated by chironomid larvae, such as midge flies, suggesting the fish are using these beds for foraging (Menzie, 1980). According to the EFH assessment and the BCT reports, Chironomidae, one of nine orders of benthic macroinvertebrates that were identified within the Local Study Area, “occurred rarely and was found only in Area C,” - one of four areas - (Area A) Fort Mifflin historic site, (Area B) Hog Island Pier, (Area C) Delaware River Cove, and (Area D) Little Tinicum Island - directly adjacent, and seaward of the airport property boundary that were selected and sampled during FAA field studies. This is supported by earlier studies (FWS, 1978) finding abundant aquatic insect life on and about wild celery plants.

Therefore, degradation, alteration, and/or loss of unique SAV habitat/beds through destruction, fill, or removal will in this instance be considered as a threat and an impact, albeit indirectly, to EFH for all life stages of bluefish particularly juvenile and adult.

As was raised in our 2008 letter, the Delaware River in the project area offers a migratory pathway and spawning, nursery, and forage habitat for a number of anadromous and catadromous fishes including American shad, alewife, blueback herring, American eel (*Anguilla rostrata*), and striped bass. Fish surveys conducted in 2001, 2002 or 2005 by the FAA captured or observed the same species of concern.

Landing statistics and the number of fish observed on annual spawning runs indicate a significant decline in alewife and blueback herring populations throughout much of their range since the mid-1960's. Consequently, they have been designated as species of concern by NMFS in a

Federal Register Notice dated October 17, 2006 (71 FRN 61022). ‘Species of concern’ are those species about which NMFS has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act. Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include *Alosa* species.

### **Essential Fish Habitat Comments**

As proposed, completion of Alternative A would entail a radical redesign of the existing runway and taxiway systems while considerably upgrading and reconfiguring the present passenger terminal complex by reconstructing new facilities. The FAA has determined that carrying out the favored proposal would have the greatest environmental consequences to waterways, tidal mudflats, shallow water fishery habitat, and the river bottom in the Delaware River in close proximity to the airport, but that the overall impacts to these integral components of the estuarine ecosystem within the River would be minimal.

No essential fish habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) is designated for bluefish (*Pomatomus saltatrix*) in the area of the PHL in either the freshwater tidal section or mixing zone of the Delaware River. EFH is designated for bluefish further south of the project area in the open-water expanse of the Delaware Estuary. Nevertheless, the NMFS continues to be concerned about the indirect impacts the proposed project will have on EFH for bluefish, as well as the cumulative and direct impacts to other NOAA trust resources in the historically important Delaware River, including freshwater wetlands, salt marshes, and both recreational and commercial fisheries (e.g. anadromous, catadromous, marine and estuarine species such as blueback herring, alewife, white perch, American eel, American shad, striped bass, shortnose sturgeon [federally protected] and Atlantic sturgeon [a candidate for listing under the Endangered Species Act]).

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as, “any impact which reduces the quality and/or quantity of EFH.” The rule further states that:

“an adverse affect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions”.

The NMFS does not concur with the determination made by the FAA. The activities proposed for the Philadelphia International Airport under a Capacity Enhancement Program will adversely affect the spawning success and the quality for the nursery habitat of resident anadromous fish species and thus directly, indirectly and cumulatively impact the EFH for bluefish by reducing the availability of prey. Therefore, the NMFS must act conservatively on the side of the fishery resource in this case.

**Conservation Recommendations**

In accordance with Section 305(b) (4) (a) of the MSA, our EFH conservation recommendation is as follows:

1. No fill should be placed in the Delaware River adjacent to the project area.

Please note that Section 305(b)(4)(B) of the MSA requires the Federal Aviation Administration to provide NMFS with a detailed written response to our EFH conservation recommendation, including a description of measures adopted by the FAA for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with NMFS' recommendation, Section 305(b) (4) (B) of the MSA also indicates that the FAA must explain its reasons for not following the recommendation. Included in such reasoning would be the scientific justification for any disagreements with NMFS over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k).

Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(l) if new information becomes available or the project is revised in such a manner that affects the basis for the EFH Conservation Recommendations listed below.

We appreciate the opportunity to review and provide commentary to documents prepared by the FAA and generated through the NEPA process for the Philadelphia International Airport, Capacity Enhancement Program. We look forward to receiving and ultimately reviewing the Final Environmental Impact Statement when it is released.

Should you have any questions regarding this matter, please contact either Karen Greene, or Brian May at 732 872-3023 or (732) 872-3116, respectively.

Sincerely,



Peter D. Colosi, Jr  
Assistant Regional Administrator  
Habitat Conservation Division

cc: USFWS, Pleasantville, New Jersey  
USFWS, State College, Pennsylvania - Mohler  
USACOE, Philadelphia District, Regulatory – Cianfrani  
USEPA, Region III, EAID - Hoffman  
USEPA, Region II, ERS - Knudson  
NJDEP, Land Use Regulation  
PAFBC - Kaufmann  
PADEP – R. Brown  
DNREC, DFW – Shirey  
DE CZM – S. Cooksey  
NMFS, PRD – Crocker  
NOAA, PPI – Doremus  
NOAA, NOS – Knight, Hahn

### References Cited

- Buckel, J.A. and D.O. Conover. 1997. Movements, feeding periods, and daily ration of piscivorous young-of-the-year bluefish, *Pomatomus saltatrix*, in the Hudson River estuary. *Fish. Bull.* (U.S.) 95(4):665-679.
- Catling, P.M.; Spicer, K.W.; Biernachi, M., and Lovett Doust, J., 1994. The biology of Canadian weeds: 103. *Canadian Journal of Plant Science*, 74(4), 883–897.
- Fahay, M.P., P.L. Berrien, D.L. Johnson and W.W. Morse. 1999. Essential Fish Habitat Source Document: Bluefish, *Pomatomus saltatrix* life history and habitat characteristics. U.S. Dep. Commer., NOAA Technical Memorandum NMFS-NE-144.
- Heck, K.L., Jr.; Able, K.W.; Roman, C.T., and Fahay, M.P., 1995. Composition, abundance, biomass, and production of macrofauna in a New England estuary: comparisons among eelgrass meadows and other nursery habitats. *Estuaries*, 8, 379–389.
- Menzie, C. A. (1980). The chironomid (Insecta: Diptera) and other fauna of a *Myriophyllum spicatum* L. plant bed in the lower Hudson River. *Estuaries* 3: 38-54
- Noordhuis, R.; Van Der Molen, D.T., and Van Den Berg, M.S., 2002. Response of herbivorous waterbirds to the return of *Chara* in Lake Veluwemeer, the Netherlands. *Aquatic Botany*, 72(3–4), 349–367.
- Philadelphia North Delaware River Greenway Ecological Assessment and Prioritization Report: Final Report for Pennsylvania Coastal Zone Management Program North Delaware Ecological Restoration Project: Grant 2007PS.05.  
Pennsylvania Environmental Council
- Rozas, L.P. And Odum, W.E., 1987. Fish and macrocrustacean use of submerged plant beds in tidal freshwater marsh creeks. *Marine Ecology Progress Series*, 38, 101–108.
- Rozas, L. and T. Minello (2006). "Nekton use of *Vallisneria americana* Michx. (Wild celery) beds and adjacent habitats in Coastal Louisiana." *Estuaries and Coasts* **29**(2): 297-310.
- U.S. Fish & Wildlife Service, 1978. Summary of available information on Chesapeake Bay submerged vegetation. FWS/OBS-78/66.



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**Eastern Region, Airports Division**

**1 Aviation Plaza  
Jamaica, NY 11434-4809**

August 12, 2010

Peter D. Colosi, Jr.  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Northeast Region  
55 Great Republic Drive  
Gloucester, MA 01930-2276

RE: Philadelphia International Airport  
Capacity Enhancement Program  
Essential Fish Habitat, Conservation Recommendation

Dear Mr. Colosi,

I am receipt of your July 26, 2010 letter regarding the above subject. In your letter, you state that the activities proposed for the Philadelphia International Airport (PHL) under the Capacity Enhancement Program (CEP), "...will adversely affect the spawning success and the quality for the nursery habitat of resident anadromous fish species and thus directly, indirectly and cumulatively impact the essential fish habitat (EFH) for the bluefish by reducing the availability of prey." Based on this conclusion, your EFH conservation recommendation was: "No fill be placed in the Delaware River adjacent to the project area."

For several reasons we disagree with your conclusion that filling a portion of the Delaware River will result in impacts severe enough to warrant NMFS's recommendation to not fill any portion of the Delaware River. This recommendation, if carried out, would result in the stoppage of the entire CEP project and not allow the urgently needed capacity project at PHL to occur. FAA has intensively evaluated ways to avoid placing fill in the River. However, after analyzing the airspace obstructions that very large ships sailing the Delaware River pose to aircraft approaching the proposed runway, and the critical runway length and spacing requirements, Federal Aviation Administration (FAA) has determine the proposed runway must unavoidably fill approximately 25 acres of the Delaware River. This extension must occur to ensure marine and aviation traffic conflicts do not occur. After evaluating the effects of placing a segment of the new runway in the River, the airport sponsor has designed the runway to minimize river fill and FAA has proposed mitigation (e.g., moratorium on in-river construction between March 15 and June 15) to mitigate construction impacts on migrating fish species. Of course, FAA remains willing to work with NMFS to devise other practical mitigation to



address unavoidable indirect effects on Bluefish Essential Fish Habitat as noted in your July 26 letter, if needed.

The CEP project is one of only a few high priority projects, selected by the U.S. Secretary of Transportation for expedited environmental review (environmental streamlining) under Executive Order 13274, *Environmental Stewardship and Transportation Infrastructure Project Review* (issued September 18, 2002). For these projects, executive departments and agencies were required, to the maximum extent practicable, to expedite their reviews for relevant permits or other approvals. To facilitate environmental reviews and timely responses, and to ensure issues were not continually revisited, the FAA, in coordination with the federal and state agencies having jurisdiction or expertise regarding the resources the CEP would affect developed the *Interagency Streamlining Agreement for the Philadelphia International Airport Environmental Impact Statement and Permitting*. The National Oceanic and Atmospheric Administration (NOAA) was signatory to this agreement. Unfortunately, throughout the CEP's environmental process there was very limited participation by NOAA. NMFS's conservation recommendation for no fill in the River was made considerably late in the environmental streamlining process, contrary to the terms of the streamlining agreement and the Executive Order.

In response to the technical and scientific aspects of your July 26, 2010 letter, the FAA provided (via August 2, 2010 e-mail) specific responses and rationale outlining our position on the items in your letter with which FAA disagrees. Members of our staff, Ms. Sue McDonald, Mr. Jim Byers, and Mr. Ed Melisky, and a representative from our environmental consultanting firm, Dr Lisa Stanley, conducted a teleconference with members of your staff, Mr. Stan Gorski, Ms. Karen Greene and Mr. Brian May. Despite these efforts, our staffs still disagree about the following:

- The importance of the proposed fill area's value and function as blue herring and alewife spawning and nursery habitats;
- The value of the new, deep-water, adult anadromous habitat (the habitat would result from dredging a new pier for Sunoco tankers that must be moved from the present Fort Mifflin Complex to avoid marine-aviation navigational conflicts);
- The value of near-shore, shallow fishery habitat provided by the accretion of river sediment downriver of the proposed in-river runway segment (the segment would alter river hydrology causing a change in sediment deposition patterns near the airport) and
- NMFS's no fill recommendation.

Therefore, in accordance with the terms of the *Interagency Streamlining Agreement for the Philadelphia International Airport Environmental Impact Statement and Permitting*, if there is a disagreement between agencies at key points, either agency may start the resolution process. The terms of this Agreement note that each responsible level has 7-calendar days to resolve differences or elevate the issues to the next management level. In accordance with these terms, I am initiating formal elevation. A copy of our response to your July 26, 2010 letter and notes from the teleconference are provided for your information.

I will be contacting you to arrange for a meeting. Should you need to contact me I can be reached at (718) 553-3330 or [william.flanagan@faa.gov](mailto:william.flanagan@faa.gov) I look forward to talking with you and quickly resolving our differences.

Sincerely,

A handwritten signature in dark ink, appearing to read 'William Flanagan', written in a cursive style.

William Flanagan,  
Manager,  
Eastern Region, Airports Division

Enclosures

cc: M. Stanco, AEA-600  
M. McCarthy, AEA-7  
R. Thompson, APP-400  
J. Byers, APP-400  
E. Melisky, APP-400  
L. Pagnanelli, HARADO  
S. McDonald, HARADO  
M. Engel, VHB

Responses to NMFS July 26, 2010 letter. (Provided via e-mail August 2, 2010)

1. In your July 26, 2010 letter, you state that the Biotic Communities Tech Report “was not part of your original file and was only recently received”. This Tech Report was sent to NMFS (Karen Greene) on October 3, 2006. NMFS/NOAA had made a commitment, via the Streamlining Agreement, to comment within 30 business days, but no comment to this report was ever received.

2. The NMFS letter concludes that fill in the Delaware River will adversely affect the spawning success and quality for nursery habitat of resident anadromous fish species and therefore indirectly and cumulatively impact downstream EFH habitat for bluefish by reducing prey availability. In response, we offer the following:

a. There is no substantiation for this statement. NMFS does not explain why the potential negligible decrease in fish habitat will have a sufficiently significant adverse impact to make a recommendation that no fill be placed in the Delaware River adjacent to the project area.

b. NMFS recommendation appears to be based on the conclusion that the filled areas support submerged aquatic vegetation (*Vallisneria*), which provides important fish nursery habitat. You note that the EFH report did not discuss the importance of SAV.

c. The EFH report did not discuss the importance of SAV in the project area because, as the technical appendices to the Biotic Communities Technical Report demonstrate, SAV is either not present in the proposed impact areas or is present in small patches at low density. The data sheets (Fish Sampling and Benthic Macroinvertebrates) show that:

i. Fill Area 1 (the easternmost), Hog Island Pier area (Area R2 on the fish sampling sheets) has a cobble-debris substrate and no SAV

ii. Fill Area 2 (R-3 on the fish and benthic data sheets), the cove at wetland DR-3, has a sand-cobble substrate with some patches of arrow arum (*Peltandra virginica*) in the intertidal areas. No SAV is present.

iii. Fill Area 3 (R-4 on the fish data sheets, Area D on the benthic habitat sheets) is characterized on the fish survey as stone-cobble-sand substrate with no SAV at 5 of the 6 sample locations. Sample location R4-5f was noted as having SAV. The benthic survey data sheets for Area D show three small patches of SAV within this area. Two discrete sample locations report 10-15% cover of SAV, at a low density.

d. We therefore disagree with NMFS for the following reasons:

i. SAV is present in only a small portion of the proposed fill areas, at low density, and does not provide important fish habitat.

ii. The loss of this small area is not likely to have a significant adverse indirect or cumulative effect on the availability of prey for downstream bluefish

e. The NMFS letter (page 3, paragraph 3) also states that NMFS is concerned about indirect

and cumulative effects to shortnose and atlantic sturgeon. This seems to contradict the NMFS letter of July 23, 2010, which concurs with FAA's determination that the project is not likely to adversely affect and listed species under NMFS jurisdiction.

3. We suggest that (a) the small loss of SAV does not have a significant adverse effect on downstream bluefish stocks, (b) as documented in the EIS, this impact cannot be avoided (both Build alternatives would have the same impact) and constructing the Runway 9F/27L RSA on a piling-supported structure would still shade the SAV patches to the extent that they would cease to photosynthesize, (c) further minimization may be practicable during the final design process, and (d) impacts may be mitigated by habitat restoration or creating new SAV beds. In accordance with the Streamlining Agreement, we would expect to work together to identify measures that would mitigate for unavoidable impacts.

