



Relocation of Hurricane Sandy Damaged Maintenance Facilities to More Sustainable Locations within the Staten Island Unit

Environmental Assessment

PMIS: GATE 200607B

May 2015



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PROJECT SUMMARY

The National Park Service (NPS) proposes to permanently relocate maintenance operations that were damaged during Hurricane Sandy within the Staten Island Unit of the Gateway National Recreation Area (Gateway). This Environmental Assessment (EA) analyzes the impacts of the no-action and one action alternative on floodplains, historic structures and districts, visitor use and experience, local roads and park access, and noise for the proposed maintenance facility relocation project. Under the no-action alternative, new maintenance or storage facilities would not be constructed at Fort Wadsworth or Miller Field. Under the proposed action alternative, the NPS would construct an outdoor covered parking structure at the existing maintenance facility at Fort Wadsworth that would accommodate equipment previously stored in Hangar 38 at Miller Field, and adaptively reuse and/or repurpose some of the existing facility in order to create additional storage capacity and improve the efficiency of park maintenance and recovery operations. In addition, the NPS would construct a new permanent maintenance facility at Miller Field that would be appropriately scaled to accommodate only the necessary day-to-day maintenance functions required for Miller Field.

This document has been prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA); regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508); and NPS Director's Order #12: *Conservation Planning, Environmental Impact Analysis, and Decision-Making* and accompanying DO-12 Handbook (NPS 2011).

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Note to Reviewers and Respondents:

If you wish to comment on the EA, you may submit comments electronically through the NPS Planning, Environment and Public Comment (PEPC) (<http://parkplanning.nps.gov/gate>) website or you may mail written comments by June 26, 2015 to the address on the following page. Before including personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

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ACRONYMS AND ABBREVIATIONS

BFE	Base Flood Elevation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CZMP	Coastal Zone Management Program
dB	Decibel
dBA	A-weighted Noise Level
DO	Director's Order
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESRI	Environmental Systems Research Institute
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Federal Insurance Rate Map
FIS	Flood Insurance Study
Gateway	Gateway National Recreation Area
GMP	General Management Plan
MOT	Maintenance of Traffic
MTA	Metropolitan Transportation Authority
NEPA	National Environmental Policy Act of 1969
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NYCEP	New York City Environmental Protection
NYCDCP	New York City Department of City Planning
NY SHPO	New York State Historic Preservation Office
OSHA	Occupational Safety and Health Administration
PEPC	Planning, Environment and Public Comment
SOF	Statement of Findings

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CHAPTER 1: PURPOSE & NEED

The National Park Service (NPS) proposes to permanently relocate maintenance operations that were damaged during Hurricane Sandy within the Staten Island Unit of the Gateway National Recreation Area (Gateway). This project involves two Staten Island Unit sites: Fort Wadsworth and Miller Field. **Figure 1** provides a view of Gateway in its entirety and **Figure 2** provides a view of the Staten Island Unit. At Fort Wadsworth, the NPS is proposing to adaptively reuse and/or repurpose some of the existing maintenance facility and construct an outdoor covered parking structure that would accommodate equipment previously stored in Hangar 38 at Miller Field. In addition, the NPS is proposing to construct a new permanent maintenance facility at Miller Field. The new maintenance facility would be appropriately scaled to accommodate only the necessary day-to-day maintenance functions required for Miller Field.

This Environmental Assessment (EA) describes two alternatives for the proposed maintenance facility relocation, including one action alternative and the no-action alternative, and analyzes the environmental consequences of implementing the alternatives.

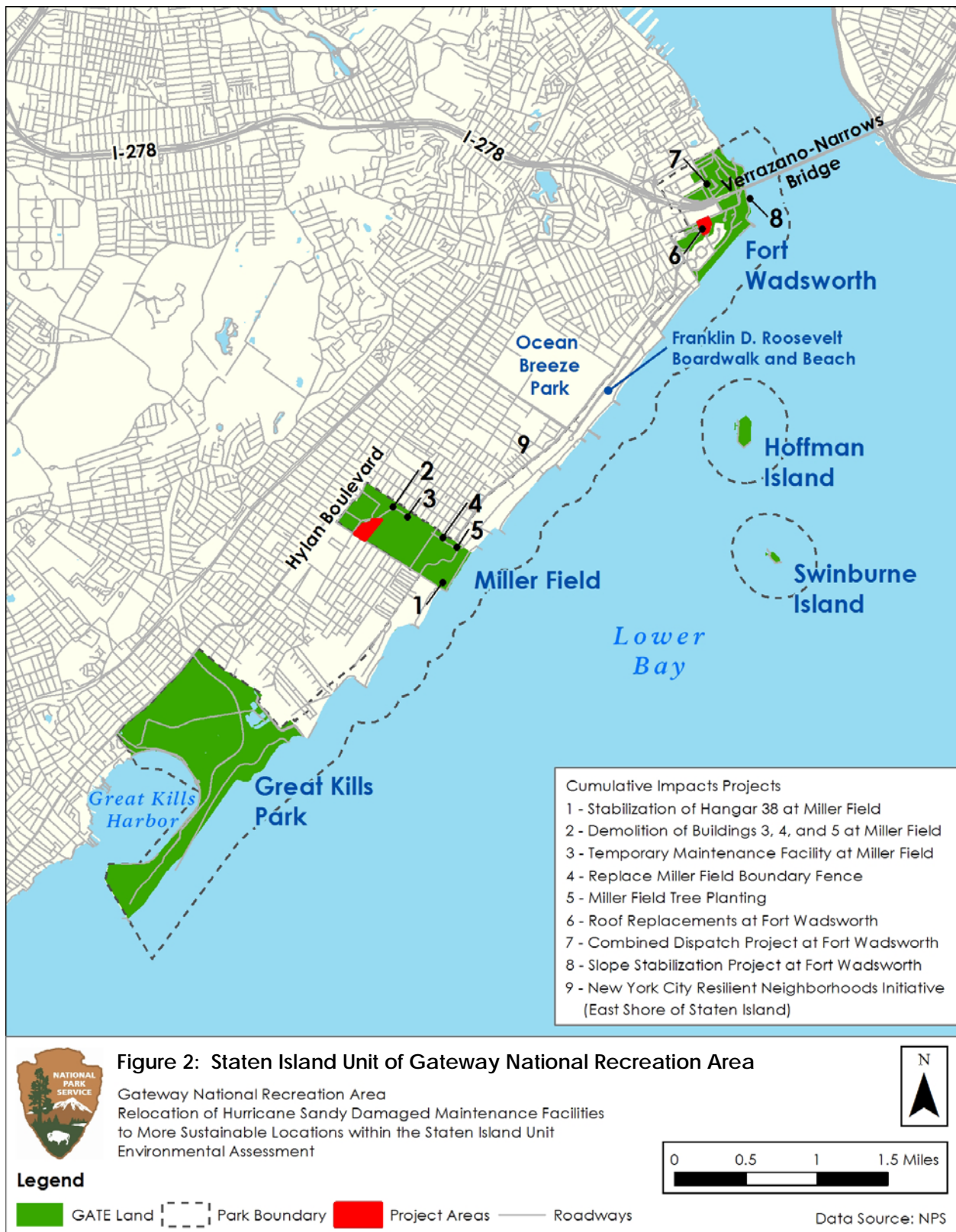
This EA has been prepared in accordance with the requirements of the National Environmental Policy Act of 1969, as amended (NEPA) and its implementing regulations (40 CFR 1500 - 1508), and with NPS Director's Order #12, *Conservation Planning, Environmental Impact Analysis, and Decision-Making* and accompanying DO-12 Handbook (NPS 2011).

PURPOSE OF AND NEED FOR ACTION

The purpose of the project is to make the Staten Island Unit maintenance facilities resilient to coastal storm surges and flooding through relocation to more sustainable locations out of the 100-year floodplain and reusing and/or repurposing some existing facilities to improve the efficiency of park maintenance and recovery operations.

This project is necessary because some existing maintenance facilities and equipment that were located in the 100-year floodplain at Miller Field were significantly damaged during Hurricane Sandy resulting in loss of functionality. The proposed facilities will support the Gateway maintenance staff and equipment while greatly reducing the potential for substantial damage during future catastrophic coastal storm surge or flood events.





PROJECT OBJECTIVES

Objectives are “what must be achieved to a large degree for the action to be considered a success” (NPS 2011) and represent more specific statements of purpose and need. All alternatives selected for detailed analysis must meet all objectives to a large degree and must resolve the purpose of and need for action. The following objectives were identified by the planning team for this project:

1. Minimize impacts to natural and cultural resources;
2. Improve operations and storage/protection of critical supplies, tools, and equipment, particularly immediately before, during, and after a severe weather event;
3. Support routine maintenance operations with an efficient, sustainable, and storm resistant facility;
4. Improve facility and maintenance management efficiencies on a daily basis within the Staten Island Unit; and
5. Improve visitor appreciation and internal customer support through critical mission support.

PROJECT BACKGROUND

In October 2012, Hurricane Sandy affected 24 states, including the entire eastern seaboard, and caused particularly severe damage in New York and New Jersey. Hurricane Sandy’s large size and tropical storm force winds extended nearly 500 miles from the center, which led to large-scale flooding, wind damage, mass power outages, and over 100 fatalities along the East Coast. Damage caused by the storm in the United States amounted to an estimated \$50 billion (NOAA 2013). Hurricane Sandy reached New York City on October 29, 2012, resulting in substantial flood damage to maintenance facilities and equipment within the Staten Island Unit, and a drastic reduction in operational efficiency.

Maintenance operations within the Staten Island Unit of Gateway are divided between three park sites: Fort Wadsworth, Miller Field, and Great Kills Park. Generally, maintenance facilities at Fort Wadsworth and Great Kills Park received little to no damage during Hurricane Sandy; however, equipment and materials stored in Hangar 38 at Miller Field received substantial flood damage. Equipment used to maintain Miller Field is now being stored within a temporary maintenance facility constructed in September 2014. The temporary facility currently provides secure equipment and materials storage until a permanent facility is constructed.

FORT WADSWORTH PROJECT AREA

The NPS maintenance facility at Fort Wadsworth currently accommodates roads and grounds, and buildings and utilities operations. All equipment and automotive servicing and maintenance for the Staten Island Unit occur at Fort Wadsworth. Since Hurricane Sandy, Fort Wadsworth has acted as the primary site for maintenance and storage of equipment that was previously accommodated in Hangar 38 at Miller Field. The Fort Wadsworth maintenance facility also accommodates carpentry shops, a plumbing shop, a building/utility shop, a tire repair and tire storage area, office/administrative space, US Park Police horse stables, a fuel station, and indoor and outdoor vehicle/equipment storage areas.

For the purposes of this EA, the project area at Fort Wadsworth includes the existing NPS maintenance facility to the south of Battery Road and north of Battery Barry. The project area includes Buildings 301, 302, 303, 305, 309, and 310, and the outdoor vehicle/equipment storage lots located on the south side and on the east side of Building 302. The limits of the project area at Fort Wadsworth are provided in **Figure 3**.

MILLER FIELD PROJECT AREA

Prior to Hurricane Sandy, equipment and materials used to maintain Miller Field were stored inside Hangar 38. Since the hurricane, all equipment used to maintain the various amenities at Miller Field has been stored at Fort Wadsworth. Buildings 3, 4, and 5 at Miller Field were also used to store small equipment and other miscellaneous items and to provide an office and break area for maintenance staff. Equipment used to maintain Miller Field is now being stored within a secure temporary maintenance facility that was constructed in September 2014.

The limits of the project area at Miller Field are provided in **Figure 4**. The project area is located at the southwest corner of Miller Field adjacent to the NPS parking lots off of New Dorp Lane. The project area is mostly grass and is located outside of existing athletic fields.

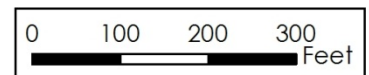


Figure 3: Fort Wadsworth Project Area

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment

Legend

- Project Area
- New Structures
- Park Boundary



Data Source: NPS

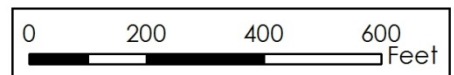


Figure 4: Miller Field Project Area

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment

Legend

 Project Area New Facility Park Boundary



Data Source: NPS

PURPOSE AND SIGNIFICANCE OF THE STATEN ISLAND UNIT

The Staten Island Unit shares its purpose with all units of the Gateway National Recreation Area. As taken from the Final General Management Plan/Environmental Impact Statement (GMP/EIS), which was approved in June 2014, the park's purpose is as follows:

“Gateway National Recreation Area provides a national park experience in the country's largest metropolitan area. The park preserves a mosaic of coastal ecosystems and natural areas interwoven with historic coastal defense and maritime sites around New York's Outer Harbor. Beaches, marshes, waters, scenic views, and open space offer resource-based recreational opportunities to a diverse public, recognizing the importance to preserve these special places for future generations (NPS 2014a).”

As described in the Final GMP/EIS, Gateway park units possess resources and values that make each park unit unique. These resources and values are critical to achieving the park's purpose and to maintain significance of each park unit. Fort Wadsworth is a National Register Historic District and is valued for its coastal defense resources, including Battery Weed, Endicott-era batteries, and Fort Tompkins. These resources provide connections to national defense history. Miller Field is valued for its civil and military aviation history resources which include Hangar 38. Further description of the historic resources at Fort Wadsworth and Miller Field are provided in the *Historic Structures and Districts* section within “Chapter 3: Affected Environment.” In addition, both Fort Wadsworth and Miller Field provide diverse recreation opportunities, including walking, hiking, biking, picnicking, visiting historic sites, nature observation, and water-based activities such as fishing. These experiences, and the locations that offer them, are particularly valuable in the most densely populated region of the country. Open spaces and wide horizons at Fort Wadsworth and Miller Field offer opportunities for contemplation and reflection.

RELATED PLANNING EFFORTS

Final General Management Plan/Environmental Impact Statement (GMP/EIS) – In 2014, Gateway concluded a multiyear effort to develop a new GMP. The 2014 GMP/EIS described several alternatives for the future management of the park that took into account current and future challenges including climate change and sea-level rise. Planning for the GMP/EIS included a substantial effort to involve members of the public, interested organizations, New York City agencies, as well as other federal, state, and local agencies that provided vital input, assistance, and insight to the NPS to help shape the GMP/EIS and the management of Gateway and its resources into the future (NPS 2014a).

Based on the management concepts described in the 2014 GMP/EIS, ongoing management of Fort Wadsworth will support a wide range of outdoor recreational opportunities, community

functions, and interpretive experiences. Preservation and promotion of fundamental resources such as Battery Weed and Fort Tompkins will be emphasized, and opportunities for water-based recreation will be expanded. Park administration and operation functions and facilities at Fort Wadsworth will continue. At Miller Field, management concepts are centered on community-based recreation for youth and their families, including plans to upgrade existing fields and establish a trail around the perimeter of the park. According to the GMP/EIS, maintenance facilities will be located to complement recreational opportunities (NPS 2014a).

ISSUES AND IMPACT TOPICS

Planning Issues and Concerns

The NPS, participating agencies and stakeholders, and members of the public identified specific issues and concerns during scoping, which are detailed in “Chapter 5: Consultation and Coordination.” Some of these issues and concerns were considered by the NPS but were ultimately dismissed from detailed analysis. Other issues and concerns were retained for detailed analysis and are included with the impact topics that are discussed in “Chapter 3: Affected Environment” and analyzed in “Chapter 4: Environmental Consequences.” Issues and concerns raised during scoping helped to guide the development of project alternatives and contributed to the selection of impact topics analyzed in detail in this EA.

Adaptive reuse of horse stables in Building 309 at Fort Wadsworth – The public expressed concern with the adaptive reuse of the horse stables at Fort Wadsworth. Comments were received during public scoping that cited the US Park Police horses as a part of the community and as an important aspect of the visitor experience at Fort Wadsworth. The NPS has considered but dismissed this concern from further consideration because the horses are the property of the US Park Police and have no relationship to the purpose, significance, or mission of Gateway and are therefore not associated with the visitor experience.

Potential for construction and operation of a new maintenance facility at Miller Field to result in traffic and pedestrian conflicts – The NPS identified the potential for traffic and pedestrian conflicts during the construction and operation of a permanent maintenance facility at Miller Field as a concern early in the planning process. Construction activities would result in temporary closures of portions of the NPS parking lots off of New Dorp Lane and may affect the flow of vehicular and pedestrian traffic in the vicinity of the New Dorp Lane/Mill Road intersection. Furthermore, integrating the entrance to the maintenance facility with the existing entrance to the NPS parking lots may result in conflicts between maintenance staff/vehicles and visitors attempting to access the park. Also, park visitors using the NPS parking lots would be required to walk around the maintenance facility to access the athletic fields and various other amenities. Pedestrian usage of sidewalks along New Dorp Lane and the potential for maintenance staff to have difficulty entering and/or exiting the NPS parking lots at certain time periods was also identified as a concern. Traffic and pedestrian conflicts during the

construction and operation of a permanent maintenance facility at Miller Field is analyzed in detail under the “Local Roads and Park Access” impact topic in this EA.

Proposed site at Miller Field located within the 500-year regulatory floodplain –

Early in the planning process, the NPS identified that any permanent maintenance facility constructed at Miller Field would be located within a regulatory floodplain. Even though the NPS was able to locate a site for the maintenance facility that is above the 100-year regulatory floodplain, which is the area most prone to flooding, the site is within an area of moderate flood risk (i.e. the 500-year regulatory floodplain). Concerns regarding the construction of a permanent maintenance facility within the 500-year regulatory floodplain at Miller Field are analyzed in detail under the “Floodplains” impact topic in this EA.

Implementation of the NPS preferred alternative includes the installation of a 1,000 gallon fuel storage tank within the 500-year regulatory floodplain at Miller Field. Pursuant to Director’s Order #77-2: *Floodplain Management* (NPS 2003), the construction of fuel storage facilities within the 500-year regulatory floodplain is considered a “critical action” that is subject to floodplain policies and procedures. Therefore, a Floodplain Statement of Findings (SOF) was prepared for the project and is attached to this EA as Appendix B.

Potential for construction and maintenance activities at Miller Field to generate noise and air emissions –

During the initial public scoping period, concerns were expressed regarding the location of a permanent maintenance facility along the northern boundary of Miller Field. Comments cited potential noise and air emissions generated by construction and maintenance activities as the primary concerns. Following initial public scoping, the NPS reconsidered the location of the proposed maintenance facility, which resulted in the new proposed location adjacent to NPS Parking Lot #1 at the southwest corner of Miller Field. Even though this new location is further removed from residences along New Dorp Lane, there is potential for construction activities and the operation of the maintenance facility to generate noise that would be noticed by local residents, park visitors, and New Dorp High School; therefore, noise is analyzed in detail as an impact topic in this EA. Furthermore, after considering concerns regarding potential air emissions, the NPS has decided to dismiss these concerns from detailed analysis because, even though emissions would be generated at the site during construction, the emissions would be temporary and measures would be implemented to minimize short-term impacts. During operation of the facility, air emissions are expected to have minimal impacts on ambient air quality at a local and regional level.