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## Phone Notes

Attendees: Sue McDonald, FAA  
Jim Byers, FAA  
Ed Melisky, FAA  
Stan Gorski, NMFS  
Karen Greene, NMFS  
Brian Mays, NMFS  
Lisa Standley, VHB

Date/Time: 5 August 2010

Project No. 08495

cc:

Place: Conference Call

Re: Essential Fish Habitat

Notes taken by: L. Standley

---

After introductions, S. McDonald stated that the objective of the call was to attempt to resolve a difference of opinion between FAA and NMFS concerning bluefish EFH. She reviewed the recent history of correspondence on this issue: FAA sent NMFS the CEP Biotic Communities Technical Report and EFH Memorandum; NMFS sent a recommendation letter on July 26, 2010; FAA sent an email on August 2 outlining disputed issues, for discussion. She asked if NMFS, after reviewing the information in that email, continued to have the opinion that the impacts of constructing the river runway were sufficiently great as to warrant not constructing the project.

S. Gorski said that NMFS had not changed their recommendation. The proposed loss of 25 acres of aquatic habitat would affect prey species for bluefish. The presence of SAV enhances the habitat value of the fill area.

E. Melisky suggested that the proposed project would enhance aquatic habitat in two other areas, as the accretion of sediments would enhance shallow-water habitats, and dredging would create new deep-water habitats. K. Greene responded that this would simply change aquatic habitat types and would not compensate for the loss of 25 acres.

L. Standley explained why the EFH report characterized the fill areas as low-quality habitat, as SAV is largely absent from the areas. She noted that the CEP depends on the 4<sup>th</sup> runway, and that alternatives evaluated have included using pilings rather than solid fill. She asked if NMFS would consider a piling-support structure to be more acceptable. S. Gorski said that NMFS would consider this. S. McDonald noted that many alternatives have been evaluated to achieve the needed capacity. She further noted that the proposed design minimizes fill impacts to the greatest extent possible.

L. Standley asked for an explanation of why NMFS considers the fill areas to be significant fish habitat, since information included in the Biotic Communities Technical Report and EFH Memorandum indicates that the habitat quality is poor. K. Greene responded that the entire reach of the Delaware River is important fish habitat and herring habitat, based on studies from Delaware and other areas. She stated that the lack of data,

or low value habitat in specific areas, did not change NMFS' conclusion that the loss of 25 acres of aquatic habitat was significant. She clarified that NMFS is making a recommendation to FAA, and does not have regulatory powers. S. McDonald noted that the Corps and PA DEP will likely take NMFS' recommendation into consideration in their permitting process, and that they (and PA DCNR) have not raised this issue previously. S. Gorski said that he had heard different things from DEP. S. McDonald acknowledged that there would be an impact but that it was not sufficiently significant to block the project, and was concerned with the NMFS recommendation. K. Greene stated that NMFS has recommended denial for impacts of only one acre.

L. Standley asked if there were mitigation measures that could offset the unavoidable impacts. S. Gorski said that NMFS is open to discussion, but that aquatic habitat could be difficult to create. **He noted that converting upland areas to suitable habitat is something NMFS and FAA should consider.** K. Greene said that they would look for compensatory mitigation to replace both the lost area and lost functions. She said that NMFS' concern was with the entire aquatic community (benthic macroorganisms, fish, SAV) as well as the downstream EFH. She referred to their comment letter on the Draft EIS.

L. Standley offered to look at providing compensatory mitigation in conjunction with mitigation for vegetated wetlands, and said that the City has identified many mitigation sites where excavation of upland to provide shallow aquatic habitat may be feasible. S. McDonald asked if NMFS would consider modifying their recommendation to take mitigation into account. S. Gorski said that he was willing to work with FAA. He was aware of the FAA AC on wildlife hazards, and would like to see mitigation as close to the airport as possible in light of the AC. S. McDonald asked if NMFS could provide guidance or suggestions on mitigation. S. Gorski said that they would like to see the lost habitat duplicated as closely as possible, by converting upland into shallow riverine habitat.

S. Gorski asked if the regulatory agencies have asked for this mitigation. L. Standley explained that the FAA and the City have had several meetings with the Corps, DEP and other regulatory agencies on wetland mitigation and have a consensus on mitigation types and ratios that do not include this aquatic habitat. The Corps has not raised this as an issue. She noted that it would have been helpful if NMFS had attended these meetings. S. Gorski stated that NMFS understands the importance of the project and is willing to work with FAA. He wants to make sure that the fisheries impacts are not under-rated, and that the importance of this habitat is recognized.

At the conclusion of the meeting, S. McDonald said that FAA would confer and get back to NMFS. S. Gorski suggested it would be helpful to bring the Corps into any further discussion. S. McDonald noted that, while it would be desirable to bring in the Corps, time does not permit; per the streamlining agreement, FAA would need to elevate the issue if not resolved within the 7-day period stipulated in the agreement.



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Eastern Region, Airports Division

1 Aviation Plaza  
Jamaica, NY 11434-4809

August 27, 2010

Peter D. Colosi, Jr.  
Assistant Regional Administrator  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service, Habitat Conservation Division  
55 Great Republic Drive  
Gloucester, MA 01930

Re: Philadelphia International Airport (PHL), Capacity Enhancement Program (CEP)

Dear Mr. Colosi:

In a letter dated July 26, 2010, NMFS provided its Essential Fish Habitat (EFH) Conservation Recommendation in accordance with Section 305(b)(4)(a) of the Magnuson-Stevens Act (MSA). NMFS' recommendation to FAA, as stated in that letter, was that no fill should be placed in the Delaware River adjacent to the project area. The NMFS letter concludes that fill in the Delaware River will adversely affect the spawning success and quality for nursery habitat of resident anadromous fish species and therefore indirectly and cumulatively impact downstream EFH habitat for bluefish by reducing prey availability.

On August 2, 2010, FAA sent NMFS our response via email. As stated in that email, FAA does not agree with NMFS' recommendation for the following reasons:

- a) There is no substantiation for this position. NMFS does not explain why the potential negligible decrease in fish habitat will have a sufficiently significant adverse impact to make a recommendation that no fill be placed in the Delaware River adjacent to the project area.
- b) NMFS' recommendation appears to be based on the conclusion that the filled areas support submerged aquatic vegetation (*Vallisneria*), which provides important fish nursery habitat. SAV is present in only a small portion (less than 10 percent) of the proposed fill areas, at low density, and does not provide important fish habitat.
- c) The loss of this small area is not likely to have a significant adverse indirect or cumulative effect on the availability of prey for downstream bluefish.

The NMFS letter (page 3, para 3) also states that NMFS is concerned about indirect and cumulative effects to shortnose and Atlantic sturgeon. This seems to contradict the NMFS letter of July 23, 2010 which concurs with FAA's determination that the project is not likely to adversely affect and listed species under NMFS jurisdiction.



As noted in your letter of July 26, Section 305(4)(B) of the MSA requires the FAA to provide NMFS with a detailed written response to the EFH conservation recommendation. Although we have already sent a response by email, this letter (submitted within the 30-day period established in the MSA, which extends until August 29, 2010) provides a more detailed response that includes:

- a) A discussion of measures for avoiding and minimizing impacts to aquatic habitat in the upper reach of the Delaware River;
- b) Proposed strategies for mitigating the unavoidable impacts to aquatic resources;
- c) Additional information on the impacted areas in support of our contention that the impacted areas do not provide significant nursery habitat for bluefish prey species, such that the loss of these areas would have a significant adverse effect on the actual EFH for bluefish in the Delaware River Estuary.

### **Avoidance, Minimization and Mitigation**

As documented in the DEIS and FEIS, the FAA and Airport Sponsor have made every effort to avoid and minimize impacts to the Delaware River. We believe that the remaining unavoidable impacts are not significant and can be mitigated.

#### **Avoidance**

The Capacity Enhancement Program (CEP) is needed because Philadelphia International Airport (PHL or the Airport) continues to be one of the most delay-prone airports in the National Airspace System (NAS), and delays are predicted to worsen in the future as aviation demand increases. These delays impose substantial costs in time and money for passengers and airlines, cargo shippers, and for other users of the air transportation system, as these delays spread throughout the NAS. Based on this need, the purpose of the proposed action has been defined as:

*To enhance airport capacity in order to accommodate current and future aviation demand in the Philadelphia Metropolitan Area during all weather conditions*

As documented in the Final Environmental Impact Statement (Chapter 3, *Alternatives*), an extensive alternatives analysis process was undertaken that evaluated 9 off-airport alternatives, 4 non-construction alternatives, over 30 on-airport alternatives, and a “blended” alternative which combined on-airport, operational, and off-airport elements. As described in the environmental documents, PHL is an extremely constrained airport with limited space for improvements in the area between I-95 and the Delaware River. The analysis found that:

- a) There are no off-airport or non-construction alternatives that would meet the project purpose.
- b) Four parallel runways are required in order to provide sufficient airport capacity to meet the project purpose.
- c) Three alternative runway configurations were developed that would meet the project purpose. Alternative C, the only alternative that would avoid placing fill in the Delaware River, was found to be not practicable to construct and was therefore eliminated. Alternative C would have a substantially higher construction cost and

would result in unacceptable levels of delay over an 11-year period during construction.

As documented in the FEIS, there are no alternatives that would meet the project purpose and avoid impacts to the Delaware River other than the No-Action Alternative.

### **Minimization**

FAA has worked diligently throughout the alternatives development process to minimize impacts to the Delaware River. Both of the alternatives evaluated in the FEIS would have the same unavoidable impacts, which occur in three locations:

- a) 3.2 acres to construct the Runway Safety Area at the eastern end of Runway 9L/27R.
- b) 2.2 acres to construct a new perimeter roadway outside of the Runway 9L/27R object-free area, and
- c) 16.9 acres to construct the Runway Safety Area (RSA) at the western end of the new Runway 9L/27R

Impacts have been minimized during the preliminary design process. Runway Safety Areas are required by our design regulations to be 1,000 feet long and 500 feet wide, to allow aircraft to land safely in the event of an undershoot or overshoot of the runway thresholds. Impacts to the Delaware River at the west end of Runway 9L/27R were minimized by incorporating a special system (Emergency Materials Arresting System, or EMAS) which reduced the length of the RSA to 600 feet and reduced fill in the river by approximately 7 acres. River impacts were also reduced by shifting the new runway as far to the east as possible without conflicting with Runway 17/35. Construction methods were also developed to minimize impacts. The analysis evaluated and rejected use of a solid fill, sloped riprap structure which would have filled more than 30 acres of the Delaware River for the western RSA alone. The selected construction method (either a solid fill structure supported by sheet piling or a pile-supported structure) would minimize the footprint of the RSA. Further minimization measures may be identified during the final design phase of the CEP.

### **Mitigation**

Mitigation measures to compensate for the loss of submerged aquatic vegetation or aquatic benthic habitats were not evaluated in the FEIS because the resource agencies involved in reviewing potential mitigation (USACE, USEPA, USFWS, PA DEP, PA FBC, PA GC, PA DCNR) did not identify this as a resource requiring mitigation. We regret that NMFS elected to not participate in the interagency meetings held to discuss mitigation, as this issue could have been raised and addressed at an earlier date.

Mitigation can be provided, by restoring or creating submerged aquatic vegetation (SAV) beds within this reach of the Delaware River. As documented by recent research reports<sup>1</sup>, *Vallisneria americana* beds can be established by transplants or seed. Potential mitigation areas include the area immediately west of the new RSA, the cove at wetland DR-3, and areas on the inshore side of Little Tinicum Island. The wetland mitigation areas, proposed

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<sup>1</sup> Moore, K.A., E.C. Shields, J.C. Jarvis. 2010. The Role of Habitat and Herbivory on the Restoration of Tidal Freshwater Submerged Aquatic Vegetation Populations. *Restoration Ecology* 18:596-604.

to compensate for the loss of emergent vegetated wetlands, are located along the Delaware River and could be designed to incorporate SAV beds.

We believe that mitigation, if warranted, could both replace any lost SAV and enhance the ability of shallow-water areas in this reach of the Delaware River to provide fish nursery habitat for bluefish prey species. If needed, a site selection study and specific design parameters would be developed.

### **Impact Analysis**

We have taken a hard look at the scientific basis for our conclusion that the three fill areas do not provide high-quality fisheries habitat, and that these areas are not significant to the health of the bluefish population in the Delaware River Estuary. This analysis is based on two elements: the actual sampling data for fish and benthic macro invertebrates, and use of the FWS Habitat Suitability Index.

### **Habitat Quality**

The habitat characteristics of the three fill areas were evaluated during in-water sampling for fish and benthic macro invertebrates. As shown in Table 1, current velocities and salinity are within the range of anadromous fish. The suspended sediment levels shown in Table 1 and Table 2 indicate that water quality (light) may limit SAV growth in the River.

**Table 1 - Physical Characteristics of the Delaware River**

<b>Variable</b>	<b>Measured Value</b>
Suspended Sediments (depth-averaged)	43.7 mg/l (March-April)
Current Velocity	2 ft/sec (max ebb/flood)
Salinity	< 0.2 ppt

Source: Philadelphia International Airport Capacity Enhancement Program, Hydrodynamic and Sediment Transport Impacts Technical Report. 2006

Table 2 provides the results from the fish and benthic macro invertebrate sampling efforts. Area A, the easternmost fill area, contains a mix of substrates. The inshore areas are primarily cobble-debris, while the more off-shore areas are sand and silt. No fish were found in this area, and the benthic macro invertebrates are primarily oligochaetes with chironomids recorded at one location. No SAV occurs in this area. Area B, the Delaware River Cove, has a sand substrate on the western half and a silt-muck substrate on the eastern half. This area is intertidal and has no SAV. Fish found in this area were primarily menhaden and smaller fish (killifish, mummichog), and benthic invertebrates were restricted to oligochaetes. Area C contains three substrate types. Inshore areas consist of stone-cobble-sand, while more offshore areas were reported as silt-clay (hardpacked), with small patches of SAV. The dominant fish in Area C was bay anchovy, and oligochaetes were the only class of benthic macro invertebrates reported.

These results do not support the NMFS conclusion that the impact areas contain significant SAV beds and important nursery habitat for bluefish prey species. SAV was reported in small patches (one of 22 sample locations), and chironomid larvae in only one sample location.