Impact Topics

Impact topics are resources of concern that would be affected, either beneficially or adversely, by the range of alternatives presented in this EA. Impact topics evaluated in this EA were identified based on the issues raised during scoping, as explained above.

Impact Topics Retained for Detailed Analysis

Floodplains –According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 3604970328G (FEMA 2013b), the project area for the proposed permanent maintenance facility at Miller Field is located within the 500-year regulatory floodplain of Lower New York Bay. Temporary disturbances within the floodplain would be unavoidable during construction of the new facility. The new facility would add obstructions and increase impervious surface area within the floodplain, which may affect the floodplains ability to store, convey, and/or infiltrate flood waters. In addition, the proposed action at Miller Field includes the installation of a 1,000 gallon fuel storage tank within the 500-year regulatory floodplain, which is considered a “critical action” subject to floodplain policies and procedures; therefore, this impact topic has been retained for detailed analysis in this EA.

A Floodplain SOF has been prepared in consultation with the NPS Water Resources Division in accordance with NPS Director’s Order 77-2: *Floodplain Management* and is provided as Appendix B.

Historic Structures and Districts – Fort Wadsworth is a National Register Historic District that was determined eligible for listing in the National Register of Historic Places in 1999 by the New York State Historic Preservation Office (NY SHPO). Fort Wadsworth is one of the oldest military installations in the nation and its significance stems from its defense of New York Harbor for over 200 years. Within the study area, existing maintenance buildings 301, 302, 305, 309, and 310 are structures that contribute to the significance of the Historic District. Battery Barry is also a contributing structure located near the maintenance facility. At the southeast corner of Miller Field, the Miller Army Airfield National Register Historic District, which includes Hangar 38, the apron surrounding Hangar 38, and Elm Tree Light, is listed in the National Register of Historic Places. The Historic District is significant for its representation of early experimental years in aviation history, air coast defense of New York, and early lighthouse service. Due to the potential for the project to impact historic districts and/or contributing resources, this impact topic has been retained for detailed analysis in this EA.

Visitor Use and Experience – Fort Wadsworth and Miller Field provide visitors with numerous recreational opportunities. Activities at Fort Wadsworth include hiking, biking, camping, and fishing. The park also offers tours of historic sites, exhibits and other interpretive opportunities, scenic views of New York Harbor and New York City, and many other experiences. The use of heavy equipment within the park and on local roads at Fort Wadsworth could detract from the visitor experience during construction.

Miller Field contains over 187 acres of open space used extensively by organized sports leagues and many other activities. Construction activities could temporarily restrict the use of certain portions of Miller Field and may result in an increase in traffic on local roads and a reduction in parking. Construction of a new permanent maintenance facility would not affect any of the athletic fields, but would require the use of an area that originally consisted of three small pee wee football fields that were relocated in 2012. The area is now used informally for practice,

spectating, and picnicking. Based on these considerations, visitor use and experience is retained for detailed analysis in this EA.

Noise – During construction at Fort Wadsworth and Miller Field, heavy machinery and other power equipment used to construct the new facilities would generate noise that could result in impacts to park visitors and neighbors. In addition, the placement of a new permanent maintenance facility at Miller Field where none currently exists would add noise generating activities along New Dorp Lane that could impact park neighbors. As a result, noise was retained for detailed analysis.

Local Roads and Park Access – At Fort Wadsworth, local roads in the vicinity of the project area are not heavily traveled. Traffic congestion is not expected to occur on Battery Road, New York Avenue, Lily Pond Avenue, or any other local road or intersection; however, heavy equipment would likely use these roadways during construction. Temporary impacts to traffic may occur during construction of the new permanent maintenance facility at Miller Field, particularly along New Dorp Lane during peak periods of park use. In addition, temporary work zone traffic control measures would likely be implemented that could affect the ease of access to Miller Field and the NPS parking lots adjacent to the project area. Based on the potential for impacts to traffic during construction at Miller Field, local roads and park access is retained for detailed analysis in this EA.

Impact Topics Dismissed from Detailed Analysis

Wetlands – No wetlands exist within the project area at Fort Wadsworth or Miller Field; therefore, wetlands has been dismissed from detailed analysis in this EA.

Federal- and State-listed Rare, Threatened, and Endangered Species – Potential impacts to both federal- and state-listed rare, threatened, and endangered species were considered during project planning. Federally listed species are protected under the Endangered Species Act and state-listed species in New York are protected by the state's endangered species regulations. Based on the US Fish and Wildlife Service's list of federally endangered and candidate species, and based on a previous assessment under the Gateway GMP/EIS, the NPS anticipates that no federal- or state-listed rare, threatened, and endangered plant or animal species would be affected by the proposed project at Fort Wadsworth or Miller Field. Letters have been sent to the US Fish and Wildlife Service and the New York Natural Heritage Program requesting concurrence with this determination. As of April 2015, responses have not yet been received from the agencies. However, because no federal- or state-listed rare, threatened, and endangered species are anticipated to be affected by the proposed project, this impact topic has been dismissed from detailed analysis in this EA.

Air Quality – The 1963 Clean Air Act, as amended, requires federal land managers to protect air quality. NPS *Management Policies 2006* addresses the need to analyze air quality during park planning (NPS 2006). The entire New York metropolitan area, in which Staten Island is located, is designated as a "nonattainment area" for the 2008 eight-hour National Ambient Air

Quality Standards for ozone (EPA 2015a). Under the proposed action alternative, construction activities would generate emissions of volatile organic compounds and nitrogen oxides from the burning of fuel associated with the operation of vehicles and construction equipment. Construction activities would also result in emissions of particulate matter (dust) and the construction of paved roads and parking lots would emit fumes during the application of hot mix asphalt surfaces. Overall impacts to air quality would be minimal and would be limited to the construction period. Emissions from construction activities would not significantly impact air quality on a local or regional level. To minimize impacts to air quality from construction activities, the NPS would implement appropriate dust control measures, as necessary, to prevent fugitive dust, and encourage construction workers to limit equipment idling times, place stationary emissions sources at a distance from one another, and operate equipment separately to the extent feasible, to reduce the concentration of diesel exhaust emissions.

The NPS would design the facility to use energy efficient systems for lighting, heating, and air conditioning to reduce energy consumption and air emissions that could impact air quality during the operation of the new maintenance facility at Miller Field. The new fueling station proposed at Miller Field would be designed and operated in accordance with applicable state and federal regulations and is not expected to have a noticeable impact on ambient air quality. Therefore, the operation of the new maintenance facility at Miller Field, and the continued maintenance activities associated with the facilities at Fort Wadsworth and Miller Field, would have minimal impacts on ambient air quality. Based on these considerations, air quality was dismissed from detailed analysis in this EA.

Cultural Resources (excluding Archeological Resources) – The NPS is required to consider any cultural resources that might be affected during project planning, including cultural landscapes and ethnographic resources. Cultural landscapes, which are defined by the Secretary of the Interior as geographic areas associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values (NPS 1992), are found at Fort Wadsworth and Miller Field. Both contain cultural landscapes related to their history as military installations. It is expected that the proposed project would result in minimal adverse impacts to cultural landscapes, based on the size and location of the new facilities. Ethnographic resources include any “site, structure, object, landscape or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it” (NPS 1998). Consultations with the American Indian tribes traditionally associated with the lands of the proposed project sites – the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge-Munsee Mohican Tribal Community – revealed that there are no known ethnographic resources associated with either site. Therefore, cultural landscapes and ethnographic resources have been dismissed from detailed analysis in this EA.

Archeological Resources – The NPS conducted an archeological assessment of the Fort Wadsworth covered parking structure project area, which concluded that there is a low probability for any archeological resources present to be impacted based on the minimal ground disturbance associated with construction. The NPS would assign a professional archeologist to monitor ground disturbing activities, as needed, to ensure the protection of any previously

undocumented archeological resources that may be uncovered during construction at Fort Wadsworth.

According to a preliminary archeological assessment for the Miller Field project area, there is potential for archeological resources (the remains of a residential structure) related to past ownership of the land. Previous studies performed at Miller Field have determined that some portions of the area retain substantial landscape and subsurface integrity. A Phase I archeological survey will be conducted within the Miller Field project area to determine if archeological resources are present. Based on the results of archeological surveys, the NPS may also monitor ground disturbing activities at Miller Field.

In the event that archeological resources are identified at Fort Wadsworth or Miller Field, the NPS would avoid these resources to the greatest extent possible, and few, if any, adverse impacts are anticipated. If National Register-eligible archeological resources cannot be avoided, an appropriate mitigation strategy (e.g. the excavation, recordation, and mapping of cultural remains prior to disturbance) would be developed in consultation with the NY SHPO. Therefore, because the NPS would protect or document any previously undocumented archeological resources identified during archeological surveys and/or construction, this impact topic has been dismissed from detailed analysis in this EA.

Indian Trust Resources – Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes. There are no Indian trust resources on Staten Island. No lands on Staten Island are held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources has been dismissed as an impact topic.

Human Health and Safety – As outlined in *NPS Management Policies 2006*, the NPS strives to provide a safe environment for visitors and employees to the extent that park resources and values are not impaired. During construction at Fort Wadsworth and Miller Field, workers would be exposed to occupational safety hazards on a daily basis. To minimize the potential for an incident to occur, workers on the construction sites would be responsible for following recommended safety procedures. Furthermore, construction areas would be off limits to park visitors. Chain link fence or other types of temporary barriers would be used to prevent trespassing into the construction sites and signs would be installed along haul routes and construction access routes to warn pedestrians and motor vehicles of construction activities. Following construction, safe work practices would be implemented to reduce the risk of injury to NPS maintenance staff and the potential for environmental contamination. In particular, the NPS would adhere to Occupational Safety and Health Administration (OSHA) guidelines for the proper storage and handling of hazardous substances such as fuel and oil. Properly implemented safety procedures would ensure minimal risk and impacts to construction workers,

NPS staff, park visitors, and park neighbors; therefore, human health and safety has been dismissed from detailed analysis.

Environmental Justice – Presidential Executive Order 12898, *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the Environmental Protection Agency (EPA), environmental justice is the:

...fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies (EPA 2015b).

The goal of ‘fair treatment’ is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

Communities on Staten Island contain both minority and low-income populations; however, environmental justice is dismissed as an impact topic because:

- The Park staff and planning team actively solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.
- Implementation of the proposed alternative would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population.
- The impacts associated with implementation of the proposed alternative would not disproportionately affect any minority or low-income population or community.
- Implementation of the proposed alternative would not result in any identified effects that would be specific to any minority or low-income community.

Energy Conservation Potential and Sustainability – The NPS strives to incorporate the principles of sustainable design and development into all facilities and park operations. Sustainability can be described as the result achieved by doing things in ways that do not compromise the environment or its capacity to provide for present and future generations.

Sustainable practices minimize the short-term and long-term environmental impacts of development and other activities through resource conservation, recycling, waste minimization, and the use of energy-efficient and ecologically responsible materials and techniques. The adaptive reuse of some existing facilities at Fort Wadsworth and the construction of an outdoor covered parking structure are not anticipated to increase energy consumption. A permanent maintenance facility at Miller Field would require lighting, heat and cooling, and electricity that are likely to result in increased energy consumption. However, through the use of energy efficient systems, appropriately sized buildings, and the small-scale of the project in general, it is expected that the increase in energy consumption would not be significant. The NPS would integrate efficient and sustainable solutions into the facility design whenever practicable. Due to these considerations, energy conservation potential and sustainability has been dismissed from detailed analysis in this EA.

CHAPTER 2: ALTERNATIVES

This EA analyzes two alternatives:

No-Action Alternative: Under this alternative, no new maintenance facilities would be constructed at Fort Wadsworth and Miller Field. The park's administration, maintenance, and operation functions and facilities would continue at Fort Wadsworth.

Proposed Action Alternative: Under the proposed action alternative, an outdoor covered parking structure would be constructed and the adaptive reuse of some of the existing maintenance facility at Fort Wadsworth would occur. Also under the proposed action alternative, a new permanent maintenance facility would be constructed at the southwest corner of Miller Field near the NPS parking lots off of New Dorp Lane. The proposed action alternative is also the NPS preferred alternative.

The elements of these alternatives are described in detail in this chapter. Impacts associated with the actions proposed under each alternative are outlined in "Chapter 4: Environmental Consequences." In addition, several concepts were dismissed from further consideration, which are described in this chapter under "Alternatives Considered but Dismissed."

NO-ACTION ALTERNATIVE

The no-action alternative represents a continuation of the present maintenance operations, management, and facility conditions within the Staten Island Unit, particularly at Fort Wadsworth and Miller Field. While the no-action alternative does not meet the purpose and need of the project, it does provide a basis for comparing the management direction and environmental consequences of the proposed action alternative.

Fort Wadsworth

Under the no-action alternative, the park's administration, maintenance, and operation functions and facilities would continue at Fort Wadsworth. Equipment originally stored in Hangar 38 at Miller Field would continue to be stored uncovered and unprotected from inclement weather at Fort Wadsworth in the vehicle/equipment storage lot behind Building 302. This vehicle/equipment storage lot is an asphalt lot that does not currently provide outdoor protection for vehicles and equipment. The lot includes a fueling station located along the southern boundary of the maintenance facility that provides diesel fuel for vehicles and equipment. As a safety measure, the fuel tank is protected by a guardrail painted yellow for increased visibility. Outdoor lighting is provided at the NPS vehicle/equipment lot by flood

lights on poles and security lights on buildings within the maintenance facility. The facility is enclosed by an existing chain link perimeter/security fence to prevent unauthorized access. Access to the vehicle/equipment storage area is provided by the entry gate off of USS Tennessee Road in the vicinity of Buildings 303 and 310. The maintenance facility is not accessible to park visitors for safety/security reasons; however, because the structures that are used by NPS maintenance are contributing resources to the Fort Wadsworth National Register Historic District, the NPS would continue to consider the significance of the facility and surrounding area in future planning decisions to ensure that historic views and the historic character of Fort Wadsworth are preserved.

Miller Field

Under the no-action alternative, the NPS would continue to be responsible for the care and maintenance of Miller Field, including the athletic fields and other amenities. Based on the high number of organized athletic events taking place, particularly between April and November, mowing, lining athletic fields and a variety of other maintenance activities would continue to ensure satisfactory conditions for park visitors.

In the short-term, the NPS would continue to use the temporary maintenance facility constructed during September 2014 to store and secure vehicles and equipment needed to maintain Miller Field. However, the temporary maintenance facility would eventually be dismantled, at which time vehicles and equipment used to maintain Miller Field would be stored uncovered and unprotected at the NPS vehicle/equipment storage lot behind Building 302 at Fort Wadsworth. NPS maintenance staff would transport vehicles and equipment to Miller Field on a daily basis to perform necessary maintenance activities. The transport of vehicles and equipment would likely occur on Hylan Boulevard and/or Father Capodanno Boulevard. Maintenance staff would access Miller Field off of New Dorp Lane using the entrance to the NPS parking lots, or using the Mason Avenue gate.

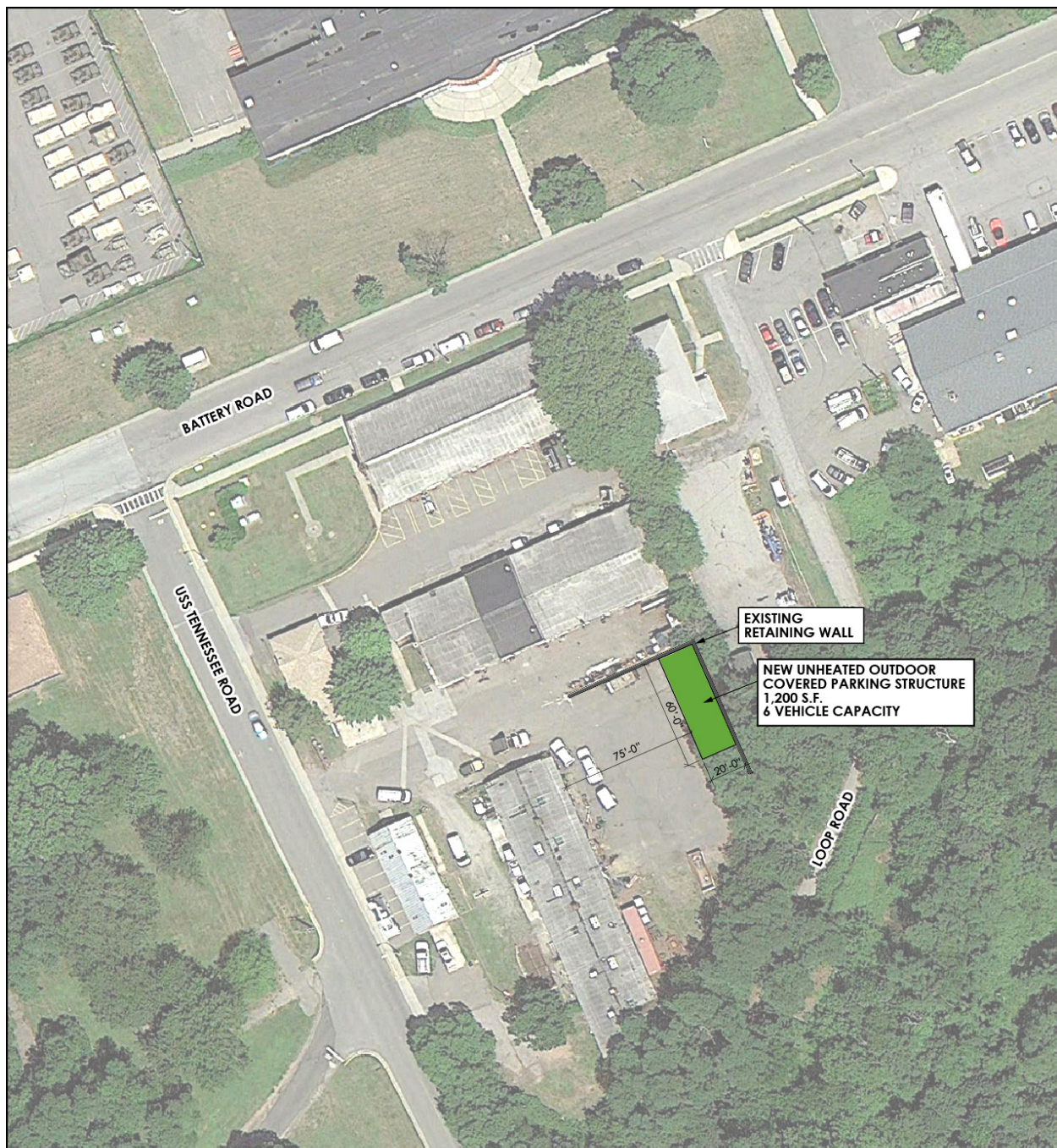
Routine maintenance and repairs to vehicles and equipment needed for Miller Field would be performed at Fort Wadsworth. In addition, potentially hazardous materials including engine oil, transmission oil, and brake fluid would be stored at Fort Wadsworth. Diesel fuel for vehicles and equipment would be provided at Fort Wadsworth by the existing fueling station at the vehicle/equipment storage lot behind Building 302. Vehicles requiring gasoline would be refueled at any of the various local gas stations.