**Table 2**  
**Substrate and Habitat Data, Delaware River Fill Areas<sup>1</sup>**

Area	Sample	Substrate	Water Temperature (°C) / Turbidity (NTU)	Dominant Species
A - Hog Island Pier (East End of proposed Runway 9L/27R RSA)	R2-1f	Cobble-debris		no fish
	R2-2f	Cobble-debris		no fish
	R2-3f	Cobble-debris		no fish
	B-17	Cobble-sand-gravel, muck	23.7 / 79.9	oligochaetes
	B-18b	Sand, silt		chironomids
	B-19b	Sand, silt, clay		oligochaetes, amphipods
	Sediment Boring	Soft compressible silts and clays		
B - Delaware River Cove (proposed perimeter road)	R3-1f	Muck-sand		menhaden, killifish
	R3-2f	Sand		menaden
	R3-4f	Sand, cobble (mouth of cove)		menhaden, mummichog
	C-14b	Sand, silt, muck		no macro invertebrates
	C-15b	Silt, clay, muck	21.4 / 15.0	oligochaetes
	C-16b	Silt, sand, muck		oligochaetes
	Sediment Boring	Soft compressible silts and clays		
C – Hog Island Road (west end of proposed Runway 9L/27 RSA)	R4-1f	Stone-cobble-sand		no fish
	R4-2f	Stone-cobble-sand		bay anchovy
	R4-3f	Stone-cobble-sand		bay anchovy
	R4-4f	Stone-cobble-sand		bay anchovy
	R4-5f	Stone-cobble-SAV		bay anchovy
	R4-6f	Stone-cobble-sand		bay anchovy
	D-13b	Cobble, sand		oligochaetes
	D-7b	SAV, silt-clay-muck	26.4 / 81.5	oligochaetes
	D-8b	Hard packed sand-silt-clay		no macro invertebrates
	D-12b	SAV, silt-clay		oligochaetes

Sediment	Fine sand, some soft
Boring	silts and clays

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Source: Philadelphia International Airport Capacity Enhancement Program, Biotic Communities Technical Report, 2006

### Habitat Suitability Index Results

We used the U.S. Fish and Wildlife Service's Habitat Suitability Index Model for Blueback Herring<sup>2</sup> to estimate the suitability of each of the proposed CEP fill areas for fish habitat, specifically as spawning/nursery habitat for bluefish prey species. Blueback herring (*Alosa aestivalis*) was selected because the habitat for this species is described as "Bluebacks spawn in freshwater several miles upstream of the tidal line in the Delaware River"<sup>3</sup> and are therefore likely to be found in this reach of the river. The spawning, adult, egg and larval river herring HIS model has cover and water quality components. Substrates with 75% silt or other soft materials and sluggish water flows are considered optimal.

Application of the HIS model for blueback herring (river herring) shows that the three proposed fill areas provide low-quality habitat for this species. The HSI Determination method provided in the FWS publication suggests that a "limiting factors" approach be used to determine the HSI, rather than a total score. This approach is based on the ecological principle that the physical requirement present in the lowest amount limits the reproduction, range or growth of an organism, even though other requirements may be adequate.<sup>4</sup> As shown in Table 3, the substrate in the three proposed fill areas is not suitable or minimally suitable for spawning due to the lack of vegetative cover, and in Area 3, the water temperature exceeds the suitable range.

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<sup>2</sup> FWS/OBS-82/10.58, September 1983. G. Pardue. Habitat Suitability Index Models: Alewife and Blueback Herring.

<sup>3</sup> Pennsylvania Fishes. [www.fish.state.pa.us/pafish/fishhhtms/chap10.htm](http://www.fish.state.pa.us/pafish/fishhhtms/chap10.htm), accessed 24 August 2010.

<sup>4</sup> Odum, E.P. Basic Ecology. Sanders College Publishing, 1983.

**Table 3 – Habitat Suitability Index Model, Blueback Herring**

<b>Variable</b>	<b>Description</b>	<b>Score</b>
<b>Area A (Hog Island Pier)</b>		
V1 – Substrate	Cobble-debris, sand – no vegetation	0.1
V2 - Mean daily water temperature	23.7	1.0
V3 – zooplankton abundance	Not measured	
V4 – mean salinity	< 0.2 ppt	1.0
<b>Score</b>		<b>2.1</b>
<b>Area B (Cove)</b>		
V1 – Substrate	Sand, muck – no vegetation	0.1
V2 - Mean daily water temperature	21.4	1.0
V3 – zooplankton abundance	Not measured	
V4 – mean salinity	< 0.2 ppt	1.0
<b>Score</b>		<b>2.1</b>
<b>Area C (Little Tinicum Island)</b>		
V1 – Substrate	Stone-cobble-sand, some patches of SAV	0.5
V2 - Mean daily water temperature	26.4	0.2
V3 – zooplankton abundance	Not measured	
V4 – mean salinity	< 0.2 ppt	1.0
<b>Score</b>		<b>1.7</b>

Source: Habitat Suitability Index Models: Alewife and Blueback Herring. U.S. Fish and Wildlife Service FWS/OBS-82/10.58, September 1983.

### **Findings**

Based on our analysis of the fisheries habitat that would be lost as a result of constructing the proposed Capacity Enhancement Program at the Philadelphia International Airport, we do not agree with NMFS's EFH conservation recommendation for this project. Our findings show that the impacted area, although there are small patches of SAV, does not provide important spawning, nursery or forage habitat for anadromous or catadromous fish. The loss of this area, which could be offset by restoring or creating SAV beds within this reach of the Delaware River, would not adversely impact the EFH for bluefish by reducing the availability of prey. Because the project has national significance, FAA cannot follow NMFS' EFH conservation recommendation to place no fill in the Delaware River as this would require selecting the No-Action Alternative as FAA's proposed action.

We hope this information clarifies our position. I understand that your office will be providing a written summary of your analysis shortly. We would like to discuss our findings and your analysis further at the earliest possible time so that we can resolve our disagreements and move to a resolution quickly.

Sincerely,

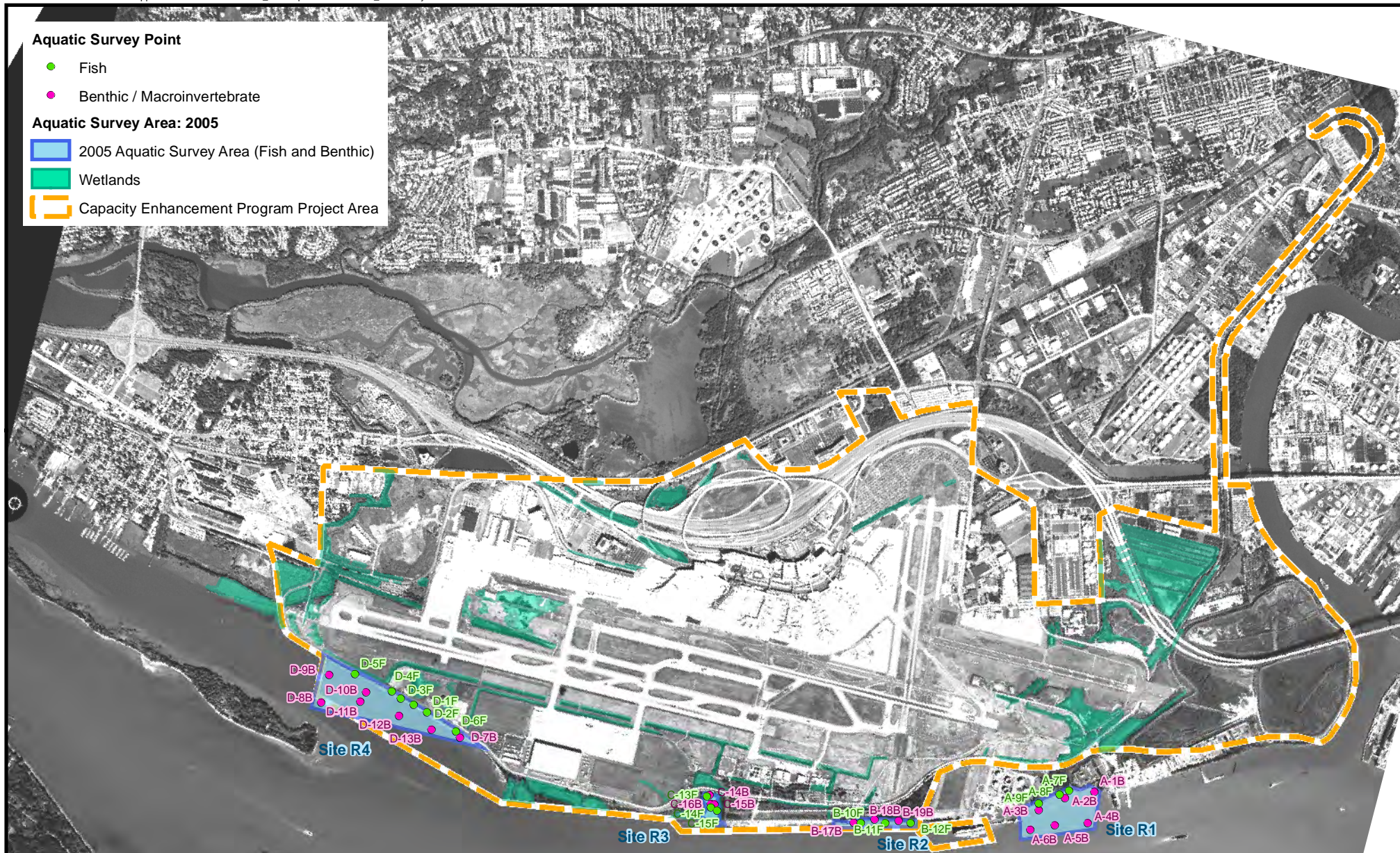


William J. Flanagan  
Manager, Airports Division

Enclosure: Figure 2-5, Fish and Macro invertebrate Survey Locations

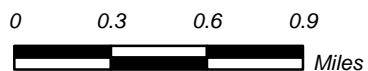
cc: Lori Paganelli, FAA  
Jim Byers, FAA  
Marla Engel, VHB  
Frank Cianfrani, USCOE, Philadelphia  
Charles Hoffman, EPA Region 3  
Randy Brown, PADEP





**Figure 2-5**

**Fish and Macroinvertebrate Survey Locations**





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**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
NORTHEAST REGION  
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William Flanagan, Manager  
Eastern Region, Airports Division  
U.S. Department of Transportation  
Federal Aviation Administration  
1 Aviation Plaza  
Jamaica, NY 11434-4809

SEP 2 2010

RE: Philadelphia International Airport  
Capacity Enhancement Program (CEP)

Dear Mr. Flanagan:

This responds to your letter dated August 12, 2010 regarding the essential fish habitat (EFH) conservation recommendations provided to your office (FAA) in our letter dated July 26, 2010. As background, in May 2010, the FAA offered NOAA's National Marine Fisheries Service, Northeast Region, Habitat Conservation Division (NMFS), an EFH assessment pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). It appears that there is some confusion over NMFS' role in the National Environmental Policy Act (NEPA) process, the Department of the Army permit process, the NMFS' and FAA's responsibilities under the MSA and our reason for recommending that no fill be placed in the Delaware River.

As a steward of our nation's living marine resources, NMFS has an obligation and legal mandate to conserve, protect, and manage these resources and must consult with federal agencies that fund, authorize or undertake actions that may affect living marine resources and their habitats. In addition to the MSA, NEPA and the Fish and Wildlife Coordination Act (FWCA) are some of the other authorities under which we consult. The MSA, FWCA and other mandates require that we provide advice and recommendations to federal action agencies on ways to avoid, minimize and mitigate for impacts to living marine resources and their habitats, also known as NOAA trust resources. Thus, our focus involves the evaluation of the impacts to our resources and establishing protections regarding their conservation and enhancement.

The MSA requires federal agencies such as the FAA to consult with the Secretary of Commerce, through NMFS, regarding any action or proposed action authorized, funded, or undertaken by the agency that may adversely affect EFH identified under the MSA. The EFH regulations, 50 CFR Section 600.920, outline that consultation procedure.

In our November 10, 2008 comments on the draft environmental impact statement (DEIS) for the Philadelphia International Airport Capacity Enhancement Program (CEP), we concluded that although no essential fish habitat has been designated in the freshwater, tidal section of the Delaware River, we were concerned about the indirect impacts of the proposed project on EFH for juvenile bluefish (*Pomatomus saltatrix*) due to the project's effects on habitat for anadromous fish including alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*) that provide a food source for federally managed species such as bluefish. In addition to their value as a prey species, these fish, collectively known as river herring are commercially and recreationally valuable species managed by the Atlantic States Marine Fisheries Commission (ASFMC). They are all NOAA trust resources.



There is an additional consideration regarding the habitat protections for the species in question under this project. Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960's, they have been designated as species of concern by NMFS in a Federal Register Notice dated October 17, 2006 (71 FRN 61022). "Species of concern" are those species about which NMFS has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act. Notwithstanding our mandates under the MSA, the NMFS also has responsibilities under the FWCA to provide federal agencies such as the FAA with recommendations to avoid, minimize and to mitigate for impacts to other NOAA trust resources such as these.

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as; "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, **prey species** and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. **Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.**

The rule also states:

Loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat and the definition of EFH includes waters and substrate necessary to fish for feeding. Therefore, actions that reduce the availability of a major prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat that are known to cause a reduction in the population of the prey species, may be considered adverse effects on EFH if such actions reduce the quality of EFH.

The CEP at the Philadelphia International Airport will result in the total loss of 25 acres of the Delaware River used by a wide variety of resources of concern to the NMFS including alewife and blueback herring. The New Jersey Department of Environmental Protection (NJDEP) has sampled the Delaware River in the project area for nearly 30 years since 1980. This long-term survey documents the use of the this portion of the river by a wide variety of species including blueback herring, alewife, American shad (*Alosa sapidissima*), American eel (*Anguilla rostrata*), Atlantic herring (*Clupea harengus*), Atlantic menhaden (*Brevoortia tyrannus*), bay anchovy, (*Anchoa mitchilli*), blueback herring, gizzard shad (*Dorosoma cepedianum*), hogchoker (*Trinectes maculatus*), striped bass, yellow perch (*Perca flavescens*), white perch (*Morone americana*), Atlantic silverside (*Menidia menidia*), and many others (NJDEP 2010).

Weisberg et al. (1996) captured more than 25 different species in this section of the Delaware River including yellow perch, hickory shad (*Alosa mediocris*), hogchoker, banded killifish (*Fundulus diaphanus*) and mummichog (*Fundulus heteroclitus*). Studies done by VERSAR, Inc. (Weisberg et al. 1990) determined that striped bass (*Morone saxatilis*) eggs and larvae were most abundant between Wilmington, DE and Philadelphia. In addition, the Screening Level Risk Assessment of the Reserve Basin Sediments prepared by NOAA and EVS Environmental Consultants (1999) for the U.S. Department of the Navy reported that American shad spawn in the Delaware River between Trenton and Philadelphia. Impingement studies done at the Eddystone power plant located approximately two miles from the Philadelphia airport identified 53 species of fish in this section of the river including alewife, American eel, American shad, Atlantic menhaden, bay anchovy, blueback herring, gizzard shad,

hogchoker, spot, striped bass and white perch (Waterfield et al. 2008). Many of these species are both commercially and recreationally important and managed by the ASFMC or are valuable prey species for ASFMC or federally managed fish.

As discussed in our previous letter, Buckel and Conover (1997) in Fahey et al. (1999) reports that diet items of juvenile bluefish include *Alosa* species such American shad, blueback herring and alewife as well as bay anchovy, silversides and other fish species. We note that both the NJDEP surveys and the Eddystone impingement data show that federally managed bluefish are present in the project area. This indicates that both the prey species and the predator are present in the Delaware River in and around the project area. Juvenile *Alosa* species have all been identified as prey species for windowpane (*Scophthalmus aquosus*) and summer flounder (*Paralichthys dentatus*) in Steimle et al. (2000). Windowpane and summer flounder are federally managed species whose EFH has been designated in the mixing zone of the Delaware River

Clearly, the loss of 25 acres of the Delaware River will have a substantial impact on these species. In addition, the planned CEP would also impact between 50.7 and 81.7 acres of wetlands and between 6.8 acres to 8.1 acres of tidal mudflats as well as the dredging of 37.7 acres of the river, converting areas of valuable shallow water habitat to deepwater habitat. White perch are schooling fish, ordinarily found in shallow water, usually not deeper than four meters (Collette and Klein-MacFee 2002). Further, Boynton et al. (1981) reported that approximately five times as many juvenile striped bass were collected in the nearshore habitat of the Potomac River than in the offshore habitat, which suggests that the former habitat is preferred. This preference also appears to be the case in other estuaries (Chadwick 1964; Setzler et al. 1980).