PROPOSED ACTION ALTERNATIVE: RELOCATE HURRICANE SANDY DAMAGED MAINTENANCE FACILITIES TO MORE SUSTAINABLE LOCATIONS WITHIN THE STATEN ISLAND UNIT (NPS PREFERRED ALTERNATIVE)

Fort Wadsworth

Under the proposed action alternative, the NPS would construct an outdoor covered parking structure at the existing NPS maintenance facility at Fort Wadsworth. The new structure would be located directly behind Building 302 along the eastern edge of the NPS vehicle/equipment storage lot (**Figure 5**). The structure would be located inside the existing chain link perimeter/security fence that currently encompasses the maintenance facility. Access to the structure would be provided by the entry gate off of USS Tennessee Road between Buildings 303 and 310. The structure would be appropriately sized to provide the capacity to accommodate six (6) maintenance vehicles. Its dimensions would be approximately 60 feet in width, 20 feet in depth, and 20 feet in height. Each vehicle bay would be approximately 10 feet wide. The roof of the structure would likely be constructed using a hurricane-resistant roof covering. In addition, the existing asphalt at the site would be removed and a concrete pad would be installed for the vehicle bays. Lighting would be installed under the canopy of the structure and new electric power supply would also be provided.

The proposed action alternative also includes the adaptive reuse of some existing NPS maintenance facilities at Fort Wadsworth. The goals of adaptive reuse would be to consolidate maintenance functions, thereby reducing space requirements for certain functions at the facility; creating additional indoor and outdoor storage capacity for vehicles, equipment, and materials; and improving the overall efficiency of park maintenance and recovery operations. Park staff has identified several opportunities to adaptively reuse and/or repurpose facilities to meet these goals including the reallocation of space in Buildings 301, 303, and 309 for NPS maintenance needs; the consolidation of maintenance functions in Buildings 301 and 310; and increasing outdoor storage area by expanding into the vehicle/equipment storage lot on the east side of Building 302.

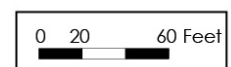
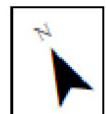


Legend

Outdoor Covered Parking Structure

Figure 5: Proposed Location of the Outdoor Covered Parking Structure

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment



Data Source: NPS

Miller Field

Under the proposed action alternative, the NPS would construct a permanent maintenance facility on approximately 2.0 acres at the southwest corner of Miller Field. The facility would include a small equipment repair and storage facility; administrative office with lockers and restrooms; an outdoor covered vehicle/equipment storage area with lighting and electric power supply; an outdoor uncovered storage area; hazardous materials storage; vehicle parking for staff and visitors; a fueling station; a vehicle wash area; and access improvements. The facility would also include a building to be used by park rangers for equipment and miscellaneous storage. **Table 1** provides a detailed breakdown of the space required for the permanent maintenance facility proposed at Miller Field. **Figure 6** provides a conceptual layout of buildings and other facility elements including site access improvements and security.

Table 1: Miller Field Building and Facility Elements		
Facility Element		
Administration Building(s)	Offices, Lockers, Restrooms	1,000 square feet
Small Equipment Repair Facility	Equipment Repair Shop and Storage Heated Small Equipment Storage	2,000 square feet
Unheated Covered Storage (3 Sides plus Roof)	Four (4) Vehicle Capacity Hazmat Storage Shed Small Tool Storage	1,000 square feet
Uncovered Service/Storage Area	Two (2) Vehicle Capacity Vehicle Wash Area Fueling Station (1,000 gallon storage) Bulk Material Storage Exterior Work Area	3,850 square feet
Parking	Eight (8) Staff Vehicles Two (2) Visitor Vehicles	4,550 square feet
Park Ranger Storage Building	Equipment and Miscellaneous Storage	1,000 square feet

The NPS would implement a “roundabout” into the facility design to provide access to the maintenance facility at the existing entrance to the NPS parking lots off of New Dorp Lane. The roundabout would provide shared vehicle access to New Dorp Lane, the NPS parking lots, and the proposed NPS maintenance facility. A roundabout would allow for a continuous flow of vehicles into and out of the NPS parking lots using yield controls, and would provide a safer entry and exit from the maintenance facility. To improve circulation through the maintenance facility, access would also be provided by constructing a road that would connect the new facility to NPS Parking Lot #2. Approximately 16 parking spaces would be removed from NPS Parking Lot #1 and one (1) space would be removed from NPS Parking Lot #2 to accommodate the new

access roads. Both access roads would be asphalt paved and each would provide two-way traffic for NPS maintenance staff and equipment circulation. In addition, swing gates would be installed at each access road to prevent unauthorized vehicle entry into the facility. Furthermore, designated pathways and crosswalks would be incorporated into the facility design to direct pedestrians safely from the NPS parking lots to the athletic fields.

The NPS would construct the facility to be resilient to extreme weather conditions, such as high wind speeds and excessive salt spray. Hurricane-resistant construction techniques would be used and facility designs would take into account the latest NPS guidance addressing climate change and natural hazards in facility planning (NPS 2015a). Also, the NPS would incorporate energy efficient heating, air conditioning, and lighting systems into the facility design.

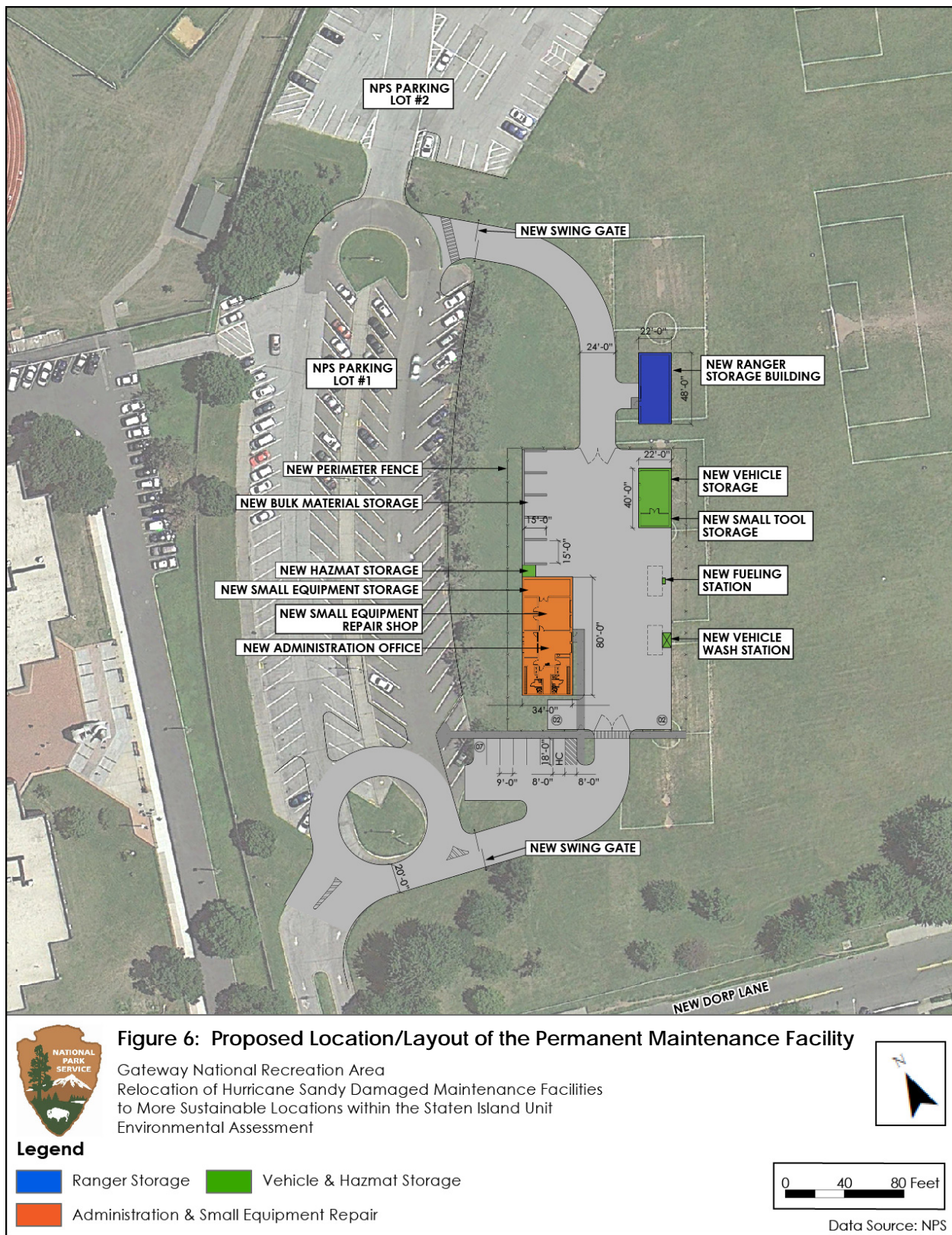
The new maintenance facility at Miller Field would include hazardous materials (hazmat) storage. The types of materials that would be stored include oil, transmission fluid, brake fluid, pesticides and fertilizer. All hazardous materials would be stored in accordance with OSHA guidelines.

In order to secure the facility, the NPS would use a transparent fencing assembly to deter unauthorized access and vandalism of the facility. The NPS is proposing to use anti-climb fence technology versus the traditional chain link and barbed wire. The NPS would consider fence solutions that are the least intrusive from an aesthetics standpoint.

The NPS would prepare and implement a landscape plan after the new facilities are constructed and site restoration activities begin. The landscape plan would include the replacement of any trees that would be removed during construction with the same or similar species that are native to the northeastern United States. The landscape plan would also include supplemental plantings of trees and shrubs, as appropriate, around the facility. Plantings may be strategically placed for aesthetic purposes as a part of the facility design or to screen the facility from the athletic fields or residences on New Dorp Lane.

Stormwater management would also be included in the design of the new maintenance facility at Miller Field. The NPS would incorporate various techniques for stormwater management including the construction of inlets and pipes to connect the maintenance facility to existing stormwater infrastructure in the area, and low impact development techniques such as drainage swales, bioretention areas, or infiltration basins.

The NPS would construct a fueling station at the new maintenance facility that would include a 1,000 gallon above-ground fuel storage tank and fuel dispensing system. The fueling station would be designed in accordance with all appropriate FEMA and NPS guidelines for the construction of fuel storage within the regulatory floodplain. In addition, the fuel storage tank and dispensing system would be surrounded with bollards, or similar barriers, as a safety measure to protect the tank from potential vehicle collisions. The bollards would also serve as a fire protection/prevention measure in addition to an automatic system shut-off system that would be incorporated into the fueling station.



MITIGATION MEASURES OF THE PROPOSED ACTION ALTERNATIVE

To avoid and/or minimize environmental impacts under the proposed action alternative, the following mitigation measures would be implemented, whenever feasible. The exact mitigation measures to be implemented would depend upon the final design and approval of plans by relevant agencies:

Floodplains

- Elevate all structures to a minimum of two feet above the Base Flood Elevation (BFE) (i.e. the 100-year regulatory floodplain elevation) (BFE+2) as identified in the 2013 Preliminary Flood Insurance Study (FIS) for Richmond County (FEMA 2013c).
- Elevate critical systems (i.e. heating and air conditioning units, fire protection, security, computers, etc.) and the fuel storage tank and its components to a minimum of three feet above BFE (BFE+3) as identified in the 2013 Preliminary FIS for Richmond County (FEMA 2013c), which is equal to or greater than the water surface elevation of the 500-year flood.
- Restore disturbed areas through vegetation establishment using NPS-approved native seed mixes and plantings.
- Implement stormwater management into the design of the facility, as appropriate, to store and convey stormwater to existing stormwater infrastructure.

Historic Structures and Districts

- Locate the outdoor covered parking structure at Fort Wadsworth to partially conceal the structure behind existing buildings and out of sight of park visitors.
- Design the height of the outdoor covered parking structure at Fort Wadsworth so the structure would not protrude above the other maintenance buildings.
- Complete improvements to existing facilities in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (NPS 1995b) in order to avoid and/or minimize any adverse impacts.
- Develop and coordinate context-sensitive facility designs with the NY SHPO and other parties as appropriate.

Visitor Use and Experience

- Notify park visitors and neighbors in advance of any construction activities that would result in temporary road closures or parking restrictions.
- Perform construction Monday through Friday, and/or during other off-peak visitor use periods, if possible, to lessen the impact on park visitors.

- Maintain access to athletic fields, parking, and other facilities at Miller Field throughout construction.
- Identify strategies to reduce potential conflicts between park visitor uses, park access and parking availability, and the daily operations required to maintain the athletic fields and other facilities at Miller Field.

Local Roads and Park Access

- Implement a roundabout into the facility design for the proposed maintenance facility at Miller Field to increase the safety characteristics of the shared vehicle access to New Dorp Lane, the NPS parking lots, and the proposed maintenance facility.
- Incorporate designated pedestrian pathways and crosswalks into the design of the proposed maintenance facility at Miller Field to ensure pedestrian safety.
- Install signs to mark pedestrian crosswalks and pathways, assist motorists to understand proper circulation through the roundabout, and other traffic patterns, and warn motorists and pedestrian of shared access with maintenance vehicles and equipment.
- Install swing gates at both entrances to the proposed maintenance facility at Miller Field to prevent unauthorized vehicle access.
- Notify park visitors and neighbors in advance of any construction activities that would result in temporary road closures or parking restrictions.
- Implement measures to ensure a safe and continued flow of traffic during construction such as marked detour routes if lane or sidewalk closures are needed, electronic signs on approaches to construction areas to notify motorists and pedestrians of construction activities, and the use of flagmen to allow safe access and traffic movements when equipment is being used near roadways or when materials are being delivered.
- Post notices to the park website to inform the public of the construction schedule and any changes in park access, parking availability, or circulation.
- Identify strategies to reduce potential conflicts between park visitor uses, park access and parking availability, and the daily operations required to maintain the athletic fields and other facilities at Miller Field.

Noise

- Schedule construction to minimize impacts on adjacent noise sensitive resources.
- Use best available noise control techniques.
- Use hydraulically or electrically powered tools.
- Locate stationary noise sources as far from sensitive resources as possible.
- Develop a noise mitigation plan that would comply with all federal, state, and local noise control laws and regulations.

ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER CONSIDERATION

Other preliminary alternatives or alternative elements were considered during the planning process, or were brought forth by the public, but were ultimately dismissed from further analysis in this EA. A brief description of these alternatives or alternative elements is provided below with the reasons for dismissal.

Fort Wadsworth

During alternatives development, the NPS considered a wide range of alternative configurations for the location and layout of the outdoor covered parking structure at the Fort Wadsworth maintenance facility. Many of the alternatives were dismissed from detailed analysis because of unreasonably high costs to obtain minimal efficiency improvements; structure configurations that provided capacity to accommodate more vehicles/equipment than needed; structure locations that restricted vehicle/equipment movement within the maintenance facility; and unnecessary impacts to the Fort Wadsworth National Register Historic District.

Miller Field

Construct new maintenance facility near Hangar 38 – The NPS considered constructing a new maintenance facility in the vicinity of Hangar 38 at Miller Field. This option was dismissed from further consideration because Hangar 38 and the surrounding area are located within the 100-year floodplain. Constructing a new maintenance facility near Hangar 38 would place an unnecessary risk on the facility and equipment due to the high probability of flooding caused by severe storms and/or the probable future rise of sea level elevations.

Construct new maintenance facility along the northern boundary of Miller Field – The NPS considered several locations to construct a permanent maintenance facility along the northern boundary of Miller Field. **Figure 7** provides the initial project area. Concept designs were presented for two maintenance facility layouts at the initial public scoping meeting in October 2014. Concept layout #1 was mostly situated at the site of the temporary maintenance facility constructed in 2014, and incorporated Building 3 into the design as office space. Concept layout #2 was situated along the northern boundary of Miller Field between the NPS housing, Mason Avenue, and Moreland Street. These concepts were dismissed from further consideration due to public concerns regarding increased vehicle traffic on residential roadways, increased noise and air pollution, decreased property values, and privacy issues related to the proximity of the proposed maintenance facility locations to park neighbors.



Figure 7: Dismissed Project Area at Miller Field

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment



Legend

Initial Project Area



Data Source: NPS

HOW THE ALTERNATIVES MEET THE PROJECT OBJECTIVES

The project objectives as described in Chapter 1 must be achieved to a large degree for the action to be considered a success. The alternatives considered in detail need to meet the project's purpose of and need for the action as well as meet the project objectives either partially or fully. This information in combination with the assessment of resource impacts is used by the NPS in its selection of a preferred alternative. A summary of how the alternatives meet the project objectives can be found in **Table 2** on the following page.