From your letter, it appears that the FAA has concluded that our recommendation against placing fill in the Delaware River is based upon the presence of submerged aquatic vegetation (SAV) documented in the area. This is incorrect. As discussed in our letter dated July 26, 2010, SAV including wild celery (*Vallisneria americana*) has been documented in the project area. SAV provides valuable nursery, forage and refuge habitat for a variety of fish including striped bass, American shad, alewife, and blueback herring. In addition, as water quality in the Delaware River continues to improve, more areas of SAV have been identified within the region including near Mantua Creek, in Camden and at several other proposed development sites in the Philadelphia region. However, as documented above, the entire project impact area is already valuable habitat for many NOAA trust resources, and that the value of the habitat is enhanced by the presence of SAV beds. We are obligated under federal regulations to offer recommendations to the FAA to protect the habitat for these fishery resources for the American public.

Your letter states that the FAA disagrees with our conclusion that filling a portion of the Delaware River will result in impacts severe enough to warrant NMFS' recommendation not to fill any portion of the Delaware River. Substantial data exists that documents that the project area is habitat for a vast number of NOAA trust resources. The magnitude of the impacts include 25 acres of total habitat loss through filling of the River, 37.7 acres of habitat alteration within the Delaware River, 50 to 80 acre loss of wetlands and other waters of the US and as well as indirect effects on the Delaware River and associated habitats from the changes in the hydrodynamic and sedimentation patterns. Therefore, we see no reason to alter our position that the proposed project will have an adverse effect on EFH through its effects on the river herring prey species and will also result in substantial impacts to species for which NOAA has responsibility under the FWCA and MSA including American shad, alewife, American eel, blueback herring, menhaden, hogchoker, spot, striped bass, white perch and many others.

With respect to the July 23, 2010 letter from our Protected Resources Division (PRD) concerning the CEP's impacts to shortnose sturgeon, the PRD comments do not address any NOAA trust resources other than those listed as threatened or endangered under Section 7 of the Endangered Species Act.

We hope that this letter clarifies our position on the CEP. While we must recommend that FAA not undertake the CEP, we recognize that many factors must be considered in any decision to move forward on the project. Should a decision be made to undertake the CEP, we will work with the FAA and other State and Federal agencies to ensure that the compensatory mitigation required under the 2008 Federal mitigation rules offsets impacts to NOAA trust resources to the maximum extent possible. We look forward to continued coordination on this matter. Should you have any question or wish to arrange a meeting to discuss this further, please contact me at 978/281-9332.

Sincerely,



Peter D. Colosi, Jr.  
Assistant Regional Administrator  
Habitat Conservation Division.

cc: FAA S. McDonald  
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D. Marin  
ACOE- Phila. District – F. Cianfrani  
EPA Region III, EAID – W. Hoffman  
EPA Region II, ERS – L. Knudston  
FWS State College, PA  
FWS – Pleasantville, NJ  
PA DEP  
NJDEP Land Use  
NJDEP Office of Dredging  
DE CZM  
NMFS PRD-J. Crocker  
NOAA PPI – P. Doremus  
NOAA NOS - P. Knight, S. Hahn  
Del. Fish Wild Mgmt Coop. Tech Comm.

## LITERATURE CITED

- Boynton, W.R., T.T. Polgar and H.H. Zion. 1981. Importance of juvenile striped bass food habits in the Potomac estuary. *Trans. Am. Fish. Soc.* 110:56-63
- Buckel, J.A. and D.O. Conover. 1997. Movements, feeding periods, and daily ration of piscivorous young-of-the-year bluefish, *Pomatomus saltatrix*, in the Hudson River estuary. *Fish. Bull. (U.S.)* 95(4):665-679.
- Chadwick, H.K. 1964. Annual abundance of young striped bass, *Morone saxatilis*, in Sacramento-San Joaquin Delta, California. *Calif. Fish. Game.* 50:69-99.
- Collette, B.B. and G. Klein-MacPhee. eds. 2002. *Bigelow and Schroeder's Fishes of the Gulf of Maine*. Smithsonian Institution. Washington, D.C.
- Fahey, M.P., P.L. Berrien, D.L. Johnson and W.W. Morse. 1999. Essential Fish Habitat Source Document: Bluefish, *Pomatomus saltatrix* life history and habitat characteristics. U.S. Dep. Commer., NOAA Technical Memorandum NMFS-NE-144.
- National Oceanic and Atmospheric Administration and EVS Environmental Consultants. 1999. Screening level risk assessment of the reserve basin. Prepared for the U.S. Department of the Navy. Washington, DC.
- New Jersey Department of Environmental Protection. 2010. Delaware River Seine Survey. Division of Fish and Wildlife. Trenton, NJ.
- Waterfield, G.B., B.W. Lees and R.W. Blye, Jr., 2008. Historical Impingement and Entrainment: Comparisons for Eddystone Generating Station. Prepared for Exelon Generation Company, LLC. Normandeau Associates, Inc.
- Setzler, E.M., W.R. Boynton, K.V. Woods, H.H. Zion, L. Lubbers, N.K. Mountford, P. Frere, L. Tucker and J.A. Mihursky. 1980. Synopsis of Biological Data on Striped Bass, *Morone saxatilis* (Walbaum). U.S. Dep. Commer. NOAA Technical Report NMFS Circular 443.
- Steimle, F.W., R.A. Pikanowski, D.G. McMillan, C.A. Zetlin, and S.J. Wilk. 2000. Demersal fish and American lobster diets in the Lower Hudson-Raritan Estuary. NOAA Technical Memorandum NMFS-NE-161. Woods Hole, MA. 106 p.
- Weisberg, S.B., and W.H. Burton. 1990. Early life stage survival of striped bass from the Delaware River, with particular reference to the Presidente Rivera oil spill. Prepared by VERSAR, Inc., for Delaware Basin Fish and Wildlife Management Cooperative. West Trenton, NJ.
- Weisberg, S.B., P. Himchak, T. Baum, H.T. Wilson and R. Allen. 1996. Temporal Trends in Abundance of Fish in the Tidal Delaware River. *Estuaries* 19(3):723-729.

Table A. Annual fish impingement totals by taxa for Eddystone Generating Station 1987-1992.

Taxa	Year	1987	1988	1989	1990	1991	1992	Totals
alewife		1579	2008	1390	1026	232	118	6353
American eel		41	101	67	30	32	16	287
American shad		1190	1155	1161	667	100	76	4349
Atlantic croaker		0	0	12	0	370	404	786
Atlantic menhaden		125	8165	1013	1222	914	53	11492
Atlantic needlefish		1	0	0	0	0	0	1
Atlantic silverside		0	0	0	0	4	0	4
banded killifish		80	113	89	36	33	21	372
bay anchovy		6098	51149	33549	12043	26744	1867	131450
black crappie		1	5	18	25	11	2	62
blueback herring		2375	2020	10605	379	3743	518	19640
bluefish		28	48	10	2	44	20	152
bluegill		34	111	184	17	19	24	389
brown bullhead		35	248	103	96	75	30	587
brown trout		0	0	3	0	0	0	3
carp		4	25	19	5	2	3	58
channel catfish		77	361	323	228	194	244	1427
gizzard shad		300	736	399	28	74	9578	11115
golden shiner		1	3	2	0	3	0	9
goldfish		0	0	2	2	1	0	5
goldfish/carp hybrid		0	0	0	0	0	1	1
gray snapper		0	0	4	0	1	0	5
hogchoker		937	17393	2512	849	8262	1391	31344
inland silverside		0	0	0	0	1	1	2
largemouth bass		1	8	4	0	1	2	16
mummichog		20	149	22	7	35	14	247
naked goby		0	0	11	0	2	0	13
northern stargazer		0	0	0	0	1	0	1
oyster toadfish		0	0	1	0	0	1	1
pumpkinseed		91	170	172	46	21	10	510
rainbow trout		0	0	0	0	1	0	1
redbreast sunfish		0	8	22	1	3	1	35
rock bass		0	4	1	1	1	0	7
sea lamprey		0	1	0	0	0	0	1
silvery minnow		274	2270	3841	1017	194	65	7661
smallmouth bass		0	2	1	0	0	0	3
spot		0	258058	519	1266	239	12	260094
spottail shiner		1	4	1	0	6	5	17
spotted seatrout		0	0	0	0	1	0	1
striped bass		1263	312	3714	363	265	67	5984
striped cusk eel		0	0	0	0	1	0	1
striped killifish		0	1	0	0	0	2	3
summer flounder		0	0	1	0	1	1	3
swallowtail shiner		0	0	0	0	1	0	2
tessellated darter		0	11	2	11	7	14	45
threespine stickleback		0	357	0	4	0	9	370
tiger muskellunge		8	4	5	1	0	0	18
weakfish		8	56	15	5	89	23	196
white catfish		1	11	18	5	13	11	59
white crappie		7	36	71	5	13	0	132
white perch		8648	18324	57233	25049	14774	18516	142544
white sucker		1	5	5	1	1	2	15
yellow bullhead		4	0	5	1	0	0	10
yellow perch		17	83	28	3	2	1	134
Totals		23250	363515	117157	44441	56531	33123	638017

Historical Impingement and Entrainment: Comparisons for Eddystone Generating Station. Prepared for Exelon Generation Company, LLC. Prepared by Gerald b. Waterfield, Bryan W. Lees, and Robert W. Blye, Jr. Normandeau Associates, Inc. December 2008.



U. S. Department  
of Transportation  
**Federal Aviation  
Administration**

**Harrisburg Airports District Office  
3905 Hartzdale Drive, Suite 508  
Camp Hill, PA 17011  
(717) 730-2830**

Ms. Blythe Semmer  
Office of Federal Agency Programs  
Advisory Council on Historic Preservation  
1100 Pennsylvania Avenue, N.W.  
Suite 803  
Washington, DC, 20004

RE: Memorandum of Agreement between the Federal Aviation Administration (FAA) and the Pennsylvania State Historic Preservation Officer (PA SHPO) regarding the Philadelphia International Airport Capacity Enhancement Program

Dear Ms. Semmer,

Attached is a copy of the subject Memorandum of Agreement (MOA). The purpose of the MOA is to monitor one underwater target and to conduct Phase I archaeological investigations on four parcels that are sensitive for terrestrial archaeological resources, but on which property access restrictions prevented archaeological testing during the EIS. These sites are not currently accessible for investigation because they are not owned by the City and the owners would not provide permission to conduct the investigations. The MOA stipulates that if any intact cultural resources are identified during the Phase I investigations, and if their eligibility for listing on the National Register of Historic Places (NRHP) cannot be determined on the basis of Phase I data, then Phase II evaluations will be conducted. The MOA also stipulates that if resources are present and deemed NRHP-eligible, a Phase III data recovery plan will be implemented.

The MOA has been reviewed and accepted by the signatories (PA SHPO, FAA) and the City of Philadelphia, which is a concurring party. As you know, the FAA coordinated with and has developed a strong working relationship with the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation, throughout the development of the PHL CEP Environmental Impact Statement (EIS). The PA SHPO has agreed that the CEP will not have a significant impact on historic, architectural, archaeological, or cultural resources, including the Fort Mifflin National Historic Landmark, which is owned by the City of Philadelphia.



It is our understanding that the ACHP does not typically participate in MOAs of this limited nature; however, pursuant to 36 CFR Part 800.6(a)(1), the FAA is extending this invitation to ACHP to participate in this MOA.

Please contact me at 717-730-2841 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Susan L. McDonald". The signature is fluid and cursive, with the first name "Susan" and last name "McDonald" clearly distinguishable.

Susan L. McDonald  
Environmental Protection Specialist  
Harrisburg Airports District Office

Enclosure: Memorandum of Agreement (with figures)

Cc: Jean Cutler, PHMC  
Calvin Davenger, PHL  
Marla Engel, VHB



Preserving America's Heritage

October 20, 2010

Ms. Susan McDonald  
Environmental Protection Specialist  
Federal Aviation Administration  
Harrisburg Airports District Office  
3905 Hartzdale Drive, Suite 508  
Camp Hill, PA 17011

*RE: Philadelphia International Airport Capacity Enhancement Program  
Philadelphia, Pennsylvania*

Dear Ms. McDonald:

The Advisory Council on Historic Preservation (ACHP) received a Memorandum of Agreement (MOA) for the referenced undertaking executed by the Federal Aviation Administration (FAA) and the Pennsylvania State Historic Preservation Officer (SHPO) on October 12, 2010. The ACHP's regulations, "Protection of Historic Properties" (36 CFR Part 800), require that the agency official notify the ACHP of an adverse effect finding and provide the ACHP with an opportunity to participate in consultation, if we so choose. The FAA invited the ACHP to participate in development of the MOA at the same time that it executed the document, thereby precluding our participation in consultation. The FAA, therefore, will need to take steps to correct procedural irregularities regarding development of this MOA in order to conclude its responsibilities under Section 106 of the National Historic Preservation Act (NHPA) and the ACHP's regulations.

FAA consulted with three SHPOs--Delaware, New Jersey, and Pennsylvania--in fulfilling its Section 106 responsibilities for the Philadelphia International Airport Capacity Enhancement Program (PHL CEP). However, only one SHPO is identified as a signatory to the MOA. Neither the FAA's documentation nor the preamble to the MOA reflects that the Delaware and New Jersey SHPOs declined any further involvement in consultation for this undertaking. Even if no historic properties were identified, or if no historic properties were to be affected in Delaware or New Jersey, FAA would need to document such avoidance in the MOA to record of the project planning process. As such, FAA should circulate the MOA to the other SHPOs and request they also execute the agreement. FAA may need to consider organizing the stipulations by state, thereby clarifying that ongoing reviews related to archaeological sites are to be conducted in Pennsylvania only.

If FAA is able to reengage the Delaware and New Jersey SHPOs in the process, or if the SHPOs decline any further involvement in the implementation of the PHL CEP undertaking, the ACHP's participation in the consultation to resolve adverse effects may not be necessary. We will defer to FAA and the other consulting parties to notify us if our assistance in concluding the consultation process is needed.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final MOA, developed in consultation with the SHPOs and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require our further assistance, please contact Blythe Semmer at 202-606-8552 or via e-mail at [bsemmer@achp.gov](mailto:bsemmer@achp.gov).

Sincerely,

A handwritten signature in cursive script, reading "Charlene Dwin Vaughn".

Charlene Dwin Vaughn, AICP  
Assistant Director  
Office of Federal Agency Programs  
Federal Permitting, Licensing, and Assistance Section

NJSHPO concurrenc

Re: Fw: PHL CEP EIS , HPO K 2010-018, 05-1777-15  
Meghan Baratta

to:

Susan McDona l d

11/03/2010 10:30 AM

Show Detai l s

Hi story: This message has been forwarded.

Thank you for the clarification Susan. The HPO concurs with the FAA assessment in the PHL CEP EIS for above ground impacts pursuant to 36 CFR 800.3(c)(4). I will log out your review request with both Vinny & my E-mails to you. Thank you for the opportunity to comment on this project.  
Sincerely,  
Meghan

Meghan MacWilliams Baratta  
Senior Historic Preservation Specialist  
New Jersey Historic Preservation Office  
(609) 292-1253 (phone)  
(609) 984 - 0578 (fax)

>>> <Susan.McDonald@FAA.GOV> 11/3/2010 10:20 AM >>>

Hi Meghan,  
Vincent has seen everything I have. Scroll down and you will see his email saying he concurs there will be no impacts to archaeological resources and seeking your concurrence.

Sue McDonald  
Environmental Protection Specialist  
Harrisburg Airports District Office  
(717) 730-2841  
(717) 730-2838 (fax)

\*---o--(!)---o---\*

From: "Meghan Baratta"  
<Meghan.Baratta@dep.state.nj.us>

To: Susan  
McDonald/AEA/FAA@FAA

NJSHPO concurr

Cc: "Vincent Maresca"  
<Vincent.Maresca@dep.state.nj.us>

Date: 11/03/2010 10:05  
AM

Subject: Re: Fw: PHL CEP EIS Section 106 MOA for archaeological  
resources

Hi Susan - Vinny needs to look at the below ground portion of the review & he has been out of the office for the last 3 days with the flu. I will speak with him when he is back in the office. I am assuming that you have sent him everything that he needs for the review - either through the EIS - or direct E-mail to him. If I am mistaken please let me know.  
Thanks-  
Meg

Meghan MacWilliams Baratta  
Senior Historic Preservation Specialist  
New Jersey Historic Preservation Office  
(609) 292-1253 (phone)  
(609) 984 - 0578 (fax)

>>> <Susan.McDonald@FAA.GOV> 11/3/2010 9:52 AM >>>  
Hi Vincent and Meghan,  
Hi, Any chance the NJ SHPO would send me an email or letter concluding the Section 106 consultation for the PHL EIS? I am trying to tie up any loose ends for the project.  
Thank you

Sue McDonald  
Environmental Protection Specialist  
Harrisburg Airports District Office  
(717) 730-2841  
(717) 730-2838 (fax)

\*---o--( )!---o---\*

From: "Vincent Maresca" <Vincent.Maresca@dep.state.nj.us>

To: Susan McDonald/AEA/FAA@FAA

Cc: "Meghan Baratta" <Meghan.Baratta@dep.state.nj.us>

Page 2

NJSHPO concurrenc

Date: 10/28/2010 04:34 PM

Subject: Re: Fw: PHL CEP EIS Section 106 MOA for archaeological resources

Hello Sue,

Thank you for the submitted information. I concur that the undertaking will have no impacts on any archaeology deposits within the limits of NJ. Thank you for providing me with the opportunity to comment regarding archaeology. Meg, any above-ground concerns?

Off the record - you may want to add to MOA Stipulation 1.D. if resources are determined NRHP eligible "by the PASHPO".... (if this is still a draft). Take care,

Vincent Maresca  
Historic Preservation Specialist  
New Jersey Historic Preservation Office  
Phone: (609) 633-2395  
Fax: (609) 984-0578  
Email: Vincent.Maresca@dep.state.nj.us  
Website: <http://www.nj.gov/dep/hpo>

Mailing Address:  
Mail Code 501-04B  
State of New Jersey  
Department of Environmental Protection  
Historic Preservation Office  
PO Box 420  
Trenton, NJ 08625-0420

>>> <Susan.McDonald@FAA.GOV> 10/28/2010 4:00 PM >>>

Vincent,  
Hi. By way of introduction, I'm FAA's environmental manager for the Philadelphia EIS. Here is everything I sent earlier. The 2nd attachment is all the Section 106 correspondence we have from the EIS. Please call me if you have any questions.

Sue McDonald  
Environmental Protection Specialist  
Harrisburg Airports District Office  
(717) 730-2841  
(717) 730-2838 (fax)

\*---o--(!)---o---\*

----- Forwarded by Susan McDonald/AEA/FAA on 10/28/2010 03:56 PM -----  
Page 3

NJSHPO concurr enc

From: Susan McDonald/AEA/FAA  
AEA-HAR-AD0, Harri sburg, PA

To: Dan. saunders@dep. state. nj . us

Date: 10/27/2010 03: 41 PM

Subj ect: Fw: PHL CEP EIS Secti on 106 MOA for archeaol ogi cal resources

Sue McDonald  
Envi ronmental Protecti on Speci al i st  
Harri sburg Ai rports Di stri ct Offi ce  
(717) 730-2841  
(717) 730-2838 (fax)

\*---o--( )!---o---\*

----- Forwarded by Susan McDonald/AEA/FAA on 10/27/2010 03: 41 PM -----

From: Susan McDonald/AEA/FAA  
AEA-HAR-AD0, Harri sburg, PA

To: Dan. saunders@dep. state. nj . us

Date: 10/27/2010 03: 39 PM

Subj ect: Fw: PHL CEP EIS Secti on 106 MOA for archeaol ogi cal resources

Dan,  
Nice talking with you. As you can see by the email thread I have been trying to send this to several people - all of which seem to be retired. Should you have any questions on this or the project, please let me know. Thank you

Sue McDonald  
Envi ronmental Protecti on Speci al i st  
Harri sburg Ai rports Di stri ct Offi ce  
(717) 730-2841  
(717) 730-2838 (fax)

Page 4

NJSHPO concurrenc

\*---o--( )!---o---\*

----- Forwarded by Susan McDonald/AEA/FAA on 10/27/2010 03:36 PM -----

From: Susan McDonald/AEA/FAA  
AEA-HAR-ADO, Harrisburg, PA

To: dorothy.guzzo@dep.state.nj.us

Date: 10/27/2010 03:23 PM

Subject: Fw: PHL CEP EIS Section 106 MOA for archaeological resources

Dorothy,  
I apologize, but I inadvertently forgot to include you on this email.  
Should you have any questions, please let me know.

Sue McDonald  
Environmental Protection Specialist  
Harrisburg Airports District Office  
(717) 730-2841  
(717) 730-2838 (fax)

\*---o--( )!---o---\*

----- Forwarded by Susan McDonald/AEA/FAA on 10/27/2010 03:04 PM -----

From: Susan McDonald/AEA/FAA  
AEA-HAR-ADO, Harrisburg, PA

To: Deborah.fimbel@dep.state.nj.us, Meghan MacWilliams Baratta  
<meghan.baratta@dep.state.nj.us>

Cc: MEngel@VHB.com, Mary M McCarthy/AEA/FAA, Lisa  
Holden/AWA/FAA@FAA

Date: 10/27/2010 02:09 PM

Subject: PHL CEP EIS Section 106 MOA for archaeological resources



NJSHPO concurrence

Deborah and Meghan,

In a letter to us (October 20, 2010) the ACHP suggested FAA invite the DE and NJ SHPO's to be signatory to an archaeological MOA. The purpose of this MOA is to monitor one underwater target and to conduct Phase I archaeological investigations on four parcels that are sensitive for terrestrial archaeological resources. These sites are all with PA and are not currently accessible for investigation because they are not owned by the City and the owners would not provide permission to conduct the investigations during the EIS. The ACHP letter, previous correspondence and the MOA and figures are attached for your information.

FAA did not originally consult with the NJ SHPO in the development of this MOA based on the location of the potential resources and previous correspondence with your office. I apologize if we inadvertently failed to properly consult.

If the NJ SHPO wishes to participate in this MOA, please let me know. If NJ SHPO agrees the consultation process has concluded, I would appreciate a written statement to that effect. An email would be fine.

Thank you for consideration in this matter. Should you have any questions, please call.

(See attached file: PHL CEP MOA and figures\_04Oct10.pdf) (See attached file: NJ SHPO Ltr on Arch.pdf) (See attached file: pa.faa.PHL CEP MOA.gc.21Oct10.pdf)

Sue McDonald  
Environmental Protection Specialist  
Harrisburg Airports District Office  
(717) 730-2841  
(717) 730-2838 (fax)

\*---o--(!)--o---\*

-----Original Message-----

From: Lukezic Craig (DOS) <[craig.lukezic@state.de.us](mailto:craig.lukezic@state.de.us)>  
Sent: Tuesday, November 09, 2010 10:00 AM  
To: 'Susan.McDonald@FAA.GOV' <[Susan.McDonald@FAA.GOV](mailto:Susan.McDonald@FAA.GOV)>  
Cc: Engel, Marla <[MEngel@VHB.com](mailto:MEngel@VHB.com)>; [Lisa.Holden@faa.gov](mailto:Lisa.Holden@faa.gov) <[Lisa.Holden@faa.gov](mailto:Lisa.Holden@faa.gov)>;  
[mary.m.mccarthy@faa.gov](mailto:mary.m.mccarthy@faa.gov) <[mary.m.mccarthy@faa.gov](mailto:mary.m.mccarthy@faa.gov)>; Slavin Timothy A (DOS)  
<[timothy.slavin@state.de.us](mailto:timothy.slavin@state.de.us)>; Marz Stephen (DOS) <[stephen.marz@state.de.us](mailto:stephen.marz@state.de.us)>  
Subject: RE: PHL CEP EIS Section 106 MOA

Hello Sue,

It is my understanding from the materials submitted, this document is only concerned with archaeological impacts, which are focused around the airport and do not extend into the State of Delaware. Therefore, we will decline to participate in this MOA.

Thanks,

Craig Lukezic

-----Original Message-----

From: [Susan.McDonald@FAA.GOV](mailto:Susan.McDonald@FAA.GOV) [<mailto:Susan.McDonald@FAA.GOV>]  
Sent: Wednesday, October 27, 2010 2:12 PM  
To: Lukezic Craig (DOS)  
Cc: [MEngel@VHB.com](mailto:MEngel@VHB.com); [Lisa.Holden@faa.gov](mailto:Lisa.Holden@faa.gov); [mary.m.mccarthy@faa.gov](mailto:mary.m.mccarthy@faa.gov)  
Subject: PHL CEP EIS Section 106 MOA

Craig,

In a letter back to us (October 20, 2010) the ACHP suggested FAA invite the DE and NJ SHPO's to be signatory to an archaeological MOA. The purpose of this MOA is to monitor one underwater target and to conduct Phase I archaeological investigations on four parcels that are sensitive for terrestrial archaeological resources. These sites are all with PA and are not currently accessible for investigation because they are not owned by the City and the owners would not provide permission to conduct the investigations during the EIS.. The ACHP letter and the MOA and figures are attached for your information.

FAA did not originally consult with the DE SHPO in the development of this MOA based on the location of the potential resources. I apologize if we inadvertently failed to properly consult.

If the DE SHPO wishes to participate in this MOA, please let me know. If DE SHPO agrees the consultation process has concluded, I would appreciate a written statement to that effect. An e mail would be fine.

Thank you for consideration in this matter. Should you have any questions, please call.

(See attached file: PHL\_CEP\_MOA\_and\_figures\_04Oct10.pdf) (See attached file: pa.faa.PHL CEP MOA.gc.21Oct10.pdf)

Sue McDonald  
Environmental Protection Specialist  
Harrisburg Airports District Office  
(717) 730-2841  
(717) 730-2838 (fax)  
\*---o--( )---o---\*



**U. S. Department  
Of Transportation**

**Federal Aviation  
Administration**

Harrisburg Airports District Office  
3905 Hartzdale Drive, Suite 508  
Camp Hill, PA 17011  
717-730-2839  
717-730-2838 (fax)

December 17, 2010

Mr. John Kennedy  
PA Department of Environmental Protection  
Southeast Region  
2 East Main Street  
Norristown, PA 17401-4915

Dear Mr. Kennedy,

The purpose of this letter is to summarize the discussions and outcome of our December 15, 2010 meeting and to confirm that the PA Department of Environmental Protection's (DEP) concerns about the Philadelphia International Airport Capacity Enhancement Program, as stated in your October 14, 2010 letter on the Final Environmental Impact Statement, have been sufficiently addressed by the FAA for compliance with the National Environmental Policy Act. This also serves to confirm FAA's understanding that the DEP is satisfied with what FAA has proposed in response to the October 14, 2010 comments.

Of primary concern to DEP was the level and detail in the Final EIS in regards to the conceptual wetland and waterway mitigation plan. The DEP also expressed concerns and caution regarding the difficulty of obtaining all the necessary permits and requested additional information on the potential impacts associated with the amount of fill needed for construction.

During the discussions, the FAA and the airport sponsor shared the most current wetland and waterway mitigation efforts and studies. It was explained that much of this information was available in the technical reports or would be refined and finalized during the permitting process. The FAA has agreed to include additional information and detail about the mitigation sites, the number of sites, and the amount of potential mitigation acreage each site is expected to yield in the ROD. The FAA and the airport sponsor also reiterated their commitment to continue working with the DEP throughout the permit process.

The participants also discussed the anticipated quantity and source of fill that will be required to extend Runway 8-26. The FAA quantified the estimated amount of fill and identified where the sponsor anticipated obtaining the fill. It was agreed that this information would be included in the ROD for clarification. Lastly, it was agreed that the ROD would expressly state that the airport sponsor must apply for a Submerged Lands License Agreement for the runway fill.

Please contact me at (717) 730-284 or at [susan.mcdonald@faa.gov](mailto:susan.mcdonald@faa.gov) if you have any other outstanding issues or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. McDonald', with a stylized, cursive script.

Susan L. McDonald  
Environmental Protection Specialist

cc:

James Newbold, PA Department of Environmental Protection  
David Burke, PA Department of Environmental Protection  
Randy Brown, PA Department of Environmental Protection  
Calvin Davenger, Philadelphia International Airport  
Mary M. McCarthy, Federal Aviation Administration



# pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

December 17, 2010

Ms. Susan McDonald  
Federal Aviation Administration  
Harrisburg Airports District Office  
3905 Hartzdale Drive, Suite 508  
Camp Hill, PA 17011

Re: Final Environmental Impact Statement for  
Philadelphia International Airport  
Capacity Enhancement Program

Dear Ms. McDonald:

Thank you for your letter of December 17, 2010, in follow-up to our meeting held on December 15, 2010, at our Norristown office and summarizing our discussions. Those discussions focused on Pennsylvania Department of Environmental Protection's (DEP) comments on the Final Environmental Impact Statement (FEIS) for the Philadelphia International Airport Capacity Enhancement Program, provided in our October 14, 2010, letter.

Based on your letter and the meeting, with assurances provided about supplemental information to be provided in the Record of Decision, DEP agrees that the level of information provided is sufficient to address our concerns about the adequacy of the FEIS. We understand that further coordination will occur between the project sponsor and DEP during the permitting phase of this project, and that the technical requirements in Pennsylvania regulations will be fully addressed in the permitting process.

If you have any questions, please contact me at 484.250.5822.

Sincerely,

David W. Burke  
Watershed Manager  
Watershed Management

cc: Mr. Davenger - Philadelphia Division of Aviation  
Mr. Kennedy  
Re 30 (GJS10WTSD)351-15

----- Forwarded by Jim Byers/AWA/FAA on 12/28/2010 03:05 PM -----

From: Early.William@epamail.epa.gov  
To: Carmine Gallo/AEA/FAA@FAA  
Cc: Okorn.Barbara@epamail.epa.gov, Benito DeLeon/AWA/FAA@FAA, Daphne Fuller/AWA/FAA@FAA, Jean Loney/AWA/FAA@FAA, Jim Byers/AWA/FAA@FAA, Pomponio.John@epamail.epa.gov, Lori Pagnanelli/AEA/FAA@FAA, Maria Stanco/AEA/FAA@FAA, Mary M McCarthy/AEA/FAA@FAA, Ralph Thompson/AWA/FAA@FAA, Susan McDonald/AEA/FAA@FAA, Early.William@epamail.epa.gov, William Flanagan/AEA/FAA@FAA, Caprio.Amy@epamail.epa.gov  
Date: 12/28/2010 12:49 PM  
Subject: Re: Draft Responses to US EPA Comments on PHL CEP FEIS  
Sent by: Caprio.Amy@epamail.epa.gov

Hi Carmine - Our staff quickly took a look at FAA's responses to our initial comments on your EIS. I am attaching a table with our DRAFT responses to your recent submittal. Please contact me with any questions.

Thanks.

bill e.