Table 2: How the Alternatives Meet the Project Objectives

Project Objective	No-Action Alternative	Proposed Action Alternative
Minimize impacts to natural and cultural resources	Fully meets this objective. <ul style="list-style-type: none"> Current operations and maintenance would continue, which protects natural and cultural resources at Fort Wadsworth and Miller Field. 	Partially meets this objective. <ul style="list-style-type: none"> The proposed action would support efforts to protect natural and cultural resources of the park. Proposed action at Fort Wadsworth would have slight impacts on historic buildings. The site would be developed using context sensitive designs to minimize impacts.
Improve operations and storage/protection of critical supplies, tools, and equipment, particularly immediately before, during, and after a severe weather event	Does not meet this objective. <ul style="list-style-type: none"> Vehicles and equipment at the Fort Wadsworth facility are currently uncovered and unprotected from severe weather. The existing temporary facility at Miller Field provides weather protected areas, but the facility will be dismantled at some point. 	Fully meets this objective. <ul style="list-style-type: none"> At Fort Wadsworth, the outdoor covered parking structure would provide weather protection for vehicles and equipment. At Miller Field, the permanent facility would include dedicated storage areas for vehicles, hazardous materials, small tools, and ranger equipment.
Support routine maintenance operations with an efficient, sustainable, and storm resistant facility	Partially meets this objective. <ul style="list-style-type: none"> Existing facilities at Fort Wadsworth and Miller Field support routine maintenance operations. 	Fully meets this objective. <ul style="list-style-type: none"> The outdoor covered parking structure and adaptive reuse of Fort Wadsworth facilities would improve efficiency and storm resiliency. The permanent facility at Miller Field would replace the temporary facility, helping to make park operations more sustainable. At Miller Field, the permanent facility would be located outside of the 100-year floodplain. Structures within the facility would be elevated to improve storm resiliency.
Improve facility and maintenance management efficiencies on a daily basis within STIS	Does not meet this objective. <ul style="list-style-type: none"> Operational inefficiencies caused by the arrangement of Fort Wadsworth facilities would not be addressed. Once the temporary facility at Miller Field is dismantled, daily transport of maintenance equipment from Fort Wadsworth to Miller Field would be required. 	Fully meets this objective. <ul style="list-style-type: none"> Adaptive reuse of Fort Wadsworth facilities would reduce operational inefficiencies. The permanent facility at Miller Field would reduce the need to transport maintenance equipment from Fort Wadsworth to Miller Field once the temporary facility is dismantled.
Improve visitor appreciation and internal customer support through critical mission support	Partially meets this objective. <ul style="list-style-type: none"> Existing facilities support maintenance operations that indirectly affect visitors and internal customers, and support the parks' purpose. 	Fully meets this objective. <ul style="list-style-type: none"> Proposed action would make maintenance operations more efficient, which would indirectly affect visitors and internal customers, and support the parks' purpose.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

A summary of the environmental consequences of each alternative is presented in **Table 3**. See “Chapter 4: Environmental Consequences” for detailed explanations of the impacts presented.

Table 3: Summary of Environmental Consequences		
Impact Topic	No-Action Alternative	Proposed Action Alternative
Floodplains	No impacts within the 100- or 500- year regulatory floodplain.	<p><u>Fort Wadsworth</u> No impacts within the 100- or 500- year regulatory floodplain.</p> <p><u>Miller Field</u> Adverse impacts within the 500-year regulatory floodplain from approximately 2.0 acres of ground disturbance and an increase of 1.25 acres of impervious surface area. Impacts would not be significant due to the relatively small-scale of the project and because the NPS would implement stormwater management, restore the site following construction, and design the facility to address climate change.</p>
Historic Structures and Districts	No impacts to historic structures and districts.	<p><u>Fort Wadsworth</u> Adverse impacts to the Historic District and contributing resources from the construction of the outdoor covered parking structure and minor modifications to existing buildings to adaptively reuse and/or repurpose facilities. Impacts would not be significant due to the implementation of context sensitive design measures and consultation with NY SHPO.</p> <p><u>Miller Field</u> No impacts because of the distance from the new facility to the Historic District.</p>
Visitor Use and Experience	No impacts to visitor use and experience.	<p><u>Fort Wadsworth</u> Adverse impacts during construction that would not be significant because construction would take place within an area that is not accessible to park visitors. No long-term impacts associated with the outdoor covered parking structure or adaptive reuse of existing maintenance facilities.</p> <p><u>Miller Field</u> Adverse impacts during construction from temporary road closures and parking restrictions. Impacts would not be significant because the athletic fields and other amenities would not be impacted. Long-term adverse impacts associated with the permanent maintenance facility from the reduction in open space. Impacts would not be significant due to the availability of other open spaces and the improved efficiency of maintenance operations.</p>

Table 3: Summary of Environmental Consequences

Impact Topic	No-Action Alternative	Proposed Action Alternative
Local Roads and Park Access	Adverse impacts from the daily transport of equipment on Hylan Boulevard and/or Father Capodanno Boulevard and the use of the Mason Avenue gate to access Miller Field. Impacts would not be significant because delays on hauling routes would not increase and because park access at Mason Avenue is not time consuming.	<p><u>Fort Wadsworth</u> Adverse impacts during construction, particularly on weekdays during peak commuter periods and during seasonal peak park use periods. Impacts would not be significant because the use of local roads by construction equipment would be relatively infrequent. Long-term impacts would be beneficial due to the reduction of vehicle and equipment transport.</p> <p><u>Miller Field</u> Adverse impacts during construction, particularly on weekdays during the school year and on weekends between April and November during peak seasonal park use periods. Impacts would not be significant due to the implementation of mitigation measures during construction to reduce traffic impacts and ensure visitor safety. Long-term adverse impacts from a reduction in parking that would not be significant because parking is available at other locations and because beneficial impacts would result from the implementation of the roundabout and pedestrian crosswalks and pathways into the design of the maintenance facility.</p>
Noise	<p>No impacts to existing ambient noise levels at Fort Wadsworth.</p> <p>Adverse impacts to park neighbors from noise associated with the maintenance of Miller Field. Impacts would not be significant because no new noise sources would be added, impacts would be seasonal, and because noise sources would not be stationary.</p>	<p><u>Fort Wadsworth</u> Adverse impacts during construction immediately surrounding the facility. Impacts would not be significant because construction noise would not affect the nearest residential areas or any sensitive receptors. No long-term noise-related impacts.</p> <p><u>Miller Field</u> Adverse impacts during construction due to noise experienced by residents on New Dorp Lane and New Dorp High School above ambient levels. Impacts would not be significant because construction noise would be temporary, noise would not be substantially greater than ambient levels, and because mitigation measures would be implemented to reduce noise. Long-term adverse impacts associated with the relocation of maintenance operations in the vicinity of residences on New Dorp Lane and from routine maintenance activities. Impacts would not be significant because noise would not be constant, would not be stationary, would be seasonal, and because the NPS would adhere to common sense practices to reduce noise from maintenance activities.</p>

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

In accordance with the DO-12 Handbook, the NPS identifies the environmentally preferable alternative in its NEPA documents for public review and comment [Sect. 4.5 E(9)]. The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources (CEQ 1981). The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative (43 CFR 46.30).

Based on the analysis of environmental impacts described in “Chapter 4: Environmental Consequences” of this EA, the NPS has determined that the no-action alternative is the environmentally preferable alternative. The no-action alternative would cause the least damage to the physical environment and therefore would best protect cultural resources. As described in Chapter 4, the proposed action alternative would result in adverse impacts to the 500-year floodplain of Lower New York Bay at Miller Field. Adverse impacts would also occur to historic structures associated with the Fort Wadsworth National Register Historic District. For these reasons, the no action alternative is the environmentally preferable alternative.

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CHAPTER 3: AFFECTED ENVIRONMENT

This chapter describes environmental conditions in and surrounding the proposed project areas at Fort Wadsworth and Miller Field. These conditions serve as a baseline for understanding the resources that could be impacted by implementation of the proposed action. The resource topics presented in this chapter, and the organization of the topics, correspond to the resource discussions contained in “Chapter 4: Environmental Consequences.”

FLOODPLAINS

Floodplains provide a wide range of benefits to both human and natural systems. According to FEMA (2015), the natural and beneficial resources and functions of floodplains can be categorized into three types, which are all interrelated. These are water resources, biological resources, and societal resources. Water resources include those resources and functions of floodplains such as natural flood storage and erosion control, surface water quality, and groundwater recharge. Biological resources and functions of floodplains include the support of biological productivity and fish/wildlife habitats. For instance, coastal floodplains are important in reducing erosive damage from floods, which helps to maintain diverse ecosystems for fish and wildlife. Societal resources are the floodplain functions that benefit human society with harvestable products, recreational opportunities, and educational values (FEMA 2015).

FEMA floodplain mapping of Fort Wadsworth and Miller Field is provided in **Figure 8** and **Figure 9**. According to FEMA FIRM Panel 3604970331G (FEMA 2013a), the project area at Fort Wadsworth is located outside of, and well above, the mapped 100-year and 500-year regulatory floodplain. According to FIRM Panel 3604970328G (FEMA 2013b), the project area at Miller Field is located outside of and above the 100-year regulatory floodplain (also known as the Base Flood Elevation (BFE)), but is located within the 500-year regulatory floodplain of the Lower New York Bay. The 500-year floodplain represents areas of moderate flood risk according to FEMA. The NPS prepared a Floodplain Statement of Findings for the project that provides 100-year and 500-year floodplain elevations for Miller Field as identified in the 2013 preliminary FIS for Richmond County (see Appendix B).

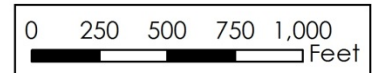


Legend

- 500-Year Floodplain (ZONE X)
- 100-Year Floodplain (ZONE AE)
- 100-Year Floodplain incl. Wave Action (ZONE VE)
- Park Boundary

Figure 8: FEMA Special Flood Hazard Areas – Fort Wadsworth

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment



Data Source: FEMA FIRM
Panel 3604970331G (2013)



Legend

- 500-Year Floodplain (ZONE X)
- 100-Year Floodplain (ZONE AE)
- 100-Year Floodplain incl. Wave Action (ZONE VE)
- Park Boundary

Figure 9: FEMA Special Flood Hazard Areas – Miller Field

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment



Data Source: FEMA FIRM
Panel 3604970328G (2013)

As described in the Gateway GMP/EIS, climate change is expected to bring accelerated sea level rise, heavy rainfall, and possible increases in storm frequency and intensity. Increases in sea level and changes in storm frequency and intensity are expected to have substantial impacts on park resources. Consequences of climate change on Fort Wadsworth and Miller Field could include shoreline erosion, saltwater intrusion, and more frequent inundation. Also, because of the urban development surrounding the parks, the effects of storms are greater than they would be under natural conditions. Urban development prevents deposition of sand and sediment, which could otherwise build protective dunes and positively affect the shape of the coastline (NPS 2014a).

In response to Hurricane Sandy, mapping was created by the National Oceanic and Atmospheric Administration in partnership with FEMA and other federal agencies to illustrate the risk of future sea level rise on coastal communities. The mapping incorporates FEMA floodplain data with sea level rise scenarios developed by the New York Panel on Climate Change (ESRI 2014). **Figure 10** and **Figure 11** depict a moderate sea level rise scenario for the year 2050 at Fort Wadsworth and Miller Field. Under this scenario, there would be an 11-inch increase in sea level. The projected increase in area within the 100-year floodplain is displayed on the figures in red. The project area at Fort Wadsworth would remain outside the 100-year floodplain under the moderate sea level rise scenario. A small portion of the project area at Miller Field would be within the 100-year floodplain under the moderate sea level rise scenario.

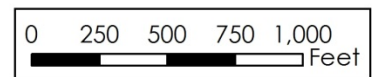


Figure 10: Projected (Year 2050) 100-Year Floodplain at Fort Wadsworth

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment

Legend

-  100-Year Floodplain + 11 inches  Park Boundary



Data Source: ESRI (2014)

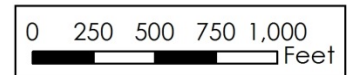


Figure 11: Projected (Year 2050) 100-Year Floodplain at Miller Field

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment

Legend

- 100-Year Floodplain + 11 inches
- Park Boundary



Data Source: ESRI (2014)

HISTORIC STRUCTURES AND DISTRICTS

Fort Wadsworth is comprised of numerous military-related resources that were designed to protect New York Harbor. Throughout its history, the area was coveted for its strategic position at the Narrows. Historical accounts describe that during the Revolutionary War, troops under the command of George Washington used the Fort Wadsworth area as a lookout point to keep watch for the arrival of British fleets. The area also played a role in the War of 1812, as British ships approaching New York were deterred by the presence of batteries at Fort Wadsworth. In 1847, the land was purchased by the US Government from New York State. The site was eventually named for James S. Wadsworth, a Brigadier General from New York who was killed in the Civil War (Wrenn 1975).

Improvement of the site's fortifications took place between 1847 and the early 1900s. The primary coastal fortification at Fort Wadsworth, named Battery Weed, took nearly 20 years to complete due to difficult site conditions and lack of funds. The design for Battery Weed is a half-trapezoid, built to suit the range limitations of weaponry during the post-Civil War era. In 1876, Fort Tompkins was completed to provide living quarters for Fort Wadsworth's defenders (Wrenn 1975). Today, Battery Weed and Fort Tompkins are considered excellent examples of third system military architecture. Forts of the third system were built using masonry and featured iron cannons with long firing distances (NPS 2015d).

Fort Wadsworth was also improved with a number of gun batteries over the years. The batteries were constructed during the Endicott period (1890-1910). The structures housed rapid fire guns and "disappearing" guns that would move behind protective walls after they were fired. Additional work was performed to update battery facilities during World War II (Wrenn 1975). Military activities at Fort Wadsworth after World War II included management of New York's Nike Missile defenses, administration of a chaplain's school, and US Navy operations. The land was turned over to the NPS in 1994 for inclusion in the Gateway National Recreation Area (NPS 2015e). The Fort Wadsworth National Register Historic District (determined eligible for listing in the National Register of Historic Places in 1999 by the NY SHPO) includes the fortifications, batteries, and associated buildings. Several structures including Battery Weed and Fort Tompkins have retained their historical character and are considered individually significant.

Within the project area, Buildings 301, 302, 303, 305, 309 and 310 (shown in **Figure 12**) are considered contributing resources to the Fort Wadsworth National Register Historic District. Collectively, the buildings have been referred to as the "Seabee Complex." Over the course of the complex's history, it has served as a space for storage, vehicle dispatch, stables, administrative offices, and for the US Park Police. Currently the complex is a center for NPS maintenance operations. A Cultural Resources Report for Fort Wadsworth states that all buildings are "in good to excellent condition and present no physical signs of failure or public safety concerns" (NPS 1995a). **Table 4** provides additional details of the buildings within the project area, historically known as the Seabee Complex.

Table 4: General Description of Buildings within the Fort Wadsworth Project Area (Source: NPS 1995a)		
Structure	Description	Modifications
Building 301	Large garage/office building constructed in 1938.	Covering of brick elevations with vinyl siding. Window and door units have been replaced. Interior floor plan has been remodeled.
Building 302	Large garage behind Building 301 constructed in 1937.	Raising the central bay to accommodate large trucks. Covering of brick elevations with vinyl siding. Interior floor plan has been remodeled.
Building 303	Small brick building formerly used as vehicle dispatch office constructed in 1938.	Vinyl siding installed in two gables, new roofing, replacement windows.
Building 305	One-story office with two rooms and basement/garage. Record of construction dates back to 1900.	Covering of brick elevations with vinyl siding. Replacement windows. Interior layout and finishes have been modified.
Building 309	Long one-story rectangular building referred to as the "Stable." The building was constructed in 1931 and housed the fort's mules and horses.	Doorways filled with smooth-face concrete masonry units. Interior retains its original open plan.
Building 310	Long one-story rectangular building known as the "Warehouse." Constructed in 1927.	Original roof replaced with metal roofing.

Miller Field was a hydroplane station on the Atlantic Coast intended to provide coastal defense in the early 20th century. The land was purchased by the US Government from private ownership in 1919, and was established as an Army airfield in 1920. Miller Field was named in memory of Captain James E. Miller, who was killed in an air battle with two German planes during World War I. Captain Miller was cited by the US War Department as the first aviator serving with an American unit to be killed in combat in France. Early activities at Miller Field conducted by the Army included aircraft testing and flight demonstrations. In a 1924 simulation, planes from Miller Field attacked Fort Wadsworth using "flour bombs" (Wrenn 1975).

Initial development of the airfield included landplane hangars, seaplane hangars, an aero repair shop, living quarters, and dozens of ancillary buildings to support Army operations. Inspections revealed that facilities were poorly constructed. A 1922 inspection report provided that "the hangar group of buildings has been graded to such a low point that exceptionally high tides flood the floors of these buildings to a depth of six or more inches while the ramp leading from the concrete area in front of these buildings to the beach has been graded so low that it acts as an inlet to the flood waters..." Facility repairs were minimal until the 1930s, when there was considerable work to improve the hangars and living quarters (Wrenn 1975).

During World War II, Miller Field functioned primarily as a supply depot. Military operations at the site continued through the Cold War Era. In 1960, two passenger airplanes collided over Miller Field resulting in 134 deaths. At the time, the mid-air collision was the most catastrophic airline disaster to have occurred in the United States. In 1969, Miller Field was deactivated as a military facility, and in 1973, the NPS acquired Miller Field as part of the Gateway National Recreation Area (Ciccione 2007).

About 24 of the original structures remained on the site when the NPS acquired Miller field. These remaining structures, especially the hangars, were in various states of deterioration. The landplane hangar (named Hangar 33) was in such deteriorated condition that renovation of the structure was no longer practical. In 1976 the structure was demolished and replaced with athletic fields. The seaplane hangar (named Hangar 38) still exists at Miller Field. The building consists of a steel frame with stucco walls. When the hangar was first constructed it was connected to the ocean by a concrete ramp 400 feet long and 40 feet wide (Greenwood & Torres-Reyes 1979). The ramp is no longer visible but is believed to still exist below the ground surface.

In 1979, the Miller Army Airfield was listed as a Historic District in the National Register of Historic Places. Since the majority of the airfield has been converted to recreational open space (see photo this page), the historic boundary is limited to Hangar 38, its apron, and the immediate surroundings. Hangar 38 possesses historical significance because of its association with early aviation history. Hangar 38 features a unique design among military aviation facilities in that no other seaplane hangar on the east coast closely resembles it.

A contributing resource to the Historic District, the Elm Tree Light, is located south of Hangar 38. The Elm Tree Light is a light tower that operated during the late 19th and early 20th centuries. Initially, the tower replaced a large elm tree off of New Dorp Lane that was a landmark for sailing vessels traveling to New York in the late 18th century (NPS 2015f). Thus, the Elm Tree Light is reflective of land uses at Miller Field dating back over 100 years. **Figure 13** provides the boundary of the Miller Army Airfield National Register Historic District and the location of contributing resources in relation to the project area.



View of Hangar 38 and Elm Tree Light at Miller Field from near the New Dorp Lane/Roma Avenue intersection

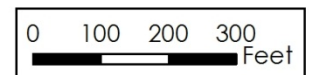


Figure 12: Historic Resources near Project Area at Fort Wadsworth

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment

Legend

 Project Area New Structures ▲ Contributing Structures



Data Source: NPS



VISITOR USE AND EXPERIENCE

Gateway offers a multitude of recreational and interpretive opportunities to park visitors throughout the year. Hiking, biking, picnicking, bird-watching, and self-guided exploration are popular activities throughout Gateway. At Fort Wadsworth, the visitor experience is centered in military and maritime history. Battery Weed and Fort Tompkins are impressive structures that are furnished with interpretive signs and scenic overlooks that enhance the visitor appreciation of the area. NPS-guided tours are available year round. Exceptional views of New York Harbor, New York City, the Verrazano-Narrows Bridge, and Battery Weed can be experienced from Fort Tompkins. Spectators of the New York Marathon gather at Fort Wadsworth to witness the start of the race on the Staten Island side of the Verrazano-Narrows Bridge. In 2011, overnight tent camping was made available at Fort Wadsworth and fishing is also permitted from the shoreline at the southern end of the park. The park provides a peaceful and contemplative space for residents of the communities surrounding Fort Wadsworth. The project area at Fort Wadsworth consists of the NPS maintenance facility, which is not accessible by visitors to the park for safety/security reasons.