William C. Early  
Deputy Regional Administrator  
Middle Atlantic Region  
U. S. Environmental Protection Agency  
215 814 2626  
215 814 2901 (Fax)  
Early.William@epa.gov

-----  
Re: Draft Responses to US EPA Comments on PHL CEP FEIS  
From: Carmine.Gallo  
To: William Early  
Sent: 12/28/2010 08:14 AM  
Cc: Amy Caprio, Barbara Okorn, John Pomponio, daphne.fuller, jean.loney, jim.byers, Lori.Pagnanelli, ralph.thompson, William.Flanagan, Maria.Stanco, mary.m.mccarthy, Susan.McDonald, benito.deleon

Good morning Bill,

I hope you all have weathered the storm OK there in Philly.  
If there are comments/memo/email to share as we discussed, suitable to be included in the ROD it would be valuable to expedite them to us.

Reply to this distribution will work to expedite...

Thank you all, again,  
Carmine Gallo  
Regional Administrator AEA-1

718 553 3000

- - - - -

From: Early.William@epamail.epa.gov  
To: Carmine Gallo/AEA/FAA@FAA  
Cc: "Amy Caprio" <Caprio.Amy@epamail.epa.gov>, "Barbara Okorn"  
<Okorn.Barbara@epamail.epa.gov>, "John Pomponio" <pomponio.john@epa.gov>  
Date: 12/23/2010 04:35 PM  
Subject: Re: Draft Responses to US EPA Comments on PHL CEP FEIS

Carmine- Sorry I missed your call. I am out of the office today and have not spoken with our staff regarding our comments on the airport project. I have asked the EPA staff to have their comments by Mon at noon. Should have comments to you Mon. afternoon. I will forward any comments I get during the weekend to you.

Bill Early  
Sent by EPA Wireless E-Mail Services

----- Original Message -----

From: Carmine.Gallo  
Sent: 12/22/2010 02:15 PM EST  
To: William Early  
Cc: Amy Caprio; Michael Dandrea; Jeffrey Lapp; Barbara Okorn  
Subject: Re: Draft Responses to US EPA Comments on PHL CEP FEIS

Bill,

I appreciate all your efforts, I just need to clarify, in response to you point, that the references in the text are also in the DRAFT response to comments.  
If there are any other questions please have appropriate staff levels discuss these points further.

Carmine Gallo  
Regional Administrator AEA-1  
718 553 3000

- - - - -

From: Early.William@epamail.epa.gov  
To: Carmine Gallo/AEA/FAA@FAA  
Cc: Lapp.Jeffrey@epamail.epa.gov, Okorn.Barbara@epamail.epa.gov,  
Caprio.Amy@epamail.epa.gov,  
Dandrea.Michael@epamail.epa.gov  
Date: 12/22/2010 09:25 AM  
Subject: Re: Draft Responses to US EPA Comments on PHL CEP FEIS

Carmine -

As a follow up to our telephone conversation earlier today I sent a message to all of the EPA reviewers asking them to review the DRAFT and get their thoughts/responses to the Region III coordinator by noon



on Monday, Dec. 27. I am advised that some of the Region III staff responsible for reviewing are out of the office. In light of this, we may only be able to give you preliminary impressions/responses based upon the staff who are in the office.

One comment I did want to share is that in some instances the DRAFT responses indicate the matter raised by EPA is addressed in the ROD. Unfortunately, we have not been provided a copy of the ROD and therefore won't be able to speak definitively on whether our concern/comment has been addressed because we have not seen the ROD.

Thanks.

bill e.

William C. Early  
Deputy Regional Administrator  
Middle Atlantic Region  
U. S. Environmental Protection Agency  
215 814 2626  
215 814 2901 (Fax)  
Early.William@epa.gov

(See attached file: PHL CEP EIS - EPA R3 Comments on FAA RTCs (12-28-10).docx)

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
CMART Code	Comment Topic	EPA Comment on Final EIS	FAA DRAFT Response	EPA Response to FAA Draft Responses
<b>Hazardous Sites Cleanup Division (HSCD) and Office of Regional Counsel (ORC) response to FAA comments</b>				
<b>General Overall Comment</b>	<p>In general, we do not believe the FAA's response addresses the concerns raised in our previous comments. Major changes are being proposed for the airport which will impact the remedy (landfill cap) and ongoing groundwater mitigation activities. No details have been provided as to just what changes are proposed, or how these changes will impact the existing remedy or the ongoing activities. Neither the City of Philadelphia nor the FAA have met with us to discuss any of these proposals. The responses provided by FAA have simply said that these issues will be addressed by the City in the final design documents. We believe we need to be involved much earlier in the design process. In addition, FAA's responses only state that the City will "seek" (rather than "obtain") EPA approval before implementing (as yet unspecified by FAA or the City) modifications to EPA's ongoing response actions.</p> <p>The Enterprise Avenue Landfill is a Superfund site, regardless of its NPL status (currently deleted). There is an ongoing groundwater response action pursuant to an Administrative Order with the City of Philadelphia. The FAA ROD may impact the protectiveness of the remedy selected in the 1984 ROD (landfill cap) and the ability to conduct the ongoing response action being conducted pursuant to the 1994 Mitigated FONSI with Special Conditions (groundwater treatment and mitigation system). Protecting the integrity of the remedy and implementation of the ongoing response action are important to prevent a release from the Enterprise Avenue Landfill site and the spread of contamination into the sole source aquifer that lies below the landfill and airport.</p>			
F-101-005	Landfill	The impact on the Enterprise Avenue Landfill Site remedy and a detailed plan to address the protectiveness of the remedy must be provided. The effectiveness of the cover cannot be impaired and any Site activities must take measures to preserve the effectiveness of the cover, including during any construction. A detailed plan to address the protectiveness of the remedy must be provided. Additionally, any exacerbation or release of hazardous substances in the groundwater as a result of the disturbance of the landfill cap is subject to enforcement under CERCLA. Please note that additional detailed comments are presented in the enclosed	More detailed information will become available during the final design of the proposed extension of Runway 8-26. The City of Philadelphia owns the property and, under the Administrative Order by Consent (AOC) for Removal Action (June, 2002) is responsible for maintaining the cover and the groundwater monitoring systems. During the final design process, the City will coordinate with the EPA and, in accordance with the requirements of the AOC, will ensure that the effectiveness of the landfill cover is maintained during construction and that the construction will not result in the release of hazardous substances to groundwater. The City, per	As indicated in EPA's extensive comments on the Final EIS, no details on the runway 8-26 design and its impact on the EAL response action were provided. The comment has not been addressed. Coordination with EPA should take place earlier than at the final design stage to avoid any delays or significant alterations in airport plans. The ROD should indicate that FAA and the City will coordinate with EPA and at what point(s) in the process coordination will occur. EPA urges that designs be provided at the 30%, 60% and 90% completion stages and that no construction activities that would impact the remedy and on-going

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		attachment. EPA would like to again emphasize the necessity that any potential future revision to the landfill cover and groundwater system will require coordination, consultation, and approval by EPA. Renegotiation of the AOC and the Response Plan will also be necessary. This is required before any work begins on the airport enhancement project. EPA would recommend having a meeting with all involved parties to discuss the FAA and City plans to address any necessary modification or potential impact to the remedy.	its responsibility under the AOC, will coordinate with EPA during the final design process for the landfill cover and groundwater system, and understands that renegotiation of the AOC and response plan may be required. The City will seek the approval of EPA for plans to alter the landfill cover and groundwater monitoring system.	groundwater response action at the Enterprise Avenue Landfill be initiated prior to obtaining approval from EPA. EPA disagrees with the last sentence in the FAA draft response. It is not sufficient for the FAA to commit the City to simply “seek” approval for modifications to the remedy or the ongoing response actions. The City may not alter the remedy implemented pursuant to the EPA ROD (May 1984) or the on-going mitigation measures under the Mitigated Finding of No Significant Impact (FONSI) with Special Conditions (1994) without EPA approval.
F-101-009	Landfill	If hazardous substances are released during any reconfiguration activities being performed by the FAA at the Enterprise Avenue Landfill Site, the FAA may be considered an "operator" under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and, may be ultimately found as a Potentially Responsible Party (PRP), which could involve paying for or performing cleanup at the Site.	The final design and construction of the Runway 8-26 extension will be undertaken by the City of Philadelphia. The City is the entity which owns the property and which, under the Administrative Order by Consent (AOC) for Removal Action (June, 2002) is responsible for maintaining the groundwater monitoring systems and the landfill cover. During the final design process, the City will consult with the EPA and, in accordance with the requirements of the AOC, will ensure that the effectiveness of the cover is maintained during construction. The CEP is being undertaken by the City of Philadelphia, as the owner of the airport. Although the FAA is approving amendment of the Airport	See EPA response to comment F-101-005

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
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			Layout Plan to depict the CEP and may provide federal funding and approval to use passenger facility charges to support the CEP, these funding activities do not render the FAA an operator for the purposes of CERCLA. To the extent the FAA installs or operates nav aids in the vicinity of the landfill, it is not anticipated that these activities will impact the landfill remedy; however, the FAA will coordinate with the EPA prior to the installation of the nav aids.	
F-101-010	Landfill	Section 1.7 - Required Permits and Actions - Table 1-5: The FAA must consult with the US EPA and the City of Philadelphia before undertaking activities at the Site which will cause or may cause a release or potential release of hazardous substances, or are a threat to public health or welfare or to the environment. These activities include, but are not limited to, impairment or destruction of the landfill cap, or interfering with the on-going groundwater evaluation or causing the release or exacerbation of groundwater hazardous substances.	See response to comment F-101-009, above. Table 11-1 in the ROD lists permits and approvals and notes that the City will renegotiate the Enterprise Avenue Landfill the AOC with the EPA.	See EPA response to comment F-101-005
F-101-011	Landfill	Section 4.18.3 - Hazardous Materials and Solid Waste - Affected Environment: Enterprise Avenue Landfill is not listed as a potential or confirmed source of subsurface contamination.	The Enterprise Avenue Landfill is a "known release"; "known releases" are among the items listed in Section 4.18.3 of the FEIS. Figure 4.18-2 of the FEIS clearly shows the Enterprise Avenue Landfill as a source of	EPA could not locate the reference to EAL as a "known release" in Section 4.18.3 in the FEIS. Identification of EAL as a "known release" should be included in the text as well as in Figure 4.18-2.

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
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			subsurface contamination.	
F-101-012	Landfill	Section 5.18.4 - Hazardous Materials, Pollution Prevention and Solid Wastes - Summary of Impacts: Although Enterprise Avenue Landfill Site is no longer on the National Priorities List (NPL), waste has been left in place and groundwater monitoring and treatment is being performed. The proposed activities on the Enterprise Avenue Landfill Site involve destroying groundwater monitoring wells and putting additional loading on the landfill cap that may cause migration of groundwater contamination from the landfill containment system. Therefore, EPA strongly disagrees with the FAA's determination that the impacts would not be considered significant.	As documented in Section 5.18.4 of the FEIS, the acquisition of land within the footprint of the former Enterprise Landfill for the Project does not constitute a "significant impact" as defined in FAA Order 1050.1E because the Enterprise Avenue Landfill is no longer on the National Priority List. Further, the City will have to the assure EPA of the continued integrity of the landfill cover and the monitoring wells, and to protect against the migration of contamination, as required by the Administrative Order by Consent (AOC) for Removal Action (June, 2002). Section 10.10 of the ROD requires the City to continue to monitor the groundwater and, if necessary, capture and treat any contaminated groundwater from the landfill. With these mitigation measures the potential impact is not significant.	Disagree. The fact that the Enterprise Avenue Landfill is no longer on the NPL is irrelevant in this situation. Waste is left in place and the groundwater continues to be impacted. Response measures are required pursuant to the Mitigated FONSI with Special Conditions (1994). The requirements of the EPA ROD and AOC are in place <u>because</u> of the Superfund site's potential impact on the sole source aquifer. Any modification to the site could impact the site conditions, remedy, or groundwater mitigation system. Designs of the current response action did not account for the potential impacts of the expansion project. If any portion of the remedy or mitigation system fails, a release could occur and cause significant impact to the surrounding media, including the sole source aquifer, and present an opportunity for receptor exposure to site contaminants. EPA reiterates its comment that no details regarding the parameters of the airport expansion project have been provided to ensure that the City will be able to comply with the AOC during and after the airport expansion. Given that Section 10.10 of the ROD requires the City to continue to monitor the groundwater and, if necessary,

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				capture and treat any contaminated groundwater from the landfill, the CEP may preclude the City's ability to do so and take additional protective measures selected by EPA.
F-101-013	Water Quality	Section 6.7 - Water Quality: Although mentioned in the response to Comment F-001-041, Section 6.7 of the EIS does not describe mitigation efforts to address potential significant impacts as a result of enhancement activities occurring on the Enterprise Landfill to water quality.	The City, per its responsibility under the Administrative Order by Consent (AOC) for Removal Action (June, 2002), will coordinate with EPA during the final design process for the landfill cover and groundwater system, and understands that renegotiation of the AOC and response plan may be required. Section 10.9 of the Record of Decision requires that the City continue to monitor and, if necessary, capture and treat the contaminated groundwater from the landfill.	See EPA response to comment F-101-005. Any alteration of site conditions that could impact the ability to implement the response action pursuant to the AOC may require the selection of additional response measures and renegotiation of the AOC.
F-101-014	Alternatives	Section 3.4.2 - Screening Level 2 - Screening of Preliminary Alternatives - Alternative A: Parallel Runway 8-26 East - Project Costs Relative to Benefits: Although it is noted on p. 3-42 that the cost of environmental mitigation requirements is unknown, this is a problem. Along with a paucity of detail regarding how the Enterprise Avenue Landfill Site cap will be replaced, how long it will take to alter the runway (and tentatively when) and information about abandoning/installing monitoring wells;	The FEIS meets the standards required by the Council on Environmental Quality with regard to economic costs. EPA cites no evidence to indicate that the proposed activities on this former landfill site are not feasible. The cost of remedial activities at the Enterprise Avenue Landfill site will be developed during the final design process, as these costs are highly specific to the actual remedial actions that will be undertaken. The design of these remedial actions will be developed by the City in consultation with the EPA as required by	See EPA response to comment F-101-013.

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		monitoring plans and sampling, there is little information regarding how much these items will cost.	the Administrative Order by Consent (AOC) for Removal Action (June, 2002).	
<b>Environmental Assessment and Innovation Division (EAID) and Sole Source Aquifer response to FAA comments</b>				
<b>General Overall Comment</b>	<p>We strongly recommend that EPA be able to participate at various stages of the project design (30%, 60%, and 90%), be shown plans, for FAA and the City to share thinking on impact minimization and mitigation efforts, any assessment of effects on the landfill, groundwater contamination, proposed changes to the recovery system, etc. for EPA be able to provide input on the plans and options/alternatives where appropriate, as project design develops. This would benefit not only the Superfund program but the other programs as well. For example, environmental impacts may be avoided if we are given the opportunity to be involved early in the process. For aquatic resource issues, an interagency team, including the Army Corps should be involved with review and concurrence.</p> <p>Given the history with this project, we recommend that the commitment to allow us to review the plans be documented in the ROD as well as in a Memorandum of Agreement or some other mechanism. Close coordination on this project has been lacking in the past. An agreement between FAA and EPA would be beneficial.</p>			
F101-001	EAID		Mitigation commitments are documented in Section 10 of the ROD.	EPA has not received the ROD to evaluate the commitments. It is very important that the project team coordinate with EPA and other agencies regarding impacts to wetlands, the River and waterways, and other habitats. Given FAA's stringent requirements for placement of mitigation sites important ecological functions will be lost in the project area.
F101-002	EAID		The construction method for Runway 9R-27L is described in more detail in the ROD. Right now it is expected that the area of fill will be enclosed with steel sheeting. Sunoco is responsible for extension of its Fort Mifflin Pier and the construction method. Detailed information on construction methods, impacts, and mitigation will be developed by the City	EPA has not received the ROD and cannot evaluate the information. It is important that FAA, the City, EPA and other agencies work together avoiding, minimizing and mitigating environmental impacts early enough in the process that modifications can be made. We recommend that FAA commit to allowing EPA to review the project plans and design at 30%, 60%, and

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
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			and Sunoco and provided in the 404 permit application.	90% to allow for modification, additional information to be collected, or anything else that may be needed to allow the project to move forward while avoiding and minimizing impacts. We also suggest that a Memorandum of Agreement or some other mechanism be used to commit to this coordination in addition to being a requirement of the ROD. The 404 impacts need to be fully vetted with the Corps and EPA prior to any permit issuance since there is not enough information available to determine compliance with 404(b) (1) Guidelines.
101-003	EAID		Subsequent to filing the FEIS, FAA had extensive consultation with NMFS concerning impacts to essential fish habitat. Measures required to minimize and mitigate are documented in the ROD, will be developed by the City as part of the final design and permitting process and will be provided in the Section 404 and state permit packages.	EPA has not seen what is documented in the ROD. Please see response above.
101-004	EAID		The loss of 15 acres of riverine intertidal habitat will not result in a significant impact to the habitat diversity of the area. During final design and permitting process any unavoidable impacts will be minimized. The permit application by the City will document the steps taken to avoid, minimize, and mitigate.	We disagree that this will not be a significant impact. Due to FAA policy these wetlands would most likely not be mitigated in the vicinity of the airport since they would be considered attractive to wildlife and therefore a hazard.



EPA Region III DRAFT Response to FAA comments – December 28, 2010				
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101-007	EAID		The City during the final design process will continue to work to avoid and minimize impact and use “green airport” and other strategies to minimize impacts as appropriate.	Comment acceptable.
101-008	EAID		If required by state and federal permits, the City will employ an independent environmental monitor.	Comment acceptable.
F-101-026	sole source aquifer		The FEIS, at Section 4.11.3 is correct and is not misleading because it states "the Airport is not directly over the SSA (sole source aquifer) but is within the review area, which includes streams within two miles of the Delaware River." This language is consistent with EPA's statement that the review area includes all lands within two miles of the River, and further, the FEIS acknowledge that the entire Airport lies within the review area.	EPA remains concerned that the reader may not make a distinction between the sole source aquifer itself and the designated sole source aquifer review area, hence the suggested modified sentence: “The Airport is not directly over the aquifer, but is within the designated Sole Source Aquifer review area, which includes the portion of the Delaware River basin within two miles of the Delaware River.” However, it is acceptable if the existing sentence remains in its present form.
F-101-027	sole source aquifer		The statement in the FEIS is accurate. The Airport is within the review area, and is north of the SSA itself.	EPA remains concerned that the reader may not make a distinction between the sole source aquifer itself and the designated sole source aquifer review area. However, it is acceptable if the existing sentence remains in its present form.
F-101-028	sole source aquifer			Acceptable
F-101-029	sole source aquifer			Acceptable

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
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F-101-030	sole source aquifer			Acceptable
F-101-031	sole source aquifer			Pending Region 2 feedback, as this was their comment; presumed acceptable
<b>Air Protection Division (APD) Response to FAA comments</b>				
F-001-032	APD-Modeling	The response to the DEIS comment F-001-045 does not adequately address our comment. FAA indicates that since it was determined that 2005 was the "worst case" year of meteorology of the 5 year period from 2001 through 2008 that all alternatives need only consider impacts using the 2005 year of meteorology. As indicated in our original comment this was not the agreement that was reached between FAA and EPA. The agreement was that once FAA determined its preferred alternative that it would evaluate both the No Build and Preferred Alternative with a full 5 year meteorological record.		In response to our comment FAA has performed the air quality modeling analysis using the request 5 yrs. of meteorological data. Therefore, this issue has now been satisfied.
F-001-033	APD-Modeling	We continue to have concerns with the responses to F-001-046 and 047. FAA has indicated that " ... It is FAA's present policy and guidance to address HAP's in the form of emissions inventories ... " We recognize that FAA's guidance documents does not address the dispersion modeling of air toxics stating that " ... scientific knowledge of these analyses with respect to airports is still very limited." However, it is our firm belief that if an emissions inventory of air		In response to this comment FAA has again indicated that addressing HAP's by simply constructing an emission inventory is consistent with current FAA policy. Additionally, they indicate that this analysis is also in keeping with the Air Quality Assessment Protocol, dated February 2006, that was circulated to all regulatory agencies including USEPA. In our review of both the DEIS and the FEIS we indicated that we understood that it was the policy

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		toxics can be determined that there should not be any reason to avoid taking the next step and determining the ambient impacts from such emissions. As stated in our original comment there is ample reason to indicate that the state-of-the-science has achieved a level to allow one to reasonably estimate air toxics impacts.		of FAA to only estimate HAP emissions and not to model their impact on human health and the environment. However, we have also indicated that we disagree with their reasoning (see previous comments I have made regarding this issue) and have encouraged them to perform an ambient air quality of the HAPs that are emitted from the airport. No new information has been provided here that would change our original position. Regarding the February 2006 Protocol – I cannot speak to what was or was not agreed upon since I did not become involved in this project until 2008.
F-001-034	APD-Modeling	We disagree with the response to F-001-048. FAA states in its response to this comment that" ... building downwash on the plumes from stationary sources (such as the utility plant) were not accounted for in the dispersion modeling." The response indicates that this was not done because the impacts from such sources are "minor." The only justifiable reason for not considering a quantifiable effect on pollutant dispersion, such as building downwash, is if it can be shown that to not account for the effect would result in a conservative (i.e., higher than expected) estimate. This is certainly not the case for stationary source emissions that are affected by building downwash.		FAA's response first suggests that EDMS (i.e., FAA's Emission and Dispersion Modeling System) "... does not include direct provisions for simulating building downwash ..." This is not true since the AERMOD model is the dispersion kernel of EDMS and AERMOD has the capability to consider building downwash. FAA's second point does recognize this (thus I don't understand first point) but implies that building downwash does not need to be considered with respect to simulating boiler emissions since other sources that are being simulated are "... vastly more significant..." I disagree with this reasoning since, as I have previously stated, the only justifiable reason for not considering a

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
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				quantifiable effect on pollutant dispersion, such as building downwash, is if it can be shown that to not account for the effect would result in a conservative (i.e., higher than expected) estimate. This is certainly not the case for stationary source emissions that are affected by building downwash. To model boiler emissions that are affected by building downwash as if they were not is to misrepresent their impact. If it was determined necessary to model the boiler emissions, then they should have been modeled correctly. FAA made two additional points: the first was related to the fact that the topography of the area is flat and the buildings are not large and are spread out; second, FAA indicates that the new boilers will be modeled with downwash during PADEP's permitting review process. Their first point seems irrelevant since it doesn't speak to why the boiler emissions are not affected by downwash while the second point essentially admits that in order to adequately assess impact from the boiler emissions downwash needs to be considered.
F-001-035	APD-Modeling	The response to comment. F -001-049 does not fully address our original comment. FAA states that" ... The assessment of "gridded" receptors ... has		Given FAA's response to our comment it appears that they have misunderstood the issue. As was indicated in our comment, the problem with the analysis that was

**EPA Region III DRAFT Response to FAA comments – December 28, 2010**

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		<p>been accomplished ... findings will be provided in the FEIS." This information is actually found in Attachment 2 of Appendix H of the Final Air Quality Technical Report, which has been provided. The analysis is significantly lacking. Although both a course grid (500m resolution) was modeled and then at course receptor points where high concentrations were predicted a fine grid (50m resolution) was modeled, the course grid excluded the discrete receptor area. That is, no fine grid modeling was performed around any discrete receptors. Therefore, since many of the highest concentrations were predicted at the discrete receptors and no fine scale modeling was performed at those locations the analysis performed did not adequately respond to our original comment. The analysis did not resolve the concentration gradients in the vicinity of many of the highest predicted concentrations.</p>		<p>done was that the receptor grids were not located in those areas, near curbsides, where the highest impacts were expected. FAA' approach was to locate a single discrete receptor in each of curbside areas. The reason for requiring a fine grid in the curbside area is to insure that the highest concentration has been determined. This cannot be done unless the spatial concentration gradient that exists in those areas are resolved; modeling a set of isolated discrete receptors cannot address this issue.</p>
F-001-036	APD-Modeling	<p>The response to F-001-050 does not address our concern. FAA states in its response to this comment that "The assessment of construction-related emission has been conducted in the form of an emissions inventory ..." The point on my original comment was that the</p>		<p>FAA indicates that: "The assessment of construction-related emissions in the form of an emissions inventory was conducted in compliance with the project-specific Air Quality Assessment Protocol (see Section 6: <i>Construction Impacts</i>). " As I indicated above I cannot speak to what was or was</p>

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		construction of an emissions inventory does not constitute an adequate assessment. Construction-related emissions should be modeled along with the other sources.		not agreed upon in the 2006 protocol since I did not become involved in this project until 2008. However, it is my opinion that a credible assessment of this projects impact on ambient air quality cannot be accomplished without modeling construction emissions. This opinion has not changed since 2008 when it was communicated to FAA. The reason this issue is important is that: 1) construction related emissions of NO <sub>x</sub> , VOC, SO <sub>2</sub> , & PM <sub>2.5</sub> are considerably higher than any source group, with the exception of aircraft emissions; and 2) Although it is generally true that construction activities usually result in short-term impacts on air quality over a very limited period, the construction period for this project is 12 years. To put this in perspective, the length of the construction period is more than double the length of meteorological record that EPA requires for regulatory modeling analyses; a period of 5 years is considered adequate for establishing temporal variability in air pollutant concentrations due to meteorology. Therefore, it is reasonable to expect that the long-term impacts from construction activities will be. Given the significance of the construction emissions and the long period of construction, these emissions should be

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
CMART Code	Comment Topic	EPA Comment on Final EIS	FAA DRAFT Response	EPA Response to FAA Draft Responses
				modeled along with the other sources.
F-001-037	APD-Modeling	Sufficient information has not been provided in the response to F-001-051 to address our comment. FAA states in its response to this comments that "The regional study area... is considered to be sufficiently large enough to capture the vast majority of mobile source emissions..." There does not appear to have been any analysis performed which would lead FAA to the conclusion; therefore, our original concern remains.		FAA response to this comment is no different from what they have responded previously. It is still my opinion that the regional study area, considered by FAA, is not large enough to assess all areas where the impact from increases mobile traffic could be significant.
F-001 - 038	APD-Modeling	We continue to disagree with the responses to F-001-052 & 053. FAA states in its response to this comment that " ... the focus of the modeling is on airport-related emission sources ... other stationary sources ... are not expected to be effected by the CEP project "" Therefore, these sources are assumed to be adequately covered by the "background" PM2.5 values ... " Although the CEP sources are the principle focus of the analysis, the EIS does include an analysis this is designed to estimate the expected total PM2.5 concentrations in the area. By adding the maximum PM2.5 concentrations that have been measured in the area to the modeled PM2.5 concentrations from the CEP sources is not, as is implied in FAA's response, a		FAA response to this comment is no different from what they have responded previously. In order to adequately determine the total concentration of PM2.5 in the area, the modeled impact from "near-by" sources plus an appropriate estimate of background should be added to the modeled impacts from the proposed project.

EPA Region III DRAFT Response to FAA comments – December 28, 2010				
CMART Code	Comment Topic	EPA Comment on Final EIS	FAA DRAFT Response	EPA Response to FAA Draft Responses
		conservative estimate. Rather, because of the close proximity of the utility plant and oil refineries, the methodology used is likely to significantly underestimate the combined PM2.5 concentrations in the area. As indicated in my original comment FAA should, in addition to the CEP sources, model all "near-by" sources.		





U.S. Department  
of Transportation

Office of Regional Administrator  
Eastern Region

1 Aviation Plaza  
Jamaica, NY 11434-4809

**Federal Aviation  
Administration**

December 29, 2010

Mr. William C. Early  
Deputy Regional Administrator  
U.S. Environmental Protection Agency  
Middle Atlantic Region  
1650 Arch Street  
Philadelphia, PA 19103-2029

Dear Mr. Early,

This responds to the U.S. EPA's September 27, 2010 letter concerning the Final Environmental Impact Statement (EIS) for the Philadelphia International Airport (PHL) Capacity Enhancement Program (CEP). The key issues raised by the EPA centered on ensuring that the airport sponsor (the City of Philadelphia) coordinates with EPA on any actions that could potentially impact the Enterprise Avenue Landfill and associated water quality. The EPA also expressed concerns about how the air quality analysis was conducted.

To address EPA's concerns, the Federal Aviation Administration, (FAA), will specify in the CEP Record of Decision (ROD) that the sponsor will seek and obtain EPA's approval prior to any modifications to the Enterprise Avenue Landfill cover and groundwater monitoring system. The ROD will also specifically require the sponsor to provide EPA access to preliminary construction designs at phases to be agreed-upon by the parties, and to work closely with EPA prior to and during the extension of Runway 8-26. As you know, that level of detailed engineering design is not typically required for environmental review under the National Environmental Policy Act (NEPA). It is more typically required in support of subsequent permitting actions.

With regard to the air quality analysis conducted for CEP, prior to initiating our air quality analysis the FAA developed an Air Quality Protocol. This protocol was developed in coordination with EPA and the Pennsylvania Department of Environmental Protection, and finalized on February 23, 2006. The air quality analysis followed the agreed upon protocol and relied upon reasonable scientific methods previously approved by US EPA. The FAA is confident that the potential air quality impacts associated with the CEP and reasonable alternatives were adequately assessed and disclosed under NEPA. In response to EPA's comments the FAA conducted additional air quality modeling using five years of meteorological data and included that information in the

ROD. Additional analysis using different methodologies as requested by EPA later in the EIS process would have enhanced the document but was not needed.

With regard to the question raised about the intertidal zone, we recognize the continued concern about this area. Of greater importance, the FAA has conditioned approval of this project upon measures to avoid and minimize impacts to aquatic habitat to the extent practicable, regardless of whether the impact is viewed as a "significant impact."

The entire NEPA process has been conducted in accordance with the streamlining agreement established between the FAA and EPA. Therefore, it is our earnest hope that inclusion of the above commitments in the ROD adequately address EPA's concerns in the above-referenced areas under the National Environmental Policy Act.

We would be grateful if you would please confirm this in writing, addressed to Susan McDonald in the FAA's Harrisburg Airports District Office, reachable at (717) 730-2841 or [susan.mcdonald@faa.gov](mailto:susan.mcdonald@faa.gov). Thank you in advance for your swift response.

I hope that we can meet early next year to discuss lessons learned so that we can collaborate more productively on future airport EISs.