Miller Field contains over 187 acres of open space and supports a substantial amount of community-based recreation. There are over 30 athletic fields suitable for soccer, football, baseball, softball, and cricket (see photo this page). There are over 80 organized sports leagues and 2,000 teams that play at Miller Field annually (NY Harbor Parks 2015). Miller Field also provides a playing surface for basketball, a picnic area with barbeque grills, a playground, and community garden. From April to November, Miller Field is heavily used by athletic programs between 8:00 a.m. and 6:00 p.m. on weekends. On weekdays, Miller Field is open to the public to be used for non-organized activities. Special events in the past have included outdoor concerts by performers such as the New York Philharmonic Orchestra (NY Times 1999). There are views of historic Hanger 38 and Elm Tree Light, both of which are located at the southwest corner of the field, from all over Miller Field. The project area is currently open space that originally consisted of three small pee wee football fields. These fields were relocated in 2012 to the north side of the main parking lot near the Cedar Grove avenue park entrance. The project area is now used informally as a practice area and a space for spectators and picnickers.



View of athletic fields at Miller Field

LOCAL ROADS AND PARK ACCESS

In general, roads within Fort Wadsworth are not heavily traveled and are generally free from congestion. Battery Road and New York Avenue are the primary roads used to access the park. Roadways in the vicinity of the park such as McClean Avenue, Bay Street, and Fingerboard Road are likely to become congested on weekdays during peak commuter periods. The Staten Island Expressway (I-278), which is frequently overcrowded, is accessible just outside of Fort Wadsworth via Lily Pond Avenue. In particular, congested conditions occur on I-278 on weekdays during peak commuter periods. I-278 eastbound provides access to Brooklyn, Manhattan, and other New York City destinations by use of the Verrazano-Narrows Bridge, and New Jersey by way of I-278 westbound.

Several Metropolitan Transit Authority (MTA) bus stops that provide access to the S51 bus route are located along Battery Road and New York Avenue within Fort Wadsworth. S51 operates between the St. George Ferry Terminal and Grant City, and generally runs between 6:00 a.m. and 7:00 p.m. daily. In addition, S81 buses provide limited-stop service on the S51 route during the afternoon and evening on weekdays. Several other bus routes are accessible just outside Fort Wadsworth on McClean Avenue, including bus stops for the S53 route, which provides full-time service every day between Port Richmond and Bay Ridge, S93 provides limited-stop service on weekdays on the S53 route, and express service to Manhattan (bus stops X4, X5, X7, and X8), which are located at the corner of Lily Pond Avenue and McClean Avenue.

Local roads in the vicinity of Miller Field provide access to a mix of urban residential and commercial areas. Hylan Boulevard, located northwest of Miller Field, is an important and heavily traveled arterial route on Staten Island. New Dorp Lane, which intersects with Hylan Boulevard to the northwest of Miller Field, runs adjacent to the southern boundary of the field, eventually terminating at the coast near Hanger 38. At the southwest corner of Miller Field, a park entrance at the New Dorp Lane/Mill Road intersection provides shared vehicle access to the park for visitors, high school students, and NPS maintenance staff.

Miller Field is open to organized activities on weekends from 8:00 a.m. to 6:00 p.m. between April and November. During this time, the NPS parking lots and the surrounding roadways are heavily used by visitors. Specifically, New Dorp Lane is heavily traveled during the weekends and provides limited parking opportunities. Visitors that park in the NPS parking lots access the athletic fields by walking directly onto the fields from the parking lots. Along with the Mill Road entrance to the NPS parking lots, a primary means of access for visitors is the Cedar Grove entrance to Miller Field located at the southeast corner of the field across from Cedar Grove Avenue. Congestion at this intersection may occur during weekends as athletic events conclude and visitors leave the park.

High school student use of the NPS parking lots is substantial on weekdays during the school year. Traffic congestion at the New Dorp Lane/Mill Road intersection is common in the morning on weekdays, at approximately 7:30 a.m., as students arrive to the school prior to the 8:00 a.m.

start of the school day. Congestion at this intersection is also common during the afternoon on weekdays, at approximately 2:30 p.m., as students are leaving the NPS parking lots. According to Gateway staff familiar with the area, congestion is due to a short green signal for drivers leaving the parking lots and is compounded by pedestrians leaving the area as they cross New Dorp Lane.

NPS maintenance staff use the Mill Road entrance to access portions of Miller Field on a regular basis. Maintenance staff also use other entrances, including the Mason Avenue entrance, which is off limits to the public, and the Cedar Grove entrance to avoid potential conflicts with park visitors or students particularly during congested periods.

Pedestrians commonly travel across Miller Field and along its perimeter sidewalks for various purposes. Residents to the north of Miller Field cross the park to access bus stops, local businesses on New Dorp Lane, and New Dorp High School. Residents to the south commonly use New Dorp Lane to access public transportation and commercial areas. Several MTA bus stops are located along New Dorp Lane that provide access to the S76 bus route, which operates between the St. George Ferry Terminal and Oakwood via Richmond Road and New Dorp Lane. S76 provides daily service from 6:00 a.m. to midnight on weekdays and 7:00 a.m. to midnight on weekends. In addition, S74, S76, and S78 provide additional service runs from New Dorp Lane at 2:25 p.m. to the St. George Ferry Terminal or Richmond Avenue and S86 provides limited-stop service on the S76 route from the St. George Ferry Terminal to Oakwood on weekdays. Several other bus routes are accessible including bus stops for S78, which runs daily full-time service between Bricktown Mall and the St. George Ferry Terminal via Hylan Boulevard; S79, which runs daily full-time service between the Staten Island Mall and Bay Ridge; and express service to Manhattan (bus stops X1, X2, X3, and X9), all of which are located at the corner of Hylan Boulevard and New Dorp Lane.

NOISE

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, the distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise is measured in decibels (dB), and the A-weighted Noise Level (dBA) is a common method for approximating the perception of sound by humans. Ambient noise, or background noise, is the level of the total noise in an area. The ambient noise level of an area can be used as a baseline to determine how the addition of new sounds might interfere with indoor and outdoor activities, be an annoyance, or affect human health.

Highways and streets surrounding the parks are noise sources. The Staten Island Expressway (I-278) and Verrazano Narrows Bridge in the vicinity of Fort Wadsworth result in substantial traffic related noise. At Miller Field, vehicles, buses, and emergency responders on secondary

roadways surrounding the park contribute to ambient noise. In general, noise from surrounding neighborhoods and roadways dissipates as one moves toward the interior of the park lands (NPS 2014a).

Within the parks, the noise sources listed above are expected to be heard in the distance. Audible noises from within the parks include intermittent sounds created by birds, pedestrians, bicyclists, radios, and people enjoying themselves. Temporary sound created by mowers and machinery used to maintain the parks is also audible. Towards the shores, the sound of waves rolling up onto rocks and sands can be heard. In general, Fort Wadsworth is less noisy than its urban surroundings, and provides a relatively quiet space for visitors. At Miller Field, ambient noise is higher based on the use of the fields for athletic events.

Table 5 shows typical sound levels associated with residential communities. At Fort Wadsworth, daily operations at the maintenance facility and surrounding land uses are likely comparable to urban residential (48 dBA average) communities due to local road traffic, periodic maintenance activities, and natural noises. Noise levels at the Miller Field project area are also likely comparable to urban residential communities, based on its proximity to New Dorp Lane. However, during peak visitor periods, particularly on weekends between April and November, noise levels at Miller Field may be comparable to noisy urban residential (53 dBA average) or very noisy residential (58 dBA average) as fields are being mowed or athletic events are being held.

Table 5: Typical Ambient Noise Levels in Residential Communities (Source: EPA 1974)		
Description	Typical Range (dBA)	Average (dBA)
Very Quiet Rural or Remote Area	26 to 30	28
Very Quiet Suburban or Rural Area	31 to 35	33
Quiet Suburban Residential	36 to 40	38
Normal Suburban Residential	41 to 45	43
Urban Residential	46 to 50	48
Noisy Urban Residential	51 to 55	53
Very Noisy Urban Residential	56 to 60	58

In 1974, the EPA provided information suggesting that continuous and long-term noise levels in excess of 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals. No on-site or off-site sensitive receptors were identified at Fort Wadsworth. At Miller Field, the closest off-site noise sensitive receptor is New Dorp High School. Typical indoor noise levels for schools are 45 dBA on average (EPA, 1974). New Dorp High School is a four year public high school with approximately 2,500 students (New Dorp High School 2015). Ancillary features of the campus include parking lots, roadways, and a football stadium. Based on these characteristics and the location of the school amid an urbanized landscape, a considerable amount of ambient noise is expected to be audible within the school facilities.

Noise on Staten Island is regulated under the New York City Noise Code (Local Law 113). The Code is enforced by New York City Environmental Protection and the New York Police Department. According to the Noise Code, it is “the public policy of the city that every person is entitled to ambient sound levels that are not detrimental to life, health, and enjoyment of his or her property (NYC 2005). The New York City Noise Code became effective on July 1, 2007. Allowable work hours for construction activities are between 7:00 am and 6:00 pm under the New York City Noise Code. The Code specifies that contractors must develop a noise mitigation plan prior to the start of work. Noise mitigation plans address the specific location, type of work, and timing of projects. Sensitive receptors such as schools, hospitals and places of worship are considered during plan development. If there are noise complaints, an inspection of the construction site takes place to determine whether modifications to the plan are needed. In addition, the Code establishes standards for noise generated from equipment and material movement within a construction site. Noise exceeding the ambient sound level by 10 decibels or more (as measured from 15 feet from the source) is prohibited. Impulsive noises, or short, sharp noises, are also restricted (NYCEP 2014).

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

In accordance with the CEQ regulations, the environmental consequences analysis includes the direct, indirect and cumulative impacts (40 CFR 1502.16). The intensity of the impacts is assessed in the context of the park's purpose and significance, and any resource-specific context that may be applicable (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are described and their effect on the severity of the impact noted. The methods used to assess impacts vary depending on the resource being considered, but are generally based on a review of pertinent literature and park studies, information provided by on-site experts and other agencies, professional judgment, and park staff knowledge and insight.

As required by the CEQ regulations on implementing NEPA, a summary of the environmental consequences for each alternative is provided in **Table 3**, which can be found in "Chapter 2: Alternatives." The impact topics presented in this chapter and the organization of the topics correspond to the resource discussions contained in "Chapter 3: Affected Environment."

Study Area – In general, the study areas for impact analysis include lands within Fort Wadsworth and Miller Field park boundaries. Adjacent lands surrounding the parks were considered in the impact analysis for local roads, park access, and noise.

Impacts are categorized by type, as follows:

Direct: Impacts that would occur as a direct result of the proposed action at the same time and place of implementation.

Indirect: Impacts that would occur as a result of the proposed action but would occur later in time or farther in distance from the action.

Adverse: A change that degrades the resource, or moves the resource away from a desired condition, or detracts from its appearance or condition.

Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

Cumulative Impacts Methodology – This EA also considers cumulative impacts, namely "the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts have been addressed in this EA by resource, and are considered for the proposed action alternative and the no-action alternative. Because some of these actions are in the early planning

stages, the evaluation of the cumulative impact is based on a general description of the projects. The approximate location of each project is provided on **Figure 2** in Chapter 1. The projects considered in the cumulative impact analysis are as follows:

Roof Replacements at Fort Wadsworth – The NPS plans to replace the roofs of three buildings at Fort Wadsworth that were damaged during Hurricane Sandy. The three buildings are the US Park Police stable (Building 309), a maintenance building (Building 302), and the SWAT building (Building 354), which is alternatively being considered for demolition. Resources impacted by the proposed roof replacements include historic structures and districts and human health and safety.

Combined Dispatch Project at Fort Wadsworth – The NPS plans to improve the park dispatch center at Fort Wadsworth. The project consists of the installation of a 100 foot monopole adjacent to Building 210, installation of an emergency natural gas powered generator adjacent to Building 210, and modification of interior spaces to accommodate the dispatch center. Several antennas and communication dishes would be mounted on the monopole at varying heights. Bullet proof glass would be retrofitted to the dispatch center windows. Resources impacted by the combined dispatch project include historic structures and districts and visitor use and experience.

Slope Stabilization Project at Fort Wadsworth – The NPS plans to stabilize 1,500 feet of shoreline that was damaged by Hurricane Sandy. Potential actions may involve the removal of leaning trees, removal of exotic vegetation, minor grading/fill along the slope, revegetation with native shrubs and grasses, addition of native cobble and gravel for slope protection, and/or the addition of a stone revetment at the toe of the embankment. Resources impacted by the proposed slope rehabilitation project include historic structures and districts.

Stabilization of Hangar 38 at Miller Field – The NPS plans to stabilize Hangar 38. Work would include repairing or replacing approximately 900 linear of resource protection fencing and conducting a structural evaluation of the hangar. The NPS would also assess the condition of the land surrounding the hangar. The building exterior, additions constructed by the Works Program Administration, and hazardous materials would be removed from the hangar to leave the historic, pre-1939 structural skeleton. The skeleton would be braced and coated for long-term resiliency and outfitted with new conduits and power cables. Resources impacted by the proposed work include floodplains, historic structures and districts, and visitor use and experience.

Demolition of Buildings 3, 4, and 5 at Miller Field – The NPS is proposing to demolish Buildings 3, 4, and 5 at Miller Field. These buildings have been determined not eligible for listing in the National Register of Historic Places. Resources impacted by the demolition include floodplains and noise.

Temporary Maintenance Facility at Miller Field – The NPS constructed a temporary maintenance facility at Miller Field in 2014 to provide a secure enclosure with weather protected area for maintenance equipment in lieu of a permanent facility. Following the construction of a permanent maintenance facility, the temporary facility would be dismantled and the site would be restored to pre-construction conditions. Resources impacted by the temporary maintenance facility include floodplains and visitor use and experience.

Replace Miller Field Boundary Fence – The NPS replaced the boundary fence along the north side of Miller Field from Baden Place to Elm Tree Lane. The fence is approximately 3,650 linear feet. This project resulted in impacts to floodplains and historic structures and districts.

Miller Field Tree Planting – The NPS plans to install 103 trees at Miller Field. Thirty-five (35) of the trees would be replacements for the trees removed during the Miller Field boundary fence replacement. Tree planting is proposed for the spring of 2015. Resources impacted by the tree planting include floodplains.

New York City Resilient Neighborhoods Initiative –The NYC Department of City Planning is developing strategies to address the long-term risks of flooding on the east shore of Staten Island as part of its Resilient Neighborhoods initiative. Strategies include identifying potential revisions to existing regulations that would facilitate building resiliency, and working with the public to enact such revisions (NYCDP 2015). Resources impacted by the Resilient Neighborhoods initiative include floodplains and local roads and park access.

An assessment of the potential significance of the impacts according to context and intensity is provided for each impact topic in the “Conclusion” section under each alternative. Resource-specific context is presented in the “About the Analysis” section under each impact topic and applies across all alternatives. Intensity of the impacts is presented in the “Conclusion” section using relevant factors which address the severity of the impact.

FLOODPLAINS

About the Analysis – Analysis of the proposed alternatives on floodplains was performed using FEMA mapping of the 100- and 500-year floodplain at Fort Wadsworth and Miller Field. Predictions of short-term and long-term impacts were based on an assessment of floodplain functions and values, professional judgment, and similar projects. In addition, the future projected location of the 100-year floodplain given the effects of sea level rise was considered.

Impacts of the No-Action Alternative – Under the no-action alternative, no construction would occur at either Fort Wadsworth or Miller Field that would result in impacts to the 100-

year or 500-year regulatory floodplain. No impervious surface would be added that would reduce the infiltration capacity of the floodplain, and no structures would be constructed that would affect the floodplains ability to store and transport flood waters.

Cumulative Impacts – The no-action alternative would not impact the 100-year or 500-year regulatory floodplain; therefore, the no-action alternative would not contribute to the cumulative impacts of other past, present, or reasonably foreseeable future actions.

Conclusion – No impacts to floodplains would occur under the no-action alternative because no activities would be conducted that would affect the floodplains ability to infiltrate, store, or transport flood waters. There would be no impacts to floodplains under the no-action alternative; therefore, the no-action alternative would not contribute to the cumulative impacts of other projects.

Impacts of the Proposed Action Alternative – Under the proposed action alternative, the construction of an outdoor covered parking structure at Fort Wadsworth would not occur within the 100-year or 500-year regulatory floodplain. Projected changes in the boundary of the 100-year regulatory floodplain in the area based on a moderate sea level rise scenario for 2050 show the maintenance facility at Fort Wadsworth to be well above the projected 100-year floodplain elevation.

At Miller Field, the construction of a permanent maintenance facility at the southwest corner of Miller Field would occur within the 500-year regulatory floodplain. Construction of the new maintenance buildings, parking and access improvements, and stormwater management would result in approximately 2.0 acres of disturbance and an increase of approximately 1.25 acres of impervious area within the floodplain. The increase in impervious area would reduce the infiltration capacity of the floodplain, and the addition of buildings and other structures would decrease the flood storage capacity and the ability of the floodplain to transport flood waters. Projected changes in the boundary of the 100-year regulatory floodplain at Miller Field based on the moderate sea level rise scenario (see **Figure 11**) shows portions of the project area to be within the projected 100-year floodplain elevation.

Cumulative Impacts – Other past, present and reasonably foreseeable future actions were reviewed to determine if the proposed action alternative would contribute an incremental impact to the overall cumulative impact when combined with other projects. Projects identified that have occurred or would occur within the floodplain at Miller Field include the stabilization of Hangar 38; demolition of Buildings 3, 4, and 5; replacement of the Miller Field boundary fence; the construction of a temporary maintenance facility; and tree plantings. These projects generally consist of small-scale restorations and improvements to park facilities that would require minimal ground disturbance and would not reduce the floodplain's ability to infiltrate, store, or transport flood waters at a detectable level. Also, while the temporary maintenance facility is located within the floodplain, it would be dismantled sometime in the future. The Resilient Neighborhoods initiative would have a beneficial impact as strategies would be identified and implemented to improve the resiliency of communities within the floodplain on

the east shore of Staten Island. The proposed action alternative would add an adverse incremental impact to the cumulative impacts of these past, present, and reasonably foreseeable future actions, but there would be an overall beneficial cumulative impact due to the improved resiliency anticipated from the implementation of the Resilient Neighborhoods initiative.