Sincerely,

  
for Carmine Gallo

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Attachment E  
Land Use Compatibility Table

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## LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

### Yearly Day-Night Average Sound Level (DNL)

Below 65 Decibels	65-70 Decibels	70-75 Decibels	75-80 Decibels	80-85 Decibels	Over 85 Decibels
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#### Residential

Residential (Other than mobile homes & transient lodges)

Mobile Home Parks

Transient Lodging

Y	N <sup>1</sup>	N <sup>1</sup>	N	N	N
Y	N	N	N	N	N
Y	N <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N

#### Public Use

Schools

Hospitals, Nursing Homes

Churches, Auditoriums, Concert Halls

Governmental Services

Transportation

Parking

Y	N <sup>1</sup>	N <sup>1</sup>	N	N	N
Y	25	30	N	N	N
Y	25	30	N	N	N
Y	Y	25	30	N	N
Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	Y <sup>4</sup>
Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N

#### Commercial Use

Offices, Business & Professional

Wholesale & Retail Building Materials,  
Hardware & Farm Equipment

Retail Trade - General

Utilities

Communications

Y	Y	25	30	N	N
Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Y	Y	25	30	N	N
Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Y	Y	25	30	N	N

#### Manufacturing & Production

Manufacturing, General

Photographic and Optical

Agriculture (Except Livestock) & Forestry

Livestock Farming & Breeding

Mining & Fishing, Resource Production &  
Extraction

Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Y	Y	25	30	N	N
Y	Y <sup>6</sup>	Y <sup>7</sup>	Y <sup>8</sup>	Y <sup>8</sup>	Y <sup>8</sup>
Y	Y <sup>6</sup>	Y <sup>7</sup>	N	N	N
Y	Y	Y	Y	Y	Y

#### Recreational

Outdoor Sports Arenas, Spectator Sports

Outdoor Music Shells, Amphitheaters

Nature Exhibits & Zoos

Amusement, Parks, Resorts, Camps

Golf Courses, Riding Stables, Water Recreation

Y	Y <sup>5</sup>	Y <sup>5</sup>	N	N	N
Y	N	N	N	N	N
Y	Y	N	N	N	N
Y	Y	Y	N	N	N
Y	Y	25	30	N	N

**NOTE:** The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties remains with the local authorities. FAA determinations under Part 150 are not intended to substitute Federally determined land use 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:**

SLUCM Standard Land Use Coding Manual.

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

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

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

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

<sup>1</sup> Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor 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

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

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

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

<sup>5</sup> Land use compatible provided special sound reinforcement systems are installed.

<sup>6</sup> Residential buildings require an NLR of 25 dB.

<sup>7</sup> Residential buildings require an NLR of 30 dB.

<sup>8</sup> Residential buildings not permitted.

Noncompatible land use.

Source: 14 C.F.R. Part 150, Appendix A, Table 1 (1 January 1998)

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Attachment F  
Additional Air Quality Information

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## METEOROLOGICAL DATA FOR WORST-CASE CONDITIONS

The purpose of this analysis was to determine which of the five years of meteorological data results in the highest predicted concentrations of air pollutants around Philadelphia International Airport using the FAA's Emissions & Dispersion Modeling System (EDMS).

Per the Air Quality Protocol, the worst-case meteorological analysis for the FEIS used the 2025 No-Action Alternative and 2025 Alternative A (FAA's Preferred Alternative or the Project) conditions to analysis the impacts of CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.<sup>1</sup> Using EDMS, the 2025 airport operational data (including aircraft, ground support equipment, stationary sources and motor vehicles operating on the airport and off-site roadways) were combined with National Climatic Data Center (NCDC) meteorological data. Both short- (one hour) and long-term (annual) conditions were analyzed.

Meteorological data were obtained from the NCDC for Philadelphia International Airport (surface data) and Sterling, Virginia (upper air data). Five years of data (2004 through 2008) were obtained. Background ambient monitoring data reflects data from 2006 through 2008 from the most representative monitoring station.

The results of the EDMS analysis were compared for each meteorological year based upon the highest predicted concentrations at any receptor. The results of the analysis are summarized in Tables F-1 and F-2 for the No-Action Alternative and Alternative A, respectively.

As shown in Table F-1 for the No-Action Alternative in 2025, the year 2005 meteorological data caused the highest concentrations for CO (8-hour), 24-hour PM<sub>10</sub>, PM<sub>2.5</sub> (24-hour and annual), and SO<sub>2</sub> (annual). For those pollutant averaging periods for which 2005 does not produce the maximum concentrate, its concentration is within 96 percent of the overall maximum concentration. Thus, meteorological data from 2005 was considered the worst-case conditions for 2025 No-Action Alternative.

As shown in Table F-2 for the Alternative A in 2025, the year 2005 meteorological data caused the highest concentrations for CO (1-hour and 8-hour), 24-hour PM<sub>10</sub>, and 24-hour PM<sub>2.5</sub> and SO<sub>2</sub> (3-hour and 24-hour). The annual NO<sub>2</sub>, SO<sub>2</sub>, and PM<sub>2.5</sub> concentrations are highest in 2007, 2007, and 2006, respectively. Of note, the 2005 annual NO<sub>2</sub>, SO<sub>2</sub>, and PM<sub>2.5</sub> concentrations are within 95, 97, and 99 percent of the overall maximum concentrations. Thus, meteorological data from 2005 was considered the worst-case conditions for 2025 Alternative A.

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<sup>1</sup> Construction of the PHL CEP was originally scheduled to begin in 2008 and be completed in 2020. As noted in the FEIS, it is now projected that construction of the CEP would start in approximately 2013 (after completion of the NEPA process and design work is completed); five years later than originally anticipated. Therefore, the CEP would be completed in 2025, and the EIS future study years are 2025 and 2030.

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**Table F- 1 Summary of Estimated Maximum Ambient Pollutant Concentrations for 2025 No-Action Alternative - Worst Case Meteorological Analysis**

Pollutant and Averaging Time	Background	AAQS	2008	2007	2006	2005	2004
<b>NO<sub>2</sub> (µg/m<sup>3</sup>)</b>							
Annual	30.2	100	59.4	<b>69.6</b>	66.5	68.2	66.2
<b>CO (ppm)</b>							
1-Hour	2.7	35	8.4	8.8	8.0	10.0	<b>10.4</b>
8-Hour	2.1	9	3.5	3.7	3.8	<b>4.1</b>	3.8
<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>							
3-Hour	112	1,300	394	<b>423</b>	366	376	445
24-Hour	57.4	365	113	130	127	131	<b>135</b>
Annual	26.7	80	39.7	40.7	40.7	<b>41.1</b>	40.0
<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>							
24-Hour	63.0	150	69.0	70.1	71.1	<b>72.4</b>	69.5
<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>							
24-Hour	36.9	35	41.2	41.9	42.5	<b>42.7</b>	42.0
Annual	15.0	15	16.1	16.5	16.4	<b>16.5</b>	16.4

**BOLD** is maximum concentration.

**Table F-2 Summary of Estimated Maximum Ambient Pollutant Concentrations for 2025 Alternative A - Worst Case Meteorological Analysis**

Pollutant and Averaging Time	Background	AAQS	2008	2007	2006	2005	2004
<b>NO<sub>2</sub> (µg/m<sup>3</sup>)</b>							
Annual	30.2	100	58.6	<b>67.8</b>	66.9	63.6	64.1
<b>CO (ppm)</b>							
1-Hour	2.7	35	8.6	12.2	15.3	<b>16.6</b>	10.0
8-Hour	2.1	9	3.3	4.3	4.0	<b>5.1</b>	4.1
<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>							
3-Hour	112	1,300	354	389	391	<b>503</b>	430
24-Hour	57.4	365	112	127	140	<b>196</b>	124
Annual	26.7	80	39.4	<b>41.3</b>	41.0	40.3	40.0
<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>							
24-Hour	63.0	150	73.7	74.4	76.3	<b>76.5</b>	74.4
<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>							
24-Hour	36.9	35	41.3	42.3	42.2	<b>42.5</b>	41.8
Annual	15.0	15	16.2	16.5	<b>16.6</b>	16.4	16.4

**BOLD** is maximum concentration.

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Attachment G  
Updated Wetlands Mitigation

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PRIORITY CANDIDATE MITIGATION SITES

Map ID	Candidate Site	Approximate Area of interest or parcel size (acres)	Current Impairment	Mitigation Opportunity by category <sup>1</sup> C, R, E, P	Potential Benefits	Potential Mitigation technique	Potential Yield in acres <sup>2</sup>
1	Port Richmond	150+ (excludes portion at Allegheny Ave in active use)	Former rail yard with old fills and long history of industrial development; loss of original tidal habitat	C/R= Restore intertidal zonation and habitat E = Enhance water quality (especially poor DO conditions in dredged slips) with improved tidal flushing	Restore natural intertidal zone and associated aquatic habitat; enhance water quality; Consistency with City Waterfront Master Plan	Bulkhead and pier removal, shoreline grading, installation of wave buffers, establishment of native tidal vegetation	25-50 depending on cost and mix of land uses on site
2	Philadelphia Coke	70	Old fills and long history of industrial development; loss of original tidal habitat	C/R= Restore intertidal zonation and habitat	Create natural tidal tributary and wetland complex	Fill removal and excavation	30+
3	Dodge Steel	24	Steep, armored shoreline filled by past industrial use	C/R= Restore intertidal zonation and habitat	Restore natural intertidal zone and create new marsh on degraded uplands	Fill removal and excavation	10+
4	Parcel at Beach Street & Schirra Street	40+	Loss of intertidal shoreline due to fills and bulk heading; past industrial development	C/R= Restore intertidal zonation and habitat	Large site with potential connectivity to Port Richmond	Bulkhead/armor removal, shoreline grading, installation of wave buffers, creation of tidal channels and marshes	15-20
5	Pennypack Creek behind Prison	14	Mostly floodplain disturbed in past by fills with loss of tidal habitat	R= Expand existing natural wetlands E= Enhance existing wetland system with larger intertidal zone C= Create nesting habitat for red bellied turtles on protected banks	Expands existing wetlands and could be added to the large upstream park system, providing the last link to the Delaware river	Fill removal and excavation	12
6	Parcel between Robbins Avenue and Deveraux Street	13	Steep, armored shoreline filled by past industrial use	C/R= Restore intertidal zonation and habitat	Restore natural intertidal zone and create new marsh on degraded uplands	Fill removal and excavation	5-8
7	Parcel south of Tacony Boat Launch	11	Steep, armored shoreline filled by past industrial use	C/R= Restore intertidal zonation and habitat	Restore natural intertidal zone and create new marsh on degraded uplands	Fill removal and excavation	5+
8	Parcel at Princeton Street and New State Road (behind Tacony Boat Launch)	10	Large, undeveloped lot behind the boat launch could be combined with – adjacent parcel or used in land swap	C/R= Restore intertidal zonation and habitat E= Enhance existing armored shoreline	Enhance existing boat launch area and create much larger wetland complex behind it; park is underutilized in existing state	Fill removal and excavation	5+
9	Former City Incinerator Site	7	Loss of natural intertidal zone due to bulkheads and fill	C= Create tidal fringe wetlands/mudflats R= Restore natural shoreline	Restore natural intertidal zone and create new marsh on degraded uplands	Bulkhead and pier removal, shoreline grading, installation of wave buffers, establishment of native tidal vegetation	2-5
10	Penn Treaty Park	4 along shoreline	Loss of natural intertidal zone due to heavily armored shoreline	C= Create tidal fringe wetlands/mudflats R= Restore natural shoreline	Restore natural intertidal zone and create new marsh on degraded uplands	Fill removal and excavation:  Removal of shoreline armoring and regrading to restore upper intertidal zone; excavation and fill removal to create tidal wetlands in upland	1-3
11	Parcel north of Bridge Street	17	Old fills and long history of industrial development; loss of original tidal habitat	C/R= Restore intertidal zonation and habitat	Restore natural intertidal zone and create new marsh on degraded uplands	Fill removal and excavation	5 - 8

### PRIORITY CANDIDATE MITIGATION SITES (CONTINUED)

Map ID	Candidate Site	Approximate Area of interest or parcel size (acres)	Current Impairment	Mitigation Opportunity by category <sup>1</sup> C, R, E, P	Potential Benefits	Potential Mitigation technique	Potential Yield in acres <sup>2</sup>
12	PA Fish & Boat Commission boat launch property	12	Old fills and long history of industrial development; loss of original tidal habitat	C/R= Create small tidal tributary to provide low energy refuge for fish	Restore natural intertidal zone and create new marsh on degraded uplands	Use as a "teaching wetland" with public access and signage	5-8
13	Pleasant Hill Park	5	Fill, lost and degraded habitat	C/R= Creation or restoration of intertidal stream channel in lower pond corridor  E= Enhancement of existing degraded non-tidal pond/stream complex to improve Red bellied turtle habitat	Tidal channel habitat creation and restoration with habitat elements designed for Red bellied turtle; public education	Fill removal, invasives removal, pond dredging and bank stabilization, signage for public education	2+
14	Property north of South 58 <sup>th</sup> Street along Schuylkill River	18+	Mix of uplands and historical tidal wetlands filled and degraded	C/R= Restore tidal marsh and mudflats	Restoration of intertidal wetlands with potential connection to Bartram's Garden	Fill removal, stream bank regrading and stabilization; replanting with intertidal species	10+
15	Property between South 58 <sup>th</sup> Street and South 61 <sup>st</sup> Street along the Schuylkill River	17	Mix of uplands and historical tidal wetlands filled and degraded	C/R= Restore tidal marsh and mudflats	Restoration of intertidal wetlands with potential connection to Bartram's Garden	Fill removal, stream bank regrading and stabilization; replanting with intertidal species	10+
16	Former National Heat & Power between Botanic Avenue and Gray's Ferry Avenue	11	Mix of uplands and historical tidal wetlands filled and degraded	C/R= Restore tidal marsh and mudflats	Restoration of intertidal wetlands with potential connection to Bartram's Garden via old Botanic Drive	Fill removal, stream bank regrading and stabilization; replanting with intertidal species	5-8
17	Bartram's Garden	1.5	Historical tidal wetlands filled and degraded	C/R= Restore tidal marsh and mudflats  E= Enhance degraded wetlands by invasives removal, and restoration of tidal connection to Schuylkill, and habitat diversification (add islands, scrub shrub plantings, etc.)	Restoration of functional tidal ecology	Fill removal, restoration and regrading to restore tidal hydrology	1
18	Former US Gypsum site below South 56 <sup>th</sup> Street along Schuylkill River	10	Mix of uplands and historical tidal wetlands filled and degraded	C/R=Restore tidal marsh and mudflats	Restoration of intertidal wetlands with potential connection to Bartram's Garden	Fill removal, stream bank regrading and stabilization; replanting with intertidal species	5-8
19	Parcel Between 84 <sup>th</sup> Street and Bartram Avenue	100+/-	Fill, habitat degradation	C= Creation of non-tidal forested wetlands targeting amphibian and reptile habitat	Restoration of rare coastal plain forest habitat with low bird strike hazard potential	Minor surface grading, invasives removal, planting with native species	25 – 50
20	Long Hook Creek (Tributary of Darby) at CSX crossing, Tinicum Township, Delaware County	Less than ½ acre	Barrier to fish and turtle passage and tidal flow	R= Restore tidal connection and fish/turtle passage	Restore important aquatic connection between Heinz marsh system and Long Hook and Delaware River	Dam removal	Restored tidal flow would benefit a very large area of the Long Hook and lower Darby watersheds covering many acres

<sup>1</sup> Mitigation Categories defined as: C = Creation: creation of wetlands from uplands; aka "establishment." R = Restoration: returning natural or historic functions to a former or degraded wetland/aquatic resource.

E = Enhancement: manipulation of an existing degraded wetland/aquatic resource to improve or increase one or more functions. P = Preservation: removal of threat of loss or decline in wetland or aquatic resource by legal (e.g. acquisition) or physical mechanism; aka "protection."

<sup>2</sup> Estimated yields are preliminary and based on conceptual site assessment that acknowledges potential limitations in site suitability as a function of current and historical site uses, surface topography, potential hydrologic connections, and adjacent land uses. Mitigation site search and assessment will continue during project design phases, in consultation with regulatory and natural resource agencies.