Conclusion – Under the proposed action alternative, the outdoor covered storage structure at Fort Wadsworth would not impact the 100-year or 500-year regulatory floodplain. The construction of a permanent maintenance facility at Miller Field would take place within the 500-year regulatory floodplain, resulting in approximately 2.0 acres of disturbance and an increase of approximately 1.25 acres of impervious area. To minimize impacts, and to design the facility to be resilient to flooding, the NPS would elevate all structures encompassing the facility to a minimum of two feet above BFE (BFE+2). Also, in accordance with NPS guidelines, the NPS would elevate critical systems (i.e. heating and air conditioning units, fire protection, security, computers, etc.) to a minimum of three feet above BFE (BFE+3) and would elevate the fuel storage tank and its components (i.e. hoses) also to a minimum of three feet above the BFE (BFE+3) by using a metal frame or concrete walls. Upon completion of any work within the floodplain, the site would be restored to include vegetation using NPS-approved native seed mixes and plantings. Stormwater management would be implemented into the design of the facility, as appropriate, to store and convey runoff. Overall, there would be an adverse impact on the floodplain, but the impact would not be significant due to the relatively small-scale of the project, and because the NPS would design the facility in accordance with the latest FEMA and NPS guidelines addressing climate change and natural hazards, including as sea level rise. The proposed action alternative would add an adverse incremental impact to the cumulative impacts of other past, present, and reasonably foreseeable future actions, but the overall cumulative impact would be beneficial.

HISTORIC STRUCTURES AND DISTRICTS

About the Analysis – Historic structures and districts include the historic resources at Fort Wadsworth and Miller Field that are listed in, or eligible for listing in, the National Register of Historic Places. Potential impacts to these resources were analyzed in consideration of regulations implementing Section 106 of the National Historic Preservation Act (36 CFR 800) and the Secretary of the Interior's *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995b). The analysis focused on whether potential impacts would "...alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5(a)(1))."

Impacts of the No-Action Alternative – The NPS would perform routine repairs to maintain proper function of the existing maintenance facility at Fort Wadsworth under the no-action alternative. The construction of an outdoor covered parking structure would not occur,

and the NPS would not adaptively reuse and/or repurpose facilities. Any repairs to designated historic structures or contributing features would be conducted in accordance with the Secretary of the Interior's *Standards for Rehabilitation of Historic Buildings*. At Miller Field, no impacts would occur to the Miller Army Airfield National Register Historic District because a new maintenance facility would not be constructed.

Cumulative Impacts – There would be no impacts to historic structures and districts under the no-action alternative; therefore, the no-action alternative would not contribute to the cumulative impacts of other past, present, or reasonably foreseeable future actions.

Conclusion – Under the no-action alternative, there would be no impacts to historic resources of the Fort Wadsworth National Register Historic District, the Miller Army Airfield National Register Historic District, or resources that contribute to their significance. Because there would be no impacts to historic resources, the no-action alternative would not contribute to the cumulative impacts of other projects.

Impacts of the Proposed Action Alternative – Under the proposed action alternative, an outdoor covered parking structure would be constructed at Fort Wadsworth, within the historic “Seabee Complex.” Buildings within the complex, including Buildings 301, 302, 305, 309, and 310 (as shown in **Figure 3**), contribute to the significance of the Fort Wadsworth National Register Historic District. The NPS maintenance facility has historically served utilitarian functions as a motor pool and maintenance facility and the construction of an outdoor covered parking structure for maintenance vehicles and equipment would provide a function that would be consistent with historical uses. The location of the proposed structure would be concealed from most vantage points along Battery Road and partially concealed from Loop Road by an existing forested corridor. The height of the covered parking structure would be determined based on the specific equipment to be stored beneath the structure. Efforts would be made to ensure the structure would not extend above the existing buildings. The structure would be designed to be consistent in character with the other buildings at the maintenance facility.

The outdoor covered parking structure would be constructed near Battery Barry, which is a contributing structure to the Fort Wadsworth National Register Historic District. Although the battery possesses historical significance, it is currently closed to public access. From Battery Barry, views of the covered parking structure would be partially concealed by the forest corridor that exists between the southern boundary of the maintenance facility and Loop Road. During the winter months when leaves are absent, the outdoor covered parking structure would be visible from the battery. As a result, the outdoor covered parking structure would add a new element within the viewshed of Battery Barry, but the structure would not be out of character from the existing maintenance buildings that are within sight of the battery.

The NPS has also identified opportunities to adaptively reuse and/or repurpose existing facilities at Fort Wadsworth. Any changes made to the existing facilities at Fort Wadsworth to accommodate new uses would be consistent with the historical character of the buildings. There would be no changes in character that would be a detriment to the Historic District or its contributing resources. Also, modifications to the buildings would have limited impacts because previous modifications to the interior spaces of the buildings have removed most of the original building materials.

The construction of a permanent maintenance facility at Miller Field would add additional features within the viewshed of the Miller Army Airfield National Register Historic District, including Hangar 38. However, the new facility would be located at a considerable distance from the Historic District boundary (roughly a half mile). As such, the new facility would not obstruct significant views to or from the Historic District or result in impacts to its character-defining features. Views to and from the proposed project area at Miller Field are provided on this page.

Cumulative Impacts – Other past, present and reasonably foreseeable future actions were reviewed to determine if the proposed action alternative would contribute an incremental impact to the overall cumulative impacts on historic resources at Fort Wadsworth and Miller Field. The combined dispatch project at Fort Wadsworth would result in slightly detectable adverse impacts, while the roof replacements project and the slope rehabilitation project would result in beneficial impacts to the Fort Wadsworth National Register Historic District. At Miller Field, the stabilization of Hangar 38 would result in adverse impacts to the Historic District, as much of the original building materials would be removed from the structure.



View toward the Miller Field project area from Hangar 38



View toward the Miller Army Airfield National Register Historic District from the project area at Miller Field

The proposed action alternative would result in adverse impacts to historic resources due to the addition of a new structure within the Fort Wadsworth National Register Historic District. In general, the proposed projects at Fort Wadsworth and Miller Field would result in both beneficial and adverse impacts as these projects involve efforts to preserve historic resources and enhance opportunities for interpretation and visitor appreciation. When the adverse incremental impact of the proposed action alternative is combined with the beneficial and adverse impacts of other past, present, and reasonably foreseeable future projects, an overall adverse cumulative impact would result.

Conclusion – The construction of an outdoor covered parking structure at Fort Wadsworth would introduce a new structure within the Fort Wadsworth National Register Historic District. The proposed location of the outdoor covered parking structure was chosen in consideration of the dimensions needed to store vehicles and equipment, concealment from views within the park, and consistency with historical uses. The adaptive reuse of existing maintenance facilities at Fort Wadsworth would result in small-scale modifications to historic buildings. Minor modifications would result in an adverse impact to historic resources, but impacts would not be significant because any attempt to adaptively reuse facilities would be consistent with the historical uses of the buildings. Any modifications to the interior and exterior of existing facilities to adaptively reuse and/or repurpose space to consolidate functions, increase storage area, or increase operational efficiency would be completed in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (NPS 1995b) in order to avoid and/or minimize adverse impacts. Overall, the new outdoor covered parking structure and minor modifications to existing facilities at Fort Wadsworth would result in adverse impacts to Buildings 301, 302, 305, 309, and 310 that would be detectable; however, impacts to the Fort Wadsworth National Register Historic District and its contributing resources would not be significant because the NPS would implement context sensitive designs, which would be developed in consultation with the NY SHPO, to minimize adverse impacts to historic resources to the greatest extent possible.

The construction of a permanent maintenance facility at Miller Field would not result in detectable adverse impacts to the Miller Army Airfield National Register Historic District. Any adverse impacts would not be significant based on the distance from the new facility to the Historic District boundary and because the addition of new buildings to the urban surroundings of Miller Field would not result in a noticeable change in the viewshed of the Historic District.

The proposed action alternative would add an adverse incremental impact to the cumulative impacts of other past, present, and reasonably foreseeable future actions, resulting in an overall adverse cumulative impact that would not be significant.

VISITOR USE AND EXPERIENCE

About the Analysis –The purpose of this section is to analyze the potential impacts of the alternatives on visitor use and experiences Fort Wadsworth and Miller Field. Current visitor uses of the area were identified, and the context of the park within the Staten Island community was considered. Recreational and historical resources that are most popular and/or unique to the park were recognized. Analysis of the potential intensity of impacts was performed using professional judgment and information provided by park staff.

Impacts of the No-Action Alternative – There would be no impacts to park visitors at Fort Wadsworth or Miller Field under the no-action alternative because construction would not occur that would detract from the visitor experience or restrict certain park uses. Occasionally, certain maintenance activities would be noticeable to park visitors, but these activities would not detract from visitor use and experience and are necessary to ensure that park infrastructure and amenities are functioning as intended.

Cumulative Impacts – There would be no impacts to visitor use and experience; therefore, the no-action alternative would not contribute to the cumulative impacts of other past, present, or reasonably foreseeable future actions.

Conclusion – Under the no-action alternative, no impacts to park visitors would occur at Fort Wadsworth or Miller Field because no construction would occur. Maintenance activities, though noticeable, would also not detract from the visitor experience. The no-action alternative would not contribute to the cumulative impacts of other projects on visitor use and experience.

Impacts of the Proposed Action Alternative – Impacts of the proposed construction of the outdoor covered parking structure at Fort Wadsworth on visitor use and experience would be small, and limited to the construction period. Construction of the outdoor covered parking structure would take place entirely within the existing maintenance facility, which is off limits to park visitors. Construction noise associated with heavy equipment use would not be noticeable from popular areas such as Fort Tompkins or Battery Weed. In the immediate area surrounding the maintenance facility, visitors are likely to notice construction activities. Heavy equipment use and the transport of materials and equipment to and from the maintenance facility would be observable by passersby, particularly on Battery Road. Once constructed, the new structure would be noticeable from Loop Road beyond a narrow, forested strip of land. Vehicles and equipment stored underneath the new structure would also be visible.

Under the proposed action alternative, the NPS would adaptively reuse and/or repurpose existing maintenance facilities at Fort Wadsworth. Although there would be minor modifications to the interior configurations of maintenance buildings, the existing footprint of the maintenance facility complex would remain the same. Reallocation of storage spaces in Buildings 301, 303 and 309 would improve the efficiency of maintenance operations, but would not be noticeable from outside the buildings. Repurposing of spaces would include changes to

the interior of Buildings 301 and 310 to consolidate maintenance activities, but no new activities are proposed. The proposed action would include conversion of the vehicle/equipment storage lot on the east side of Building 302 to a storage area. NPS use of the space would be comparable to existing use, and visitors to the park would be unlikely to notice.

At Miller Field, temporary impacts of the proposed action alternative on visitor use and experience would be readily apparent. During construction of the permanent maintenance facility, construction noise could be disruptive to visitors. NPS Parking Lots #1 and #2 would be used for construction site access, staging, and other construction-related activities. The transport of materials and equipment via New Dorp Lane could cause temporary disruptions to traffic flow and limit roadside parking opportunities.

Miller Field is valued primarily for its athletic fields. The proposed project area is currently open space that originally consisted of three small pee wee football fields. These fields were relocated in 2012 and the area is now used informally as a practice area and a space for spectators and picnickers. Although the area would no longer be available for these uses, none of the fields at the park would be affected by the project. The new maintenance facility would be noticeable to visitors, but there would be no impacts to organized sports programs.

Pedestrian crosswalks and pathways would be integrated into the design of the new facility to maintain the connectivity between the parking lots and the fields. A landscape plan would be developed to maintain existing aesthetics. Also, the facility would be located at a distance from Hangar 38 and would not detract from visitor's interpretation of the park's historic resources. Some visitor parking would be removed from the NPS parking lots off of New Dorp Lane that would reduce parking within and surrounding Miller Field. However, the overall impact to the new facility would not reduce the capacity of the park to provide open space for recreation.

Cumulative Impacts – Past, present and reasonably foreseeable future projects were reviewed to identify impacts to the visitor use and experience at Fort Wadsworth and Miller Field. Many of the proposed actions involve park facilities that are currently off limits to the public, such as roof replacement at Fort Wadsworth, improvement of the Fort Wadsworth dispatch center, stabilization of Hangar 38, and demolition of buildings 3, 4 and 5 at Miller Field. No impacts to visitor use and experience were identified for these projects. The slope stabilization project at Fort Wadsworth would have noticeable short-term impacts during construction periods, but the long-term impacts of the project would benefit visitor use and experience. At Miller Field, the temporary maintenance facility being dismantled would also result in a benefit to visitors. In the short-term, the proposed action alternative would add an adverse increment to the cumulative impacts of other projects due to disruptions caused by construction activities. In the long-term, there would be a loss of open space for recreational use, but no other adverse impacts from past, present or reasonably foreseeable future projects were identified; therefore, there would be no long-term cumulative impacts.

Conclusion – Impacts to visitor use and experience at Fort Wadsworth would take place during construction due to noise and the use of local roads by heavy equipment. However, these

impacts would be limited to the immediate area surrounding the maintenance facility. As a result, many of the main attractions at Fort Wadsworth would be unaffected by the construction. It is anticipated that the outdoor covered parking structure may slightly reduce traffic as compared to storage of vehicles and equipment in Hangar 38 at Miller Field, because vehicles and equipment would be stored on site as opposed to being transported from Miller Field.

Construction of a new permanent maintenance facility at Miller Field would result in temporary disruptions to park visitors due to noise, the use of local roads by heavy equipment, and a reduction in parking. To lessen the impacts of construction activities at Fort Wadsworth and Miller Field, work would be scheduled during weekdays and during off-peak visitor use periods, if possible. Visitors to the parks would be notified in advance of construction activities that would result in temporary road closures or parking restrictions. At Miller Field, all athletic field space would remain open and available for organized athletic events during construction. The NPS would maintain access to the athletic fields, parking and other community services in the vicinity of the project site. Overall, construction would have adverse impacts on visitors at Fort Wadsworth that would be slightly detectable, but these impacts would not be significant because the impacts would be temporary and the majority of construction activities would occur within an area that is not authorized for access by park visitors. In addition, adverse impacts to visitors at Miller Field would be detectable during construction, but would not be significant because the impacts would be temporary and because mitigation measures would be implemented to minimize impacts.

Following construction, no long-term impacts to visitor use and experience are expected to occur at Fort Wadsworth. The outdoor covered parking structure would be located within the existing maintenance facility and would not affect areas accessible to the public. In addition, there would be no impacts associated with the adaptive reuse of existing maintenance facilities because there would be no changes to building or lot footprints at the site, and the recreational and interpretive opportunities available to visitors would remain the same.

At Miller Field, impacts on visitors after construction would be minimal because no changes to the athletic fields would occur. Existing recreational opportunities provided at Miller Field for organized sports programs would remain and the new facility would be unlikely to detract from primary uses and experiences. Although the permanent maintenance facility would require conversion of 1.25 acres of open space, over 185 acres of open space would remain available in the park. As a result, it is expected that park visitors engaging in informal activities such as sports practice, spectating, and picnicking within this area would utilize open spaces available elsewhere in the park. The site of the proposed maintenance facility would be designed and landscaped so as to maintain safe access and aesthetics. Also, the facility would be relatively small and would not interfere with visitors' interpretation of historic resources at the park.

The improved efficiency of Miller Field operations provided by the new facility would enhance the visitor experience. The location of the facility would enhance management efforts, as maintenance staff would have improved access to athletic fields and other park amenities. Tools and equipment would be more readily available to staff. Improvements in the management and

maintenance of the athletic fields would allow for optimum conditions within the park. Specifically, staff would have greater means to maintain field turf and striping. The enhanced operations would support the park's mission in improving and sustaining the athletic fields and other amenities for visitor use. Overall, impacts to visitors at Miller Field following construction would be adverse due to the loss of open space, but would not be significant because of the availability of other open spaces and the improved efficiency of maintenance operations. There would be no long-term cumulative impacts under the proposed action alternative because there would be no adverse impacts resulting from past, present or reasonably foreseeable future projects.

LOCAL ROADS AND PARK ACCESS

About the Analysis – Analysis of potential impacts to local roads and park access under the proposed alternatives was based on a desktop review of local traffic conditions and information provided by park staff. Existing conditions including peak traffic periods for local roads, peak visitation times to the parks, and parking availability were considered. Temporary impacts to traffic, park access, and parking associated with construction of the new facilities were also analyzed.

Impacts of No-Action Alternative – Under the no-action alternative, local roads in the vicinity of Fort Wadsworth and Miller Field would experience slight changes in use from the current condition. After the temporary maintenance facility is dismantled at Miller Field, NPS maintenance staff would be required to transport equipment to Miller Field on a daily basis from Fort Wadsworth using Father Capodanno Boulevard and/or Hylan Boulevard. It is expected that fewer than ten trips per day would be necessary, but would generally occur during peak commuter periods and traffic congestion. In addition, the daily delivery of large equipment and general maintenance access, particularly at the Mason Avenue gate to Miller Field, would require the use of residential streets multiple times in a day.

Cumulative Impacts – Past, present, and reasonably foreseeable future projects were reviewed to identify potential impacts to local roads in the vicinity of Fort Wadsworth and Miller Field. Resilient Neighborhoods is an initiative aimed at identifying local strategies to support the vitality and resiliency of communities in the flood zone (NYCDCP 2015). Among these are opportunities to improve transportation infrastructure to address flooding issues and to establish local and borough-wide connectivity to improve long-term resiliency that would result in beneficial impacts along the East Shore of Staten Island. The no-action alternative would add an adverse incremental impact to the cumulative impacts of other projects; however the beneficial impacts anticipated under the Resilient Neighborhoods initiative outweighs any adverse impacts.

Conclusion – Under the no-action alternative, the NPS would use local roads including Father Capodanno Boulevard and/or Hylan Boulevard to transport vehicles and equipment between

Fort Wadsworth and Miller Field on a daily basis. It is likely that adverse impacts to traffic along these routes would be slightly detectable due to the introduction of trucks hauling large equipment on trailers on roadways that are typically congested during peak commuter periods. In addition, the daily delivery of large equipment, and general maintenance access, particularly at the Mason Avenue gate, would result in adverse impacts that would be detectable for short periods as vehicles and equipment use these residential streets to access Miller Field. Once away from this area, maintenance access at Mason Avenue would not be of concern under normal circumstances. Therefore, adverse impacts would not be significant under the no-action alternative because a few additional vehicles added to the already congested travel condition would not increase delays on these roadways at a measurable level and because the delivery of maintenance equipment would only require a few minutes on each occasion as the Mason Avenue gate is open and closed. The no-action alternative would add an adverse incremental impact to the cumulative impacts of other projects that would be outweighed by the beneficial impacts anticipated under the Resilient Neighborhoods initiative.

Impacts of the Proposed Action Alternative – Under the proposed action alternative, the construction activities necessary to construct the outdoor covered parking structure and make minor modifications to existing buildings at Fort Wadsworth would require construction vehicles and heavy machinery to use local roadways. Roads within the park, particularly Battery Road, would be used to deliver construction materials and equipment to the project site. Heavy machinery and other construction vehicles on local roads could result in temporary increases in traffic, particularly on weekdays during peak commuter periods or during peak seasonal park use periods. It is not expected that lane closures would be necessary on Battery Road or any other roadway within Fort Wadsworth to accommodate construction activities. It may be necessary; however, to temporarily halt traffic on Battery Road during deliveries of large equipment or construction materials. Construction activities at Fort Wadsworth is not expected to restrict the use of bus stops or result in delays to buses on local bus routes, or impact any other modes of public transportation in the vicinity. Following construction of the outdoor covered parking structure, maintenance vehicles and equipment needed at Fort Wadsworth would be stored there, which would reduce the need to transport maintenance vehicles and equipment on local roads from Hangar 38 at Miller Field.

At Miller Field, the construction of a permanent maintenance facility would require use of local roads, particularly New Dorp Lane, by heavy machinery and other construction equipment. New Dorp Lane would also be used to deliver construction materials and equipment to the project site. Heavy machinery and other construction vehicles on local roads could result in temporary increases in traffic, particularly on weekdays during the school year or during peak park use between April and November. It is not expected that lane closures would be necessary on New Dorp Lane or any other roadway at Miller Field during construction; however, it may be necessary to temporarily halt traffic during deliveries of large equipment or construction materials. It is anticipated that a portion of NPS Parking Lot #2 at Miller Field would be used for construction staging and materials storage. Parking along New Dorp Lane and within the NPS parking lots may be restricted during construction. Following construction, a permanent reduction of 16 parking spaces at NPS Parking Lot #1 and one (1) parking space at NPS Parking

Lot #2 would result due to access improvements. No bus stops along existing bus routes would be affected during construction. Access to nearby residences and businesses would be maintained for the duration of construction.

To minimize potential safety concerns associated with shared vehicle access of the entrance to the NPS parking lots off of New Dorp Lane, the NPS is considering a roundabout at the entrance to the proposed maintenance facility at Miller Field. The roundabout would provide shared vehicle access to New Dorp Lane, the NPS parking lots, and the proposed NPS maintenance facility. Roundabouts have been demonstrated to improve safety at an intersection by reducing conflict points and by lowering the speeds of circulating and through vehicles as compared to controlled intersections (FHWA 2014). Roundabouts have also been demonstrated to reduce congestion, reduce pollution and fuel use, require less pavement material, and be more aesthetically pleasing than controlled intersections (FHWA 2014). The roundabout would allow for a continuous flow of vehicles into and out of the NPS parking lots using yield controls, and would provide safe entry and exit from the maintenance facility. As a result, potential user conflicts associated with the shared vehicle access are expected to be reduced. In addition, as part of the access improvements, signage would be installed, where appropriate, to assist motorists and pedestrians to understand proper circulation through the roundabout, and to warn motorists and pedestrians of shared access with maintenance vehicles and equipment.

To ensure the safety of pedestrians accessing the athletic fields from the NPS parking lots, designated pathways and crosswalks would be incorporated into the design of the new maintenance facility at Miller Field. Appropriate signage would be used to mark crosswalks and pathways for the benefit of pedestrians and motorists. Pedestrian pathways and crosswalks would serve to focus pedestrian movements from the NPS parking lots and around the maintenance facility to Miller Field. Focusing pedestrian movements to designated locations would further reduce potential conflicts between pedestrians and vehicles. The NPS would install swing gates at both entrances to the proposed maintenance facility at Miller Field to prevent unauthorized vehicle access. These gates would be kept closed at all times, except for NPS staff entry and exit, to prevent visitor use of NPS parking spaces at the maintenance facility and to prevent through traffic.

Cumulative Impacts – Past, present, and reasonably foreseeable future projects were reviewed to identify potential impacts to local roads in the vicinity of Fort Wadsworth and Miller Field. The NYC Resilient Neighborhoods initiative is identifying opportunities to improve transportation infrastructure to address flooding issues and to establish local and borough-wide connectivity to improve long-term resiliency that would result in beneficial impacts along the East Shore of Staten Island. The proposed action alternative would add an adverse incremental impact to the cumulative impacts of other projects that would be outweighed by the beneficial impacts anticipated under the Resilient Neighborhoods initiative.

Conclusion – At Fort Wadsworth, heavy machinery and other construction vehicles would use local roads to access the project site during construction, which would result in adverse impacts, particularly on weekdays during peak commuter periods or during peak seasonal park use

periods. However, the overall impacts of construction-related traffic would be only slightly detectable but would not be significant because the use of roadways by construction vehicles and equipment would be relatively infrequent. Following construction, beneficial impacts to traffic on local roads would result from the reduction in the transport of vehicles and equipment from Hangar 38 at Miller Field. No impacts to public transportation, parking, or park access would occur at Fort Wadsworth under the proposed action alternative.

At Miller Field, construction activities would result in impacts to traffic, parking, and park access under the proposed action alternative. In order to reduce traffic impacts during construction, the NPS would notify park visitors and neighbors in advance of any activities that would result in temporary road closures or parking restrictions. The NPS would develop and implement measures to ensure a safe and continued flow of traffic during construction. Traffic measures may include marked detour routes if lane or sidewalk closures are needed, electronic signs on approaches to construction areas to notify motorists and pedestrians of construction activities, and the use of flagmen during construction to allow safe access and traffic movements when equipment is being used near roadways or when materials are being delivered to the construction site. Notices would also be posted to the park website to inform the public of the construction schedule and any changes in park access, parking availability, or traffic patterns. Therefore, adverse impacts associated with traffic, parking, and access to Miller Field would be detectable during construction of the new maintenance facility; however impacts would not be significant due to the implementation of mitigation measures to minimize impacts and ensure the safety of park visitors.

Following construction, traffic on local roads surrounding Miller Field, public transportation, and access to the park is generally expected to return to preconstruction conditions, with the exception of a slight reduction in parking within the NPS Parking Lots #1 and #2 off of New Dorp Lane. A total of 17 total parking spots would be lost, resulting in adverse impacts to parking availability at Miller Field. It is expected that the implementation of a roundabout would have beneficial impacts on park access because potential user conflicts would be reduced. Incorporating designated pedestrian sidewalks and pathways into the facility design is also expected to have beneficial impacts because potential conflicts between pedestrians and vehicles would be reduced and because safe access around the maintenance facility would be provided. Overall, impacts to parking availability are expected to be only slightly apparent to visitors, because public parking would still be available at other locations at Miller Field and on numerous roads surrounding the park. Overall, impacts to local roads and park access following the construction of the maintenance facility at Miller Field would be adverse but would not be significant because other than the slight reduction in parking within the NPS parking lots, no long-term impacts to local roads and public transportation are expected, and beneficial impacts to park access are expected from implementation of the roundabout and designated pedestrian crosswalks. The proposed action alternative would add an adverse incremental impact to the cumulative impacts of other projects that would be outweighed by the beneficial impacts anticipated under the Resilient Neighborhoods initiative.

NOISE

About the Analysis –To determine potential noise impacts, the range of activities taking place at the proposed maintenance facilities was considered. Communities surrounding the proposed project areas were evaluated for any sensitive receptors, which could be adversely affected by the new facilities. In addition, potential noise impacts resulting from the use of machinery and equipment during construction periods were analyzed. Impacts were assessed qualitatively based on the professional judgment of park staff and information obtained during public involvement.

Impacts of No-Action Alternative – Maintenance activities at the existing Fort Wadsworth facility generate low noise levels that do not have a noticeable impact on park visitors or nearby communities. At Miller Field, the use of tractors and lawn mowers to maintain the athletic fields result in noise levels ranging from 75 dBA to 95 dBA at a distance of 50 feet (EPA 1974). The use of the temporary maintenance facility and surrounding area would generate noise that would be apparent to residents adjacent to the park on Kiswick Street, Moreland Street, and Mason Avenue. The nearest residences, approximately 100 feet from the temporary facility on Kiswick Street, experience indoor noise levels during the operation of tractors and lawn mowers that range from approximately 54 dBA to 74 dBA, which is above ambient noise levels typical of urban residential communities.

Cumulative Impacts – Past, present and reasonably foreseeable future projects would require construction periods which would result in temporary noise impacts at Fort Wadsworth and Miller Field. The proposed projects generally consist of small-scale restorations and improvements to park facilities that would require the use of heavy equipment. Although the various improvement projects are not expected to be constructed at the same time, the amount of work to be completed could create persistent background noises which would be noticeable to park visitors. Also, the use of tractors and lawn mowers to maintain the athletic fields at Miller Field would continue, which would result in noise levels above ambient levels. Since construction-related noise impacts would end at the completion of the projects, there would be short-term adverse cumulative impacts, but no long-term cumulative impacts.

Conclusion – Under the no-action alternative, maintenance operations at Fort Wadsworth would not result in noise above ambient levels. At Miller Field, the use of tractors and lawn mowers to maintain the athletic fields would continue to generate noise that would be detectable to local residents. Noise generated at the temporary maintenance facility would be above ambient levels resulting in impacts to park neighbors on Kiswick Street, Moreland Street, and Mason Avenue; however, because these noise sources are not stationary, noise levels would decrease as tractors and mowers move away from the temporary facility and onto the field, in which case other park neighbors would be affected to varying degrees. In general, most noises, particularly those generated by mowing, would be seasonal in nature. No new noise sources would be added to what currently exists under the no-action alternative. Therefore, impacts to park neighbors from noise associated with the maintenance of Miller Field would be detectable

but would not be significant because no new noise sources would be added, impacts would be seasonal in nature, and because noise sources would not be stationary. There would be short-term adverse cumulative impacts associated with the construction of various improvement projects, but no long-term cumulative impacts would occur.

Impacts of the Proposed Action Alternative – At Fort Wadsworth, the proposed action alternative would result in temporary elevated noise levels during the construction of the outdoor covered parking structure. Noise would be generated by heavy equipment during the removal of asphalt, pouring of the new concrete pad, and installation of the parking structure supports and roofing. The proposed modification of existing buildings is not likely to require machinery that would generate substantial noise.

Maximum average noise levels generated by construction activities typically range from 78 to 89 dBA at a distance of 50 feet for excavation, grading, and finishing activities (see **Table 6**). With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active construction sites. Noise from a point source (i.e., stationary construction equipment) generally decreases 6 dBA per doubling of distance. Therefore, the nearest residential area to Fort Wadsworth, which is the Navy housing on USS Tennessee Road (about 400 feet to the south), would experience construction noise levels that range from approximately 60 dBA to 71 dBA. Additionally, standard buildings typically provide about 15 dBA of noise reduction between exterior and interior noise levels with the windows partially open (EPA 1978). As a result, interior noise levels at the Navy housing would range from approximately 45 dBA to 56 dBA.

Table 6: Noise Levels Associated with Outdoor Construction (Source: Bolt, Beranek and Newman 1971)	
Construction Phase	dBA L_{eq} at 50 feet from source
Ground Clearing	84
Excavation, Grading	89
Foundations	78
Structural	87
Finishing	89

No sensitive receptors such as churches, schools, hospitals, or daycare facilities have been identified within the anticipated range of construction noise at Fort Wadsworth. Once the construction was complete, noise levels at the maintenance facility would return to pre-construction conditions.

Construction of a permanent maintenance facility at Miller Field would also result in temporary elevated noise levels. Noise associated with construction of the new buildings and access roads would be apparent from within the park as well as from New Dorp High School and residences off of New Dorp Lane. Construction staging and materials storage is also likely to occur within a portion of NPS Parking Lot #2. The nearest residences, which are on New Dorp Lane about 150 feet from the project area, would experience construction noise levels likely no greater than 72 dBA to 83 dBA. Taking into account the noise reduction provided by buildings, interior noise

levels at residences on New Dorp Lane would likely be no greater than 57 dBA to 68 dBA. Additionally, New Dorp High School, which is approximately 300 feet from the proposed location of the new maintenance facility, would experience noise levels that range from approximately 63 dBA to 74 dBA outside the school, and approximately 48 dBA to 59 dBA inside the school.

In the long-term, the permanent maintenance facility would replace the temporary maintenance facility at the north end of the park. As a result, some of the noise created by maintenance activities would be relocated. There would be a noticeable reduction in noise near the temporary maintenance facility at Building 3, particularly for residents adjacent to the park on Kiswick Street, Moreland Street, and Mason Avenue. Conversely, there would be an increase in noise created by the facility at its proposed location along New Dorp Lane. In general, noise generated by the new maintenance facility would be within the range of ambient noise levels that currently exists in the area. However, the operation of tractors, lawn mowers, and diesel trucks generate noise levels ranging from 75 dBA to 95 dBA at a distance of 50 feet (EPA 1974). Residents on New Dorp Lane closest to the facility would experience indoor noise levels from operation of these vehicles and equipment ranging from approximately 51 to 71 dBA. In addition, noise experienced inside New Dorp High School, particularly in areas nearest to Miller Field, would be approximately 45 to 65 dBA. Organized outdoor activities that occur at the high school, such as track meets and baseball, softball, and lacrosse games that occur during the spring would not be affected by noise generated by the new facility because these events are likely to take place after school hours when maintenance activities would have ended for the day.

Cumulative Impacts – Past, present and reasonably foreseeable future projects would require construction periods which would result in temporary noise impacts at Fort Wadsworth and Miller Field. The proposed projects generally consist of small-scale restorations and improvements to park facilities that would require the use of heavy equipment. Although the proposed action alternative and other improvement projects are not expected to be constructed at the same time, the amount of work to be completed could create persistent background noise which would be noticeable to park visitors. Also, the use of tractors and lawn mowers to maintain the athletic fields at Miller Field would continue, which would generate noise above ambient levels. Since construction-related noise impacts would end at the completion of the proposed action alternative and other projects, there would be short-term adverse cumulative impacts, but no long-term cumulative impacts would occur.

Conclusion – Under the proposed action alternative, there would be temporary noise impacts during construction of the outdoor covered parking structure at Fort Wadsworth and the permanent maintenance facility at Miller Field. No construction noise is expected for any modification of existing facilities at Fort Wadsworth. Noise generated by construction at Fort Wadsworth would result in temporary impacts immediately surrounding the maintenance facility, but would not affect residential areas because levels would be within the range of ambient noise of urban residential communities. Construction noise generated at Miller Field would result in adverse impacts to residents on New Dorp Lane because noise levels would be above ambient noise levels and would be noticeable to residents. Also, noise levels generated by

construction activities would also be above the typical noise levels for schools (45 dBA) and would therefore be noticeable from areas within the school closest to the construction.

In order to minimize noise impacts during construction, work would be scheduled during normal business hours on weekdays. Construction activities would follow a noise mitigation plan that would be implemented to comply with all federal, state, and local noise control laws including the New York City Noise Code. The NPS would coordinate with New Dorp High School administrators to discuss strategies to minimize impacts to the school during construction. As practicable, the project contractor would minimize equipment idling times, and would implement other practices as outlined in the approved noise mitigation plan, such as noise barriers, the use of hydraulically and/or electrically powered tools, noise level monitoring, and other noise control techniques in order to lessen the impact of construction noise on park visitors and neighbors. Stationary noise sources would be placed as far from sensitive resources as possible. Noise effects on construction personnel would be limited by ensuring all personnel wear adequate personal hearing protection to limit exposure in compliance with Federal health and safety regulations. Therefore, construction-related noise impacts would be adverse but would not be significant because impacts would be temporary, noise would not be substantially greater than typical ambient noise levels, and mitigation measures would be implemented to reduce construction noise to the greatest extent possible.

Once operational, the outdoor covered parking structure at Fort Wadsworth would not result in noise above ambient levels. Maintenance activities would generally remain the same; therefore, there would be no perceptible changes in the noise generated by the facility. At Miller Field, activities associated with the new facility including the use of tractors, lawn mowers, and diesel trucks would result in noise that would be above ambient levels, resulting in impacts to park neighbors on New Dorp Lane and New Dorp High School; however, because these noise sources are not stationary, noise levels would decrease as maintenance vehicles and equipment, such as tractors and lawn mowers, move away from the facility and onto the field, in which case other park neighbors would be affected to varying degrees. In general, most noises, particularly those generated by mowing, would be seasonal in nature.

To minimize the effects of noise generated by maintenance activities at Miller Field, the NPS would identify simple strategies to reduce noise levels in consideration of nearby residents and New Dorp High School. The NPS would not operate equipment during the evening or on weekends. The majority of noise generating activities would be conducted between the hours of 7:00 a.m. and 4:00 p.m. Any early morning maintenance activities, particularly between April and November during peak visitor use periods, would be limited to the operation of lawn mowers. Overall, adverse impacts would be detectable by local residents and New Dorp High School, but impacts are not expected to be significant because noise generated by maintenance activities would not be constant, would not be stationary, would be seasonal in nature, and because the NPS would adhere to common sense practices to reduce noise associated with maintenance of Miller Field. Based on the potential for persistent noise associated with the construction of the proposed action alternative and various improvement projects, there would be short-term adverse cumulative impacts, but no long-term cumulative impacts would occur.

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CHAPTER 5: CONSULTATION AND COORDINATION

The NPS places a high priority on public involvement in the NEPA process and on giving the public an opportunity to comment on the proposed action. Consultation and coordination with federal, state, and local agencies, and American Indian tribes was also conducted to identify issues and/or concerns related to natural and cultural resources at Fort Wadsworth and Miller Field within the Gateway National Recreation Area. Chapter 5 provides a summary of the public involvement and agency consultation that occurred in the preparation of the EA.

PUBLIC INVOLVEMENT

Initial Public Scoping

The initial public scoping period began on September 22, 2014, and ended October 22, 2014. The NPS issued a press release to area-wide news organizations and numerous stakeholders to announce the scoping period. The NPS also posted project information including the scoping newsletter to the Planning, Environment and Public Comment (PEPC) website. The press release and PEPC provided a project overview and invited the public to participate in the planning process. Members of the public were invited to submit comments on the project electronically through PEPC or by sending written comments via US mail to the Office of the Superintendent of the Gateway National Recreation Area. A public open house was held on October 9, 2014, at Gateway National Recreation Area, Fort Wadsworth, Staten Island, NY to provide the public with information about the proposed maintenance facility relocation project, as well as solicit input regarding the project. During this scoping period, ninety-nine (99) pieces of public correspondence were received. The majority of the comments received during initial scoping regarding the proposed maintenance facility at Miller Field expressed concern with potential increases in traffic, air pollution, and noise. At Fort Wadsworth, the potential reuse of the existing horse stables in Building 309 was the primary concern. More details on the issues and concerns derived from the comments received during the initial scoping period are provided in Chapter 1 of this EA.

Additional Public Scoping

Based on comments received during the initial public scoping period, the NPS identified several options for the construction of the permanent maintenance facility at Miller Field and other approaches to adaptively reuse/repurpose some existing NPS maintenance facilities at Fort Wadsworth. The NPS held an additional scoping period from November 24, 2014, through December 24, 2014, to introduce the new site options to the public and to gather public feedback. A press release was issued on November 21, 2014, to announce the additional scoping

period. An additional public open house was held on December 3, 2014. Similar to the initial scoping period, the public, agencies, and stakeholders were invited to submit comments on the project during this time period. The majority of comments received during the additional scoping period expressed support for the new Miller Field maintenance facility location (the proposed action alternative), suggested additional alternative elements, and expressed concern with the potential for reuse of existing horse stables at the Fort Wadsworth maintenance facility. More details on the issues and concerns derived from the comments received during the additional scoping period are provided in Chapter 1 of this EA.

AGENCY AND TRIBAL CONSULTATION

Agency Scoping

The NPS initiated scoping with multiple relevant agencies early in the planning process. Scoping information was sent to the US Fish and Wildlife Service, the US Army Corps of Engineers, the NY SHPO, the New York State Department of Environmental Conservation, the National Marine Fisheries Service, and others. This consultation is discussed in more detail below. Copies of responses from the agencies, if applicable, can be found in Appendix A.

Coastal Zone Management Act Federal Consistency Determination

Coastal zone management for the proposed action is federally authorized by the Coastal Zone Management Act. The Coastal Zone Management Program (CZMP) federal consistency review process is described in 15 CFR 930: Federal Consistency with Approved Coastal Management Programs. The CZMP gives day-to-day management authority to the state of New York. The New York State Department of State, Office of Planning & Development, Division of Development will review this project for Federal Consistency. The NPS has determined that the proposed action would be consistent, or consistent to the maximum extent practicable, with the New York State Department of State coastal policies.

Section 106 Consultation

Consultation with the NY SHPO is being conducted in accordance with Section 106 of the National Historic Preservation Act. On September 22, 2014, a letter was sent to the New York State Division for Historic Preservation initiating the Section 106 consultation process on potential effects to historic properties. The NY SHPO concurred with the NPS proposal to conduct archaeological monitoring of ground disturbing activities during construction at Fort Wadsworth to identify and record any archeological resources (features or artifact concentrations) present. At the Miller Field project area, the NPS has determined that there is a potential for archeological resources. The NPS will conduct a Phase I archeological survey during the spring of 2015 to determine if archeological resources are present.

NY SHPO responses to consultation initiation letters sent by the NPS and other correspondence are provided with this EA as Appendix A. Section 106 consultation is on-going at the time of this EA.

Tribal Consultation

The park initiated tribal consultation on September 22, 2014. Letters seeking consultation were sent to the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge-Munsee Mohican Tribal Community. The Delaware Tribe Historic Preservation Representatives and the Stockbridge-Munsee Mohican Tribal Historic Preservation Office requested continued consultation with NPS as the project progresses. The Delaware Nation Cultural Preservation Office stated that the location of the project does not endanger cultural or religious sites and that the project should continue as planned; however, if archaeological sites or objects are uncovered, construction should stop until the appropriate state agencies and tribal organizations are consulted. Tribal responses to consultation initiation letters sent by the NPS are provided with this EA as Appendix A.

Section 7 Consultation

According to the US Fish and Wildlife Service's list of federally endangered and threatened species and candidate species in New York, except for occasional transient individuals, no federally listed or proposed endangered or threatened species, or candidate species under the jurisdiction of the US Fish and Wildlife Service are known to exist in Richmond County, NY. On September 22, 2014, the NPS sent a letter to the US Fish and Wildlife Service, New York Field Office, seeking concurrence that there would be no effect to federally listed species from the implementation of the proposed project at Fort Wadsworth or Miller Field. As of April 2015, a response has not yet been received from the US Fish and Wildlife Service for this project.

Sensitive Species

The NPS sent a letter to the New York State Department of Environmental Conservation, New York Natural Heritage Program, on September 22, 2014, requesting information regarding state-listed rare, threatened, or endangered plant or animal species, significant natural communities, and/or other environmentally sensitive areas within the project boundaries. Based on a review of the Gateway GMP/EIS, no state-listed rare, threatened, and endangered species are anticipated to be affected by the proposed project at Fort Wadsworth or Miller Field. As of April 2015, a response has not yet been received from the New York Natural Heritage Program for this project.

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APPENDIX A: RELEVANT AGENCY AND TRIBAL CORRESPONDENCE

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**New York State Office of Parks,
Recreation and Historic Preservation**

Division for Historic Preservation
Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

October 23, 2014

Ms. Marilou Ehrler
Chief of Cultural Resources
Gateway National Recreation Area
210 New York Avenue
Staten Island, NY 10305
(via e-mail only)

Re: NPS
Relocation of Maintenance Facilities, Gateway NRA, Staten Island Unit
Maintenance facilities at Fort Wadsworth and Miller Field, Staten Island, NY
14PR04119

Dear Ms. Ehrler:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

We understand that the NPS is beginning a planning process for the permanent relocation of maintenance operations that were damaged during Hurricane Sandy at Gateway National Recreation Area. The Fort Wadsworth Historic District is listed on the State Register of Historic Places and eligible for listing on the National Register. The Miller Army Air Field Historic District is listed on the National Register of Historic Places. Both sites were visited by SHPO on Monday, September 29, 2014.

Both project areas are archaeologically sensitive. SHPO recommends that a Phase I archaeological investigation should be undertaken in all portions of the project's APE where substantial prior ground disturbance cannot be documented.

We look forward further consultation once you have determined the APE and scope of work.

If further correspondence is required regarding this project, I can be reached at (518) 237-8643, ext. 3260 or at eric.kuchar@parks.ny.gov. Please be sure to refer to the Project Review (PR) number noted above.

Sincerely,

Eric N. Kuchar
Historic Preservation Technical Specialist
CC: Jennifer T. Nersesian, Superintendent, Gateway (via e-mail only)

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner



The Delaware Nation
Cultural Preservation Office
P.O. Box 825 - 31064 State Highway 281- Anadarko, OK 73005
Phone: 405/247-2448 – Fax: 405/247-8905

NAGPRA ext. 1403
Section 106 ext. 1181
Museum ext. 1181
Library ext. 1196
Clerk ext. 1182

October 27, 2014

RE: Tribal Consultation for the Relocation of Maintenance Facilities to More Sustainable Locations,
Gateway National Recreation Area, Staten Island Unit, Staten Island, New York

Dear Ms. Ehrler,

The Delaware Nation Cultural Preservation Department received correspondence regarding the above referenced project. Our office is committed to protecting sites important to tribal heritage, culture and religion. Furthermore, the tribe is particularly concerned with archaeological sites that may contain human burials or remains, and associated funerary objects.

As described in your correspondence and upon research of our database(s) and files, we find that the Lenape people occupied this area either prehistorically or historically. However, the location of the project does not endanger cultural or religious sites of interest to the Delaware Nation. Please continue with the project as planned. However, should this project inadvertently uncover an archaeological site or object(s), we request that you halt all construction and ground disturbance activities and immediately contact the appropriate state agencies, as well as our office (within 24 hours).

Please Note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation Cultural Preservation Office to conduct proper Section 106 consultation. Should you have any questions regarding this email or future consultation feel free to contact our offices at 405-247-2448 or by email nalligood@delawarenation.com.

Sincerely,

Nekole Alligood
Director

Stockbridge-Munsee Tribal Historic Preservation Office

*Bonney Hartley – Tribal Historic Preservation Assistant
W13447 Camp 14 Road
P.O. Box 70
Bowler, WI 54416*

Jennifer Nersesian
Superintendent, Gateway National Recreation Area
National Park Service
Staten Island unit
210 New York Avenue
Staten Island, NY 10305
Via email only

October 24, 2014

Re: Relocation of Maintenance Facilities, Gateway National Recreation Area, Staten Island NY

Dear Ms. Nersesian:

Thank you for sending the project materials dated September 22 2014 on the above project for our Section 106 review.

On October 20, 2014 after reviewing the initial materials received, our office inquired with Ms. Marilou Ehrler as to the extent of ground disturbance and past archeology conducted in the area. Ms. Ehrler kindly provided more information including sending an Archeological Assessment from July 2014. Upon review, we have determined that we do not have significant concerns with the project because the results of the past archeology were largely conducted in the project area and did not find any features or precontact materials.

However, we note that the past archeology that was done does not cover every part of the new area of potential effect (APE) for Fort Wadsworth and Miller Field that are planned for the new facilities. Because of this, and noting the findings that culturally intact soils may be present, we concur with the archeological assessment in requesting that archeological monitoring take place during construction.

Respectfully,



Bonney Hartley
Tribal Historic Preservation Assistant

Cc: Marilou Ehrler, Chief of Cultural Resources

(715)-793-3995

Email: bonney.hartley@mohican-nsn.gov



The Delaware Nation
Cultural Preservation Office
P.O. Box 825 - 31064 State Highway 281- Anadarko, OK 73005
Phone: 405/247-2448 – Fax: 405/247-8905

NAGPRA ext. 1403
Section 106 ext. 1181
Museum ext. 1181
Library ext. 1196
Clerk ext. 1182

January 21, 2015

RE: Tribal Consultation for the Relocation of Maintenance Facilities to More
Sustainable Locations Additional Proposed Site Locations, Gateway National
Recreation Area, Staten Island Unit, Staten Island, NY

Ms. Ehrler,

The Delaware Nation Cultural Preservation Department received correspondence regarding the above referenced project. Our office is committed to protecting sites important to tribal heritage, culture and religion. Furthermore, the tribe is particularly concerned with archaeological sites that may contain human burials or remains, and associated funerary objects.

As described in your correspondence and upon research of our database(s) and files, we find that the Lenape people occupied this area either prehistorically or historically. However, the location of the project does not endanger cultural or religious sites of interest to the Delaware Nation. Please continue with the project as planned. However, should this project inadvertently uncover an archaeological site or object(s), we request that you halt all construction and ground disturbance activities and immediately contact the appropriate state agencies, as well as our office (within 24 hours).

Please Note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation Cultural Preservation Office to conduct proper Section 106 consultation. Should you have any questions regarding this email or future consultation feel free to contact our offices at 405-247-2448 or by email nalligood@delawarenation.com.

Sincerely,

Nekole Alligood
Director



Delaware Tribe Historic Preservation Representatives
Department of Anthropology
Gladfelter Hall
Temple University
1115 W. Polett Walk
Philadelphia, PA 19122
temple@delawaretribe.org

December 28, 2014

United States Department of the Interior
National Park Service
Gateway National Recreation Area
Staten Island Unit
Attn: Marilou Ehrler
210 New York Avenue
Staten Island, New York 10305

Re: Relocation of Maintenance Facilities to More Sustainable Locations, Additional
Proposed Site Locations, Staten Island Unit

Dear Marilou Ehrler,

Thank you for providing the updated project information for the above referenced project. We look forward to receiving copies of any studies conducted to aid in the determination of potential effects on historic resources within the project area. We appreciate your cooperation and look forward to continued collaborative efforts to preserve Delaware cultural heritage.

If you have any questions, feel free to contact this office by phone at (609) 220-1047 or by e-mail at temple@delawaretribe.org.

Sincerely,

Blair Fink
Delaware Tribe Historic Preservation Representatives
Department of Anthropology
Gladfelter Hall
Temple University
1115 W. Polett Walk
Philadelphia, PA 19122

----- Forwarded message -----

From: **Bonney Hartley** <Bonney.Hartley@mohican-nsn.gov>

Date: Mon, Dec 15, 2014 at 1:57 PM

Subject: RE: Staten Island Gateway National Recreation Area-Tribal Consultation

To: "Ehrler, Marilou" <marilou_ehrler@nps.gov>

Cc: Sherry White <sherry.white@mohican-nsn.gov>

Dear Marilou,

We received the additional consultation letter dated Nov. 21, 2014 informing us of the plans for a Phase 1 survey for this project at the request of SHPO & Delaware Tribe. Thank you for the update; we will note that and await the copy of the report to review when complete. We do not have comments at this time on preferences between the proposed site locations under review.

Also, please note my new contact information below. Can you kindly direct Section 106 requests to me by email (preferred) or mail at this new address?

Thanks,
Bonney

Bonney Hartley

Tribal Historic Preservation Assistant- NY Office
Stockbridge-Munsee Mohican Tribal Historic Preservation
P.O. Box 718
Troy NY 12181
(518) 326-8870 office
(518) 888-6641 cell
Bonney.Hartley@mohican-nsn.gov

View Correspondence

[Close](#)

Correspondence Type: Consolidated Response - Submission

Correspondence Email Mode:

Description: SHPO Submission Consolidated Response for Project: 14PR04119

Correspondence Details:

Correspondence Details: State Historic Preservation Office (SHPO). Please log into the CRIS web portal to view a Consolidated Response for submission- (7DRPUTB46DNH) / Relocation of Maintenance Facilities, Gateway NRA, Staten Island Unit (14PR04119). The Consolidated Response is provided within a single web page, which can be viewed by clicking the following link:
<https://cris.parks.ny.gov/?type=CR&id=7DRPUTB46DNH>
The Consolidated Response includes individual written responses from all reviewers of this submission, and may include potential supporting documentation as attachments. It is important to note that this response may include requests for more information which can be digitally submitted by following the instructions within the response page.
Sincerely,
New York State Historic Preservation Office
This email

Date Sent: 12/18/2014

Sent By: Philip Perazio

Sent To: Marilou Ehrler

Sent To: Marilou_Ehrler@nps.gov

Email:

Search results - connie_ch... x Cultural Resource Information x 22 DEPARTMENT OF THE INTERIOR x

https://cris.parks.ny.gov/?type=CR&id=7DRPUTB46DNH

Welcome Guest User | Contact Us | FAQ | Help | Sign Out

Submission Status

Reviewer	Review Type	Response
Philip Perazio	Archaeology	In order for SHPO to complete our evaluation of the Archaeological sensitivity of your project, we need further information. Please review the specific information request(s) below and click the Process button to respond to each request.

Information Requests

Status	Reviewer	Review Type	Request Type	Request Entity	Request Item	Request Description
Information Requested	Philip Perazio	Archaeology	Request a New Attachment, Photo, or Survey for this Consultation Project		Attachment	SHPO concurs with the proposals to conduct archaeological monitoring for excavations greater than one foot in depth at Miller Field and for archaeological monitoring at Fort Wadsworth if any ground disturbance is to take place.

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APPENDIX B: STATEMENT OF FINDINGS FOR FLOODPLAINS

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**STATEMENT OF FINDINGS
FOR
EXECUTIVE ORDER 11988 (FLOODPLAIN MANAGEMENT)**

Relocation of Hurricane Sandy Damaged Maintenance Facilities to More Sustainable Locations
within the Staten Island Unit

Gateway National Recreation Area
New York

Recommended:

Jennifer Nersesian
Superintendent
Gateway National Recreation Area

Date

Certification of Technical Adequacy and Service-wide Consistency:

Water Resources Division

Date

Approved:

Mike Caldwell
Regional Director
Northeast Region

Date

STATEMENT OF FINDINGS

INTRODUCTION

Executive Order 11988 (Floodplain Management) requires the National Park Service (NPS) and other federal agencies to evaluate the likely impacts of actions in floodplains. NPS Director's Order 77-2: *Floodplain Management* and Procedural Manual 77-2 provide NPS procedures for complying with Executive Orders 11988.

The NPS proposes to permanently relocate maintenance operations that were damaged during Hurricane Sandy within the Staten Island Unit of the Gateway National Recreation Area (Gateway). This Statement of Findings (SOF) for Floodplains was prepared per Director's Order 77-2: *Floodplain Management* for the proposed construction of a permanent maintenance facility at Miller Field within the 500-year regulatory floodplain of Lower New York Bay. The NPS requires the preparation and approval of a SOF for any proposed action that is located within a defined regulatory floodplain "when it is not practicable to locate or relocate development or inappropriate human activities to a site outside and not affecting the floodplain... (NPS 2003)" The proposed action at Miller Field also includes the installation of a 1,000 gallon fuel storage tank within the 500-year regulatory floodplain. The construction of fuel storage facilities within the 500-year regulatory floodplain is considered a "critical action" that is subject to floodplain policies and procedures (NPS 2003). This Floodplain SOF documents compliance with the NPS floodplain management procedures.

PROPOSED ACTION

Under the proposed action alternative, the NPS would construct a permanent maintenance facility on approximately 2.0 acres at the southwest corner of Miller Field (see **Attachment 1**). The facility would include a small equipment repair and storage facility; administrative office with lockers and restrooms; an outdoor covered vehicle/equipment storage area with lighting and electric power supply; an outdoor uncovered storage area; hazardous materials storage; vehicle parking for staff and visitors; a fueling station; a vehicle wash area; and access improvements. The facility would also include a building to be used by the park rangers for equipment and miscellaneous storage (see **Attachment 2**).

The NPS would implement a "roundabout" into the facility design to provide access to the maintenance facility at the existing entrance to the NPS parking lots off of New Dorp Lane. The roundabout would provide shared vehicle access to New Dorp Lane, the NPS parking lots, and the proposed NPS maintenance facility. A roundabout would allow for a continuous flow of vehicles into and out of the NPS parking lots using yield controls, and would provide a safer entry and exit from the maintenance facility. To improve circulation through the maintenance facility, access would also be provided by constructing a road that would connect the new facility to NPS Parking Lot #2. Approximately 16 parking spaces would be removed from NPS Parking

Lot #1 and one (1) space would be removed from NPS Parking Lot #2 to accommodate the new access roads. Both access roads would be asphalt paved and each would provide two-way traffic for NPS maintenance staff and equipment circulation. In addition, swing gates would be installed at each access road to prevent unauthorized vehicle entry into the facility. Furthermore, designated pathways and crosswalks would be incorporated into the facility design to direct pedestrians safely from the NPS parking lots to the athletic fields.

The NPS would construct the facility to be resilient to extreme weather conditions, such as high wind speeds and excessive salt spray. Hurricane-resistant construction techniques would be used and facility designs would take into account the latest NPS guidance addressing climate change and natural hazards in facility planning (NPS 2015a). Also, the NPS would incorporate energy efficient heating, air conditioning, and lighting systems into the facility design.

The new maintenance facility at Miller Field would include hazardous materials (hazmat) storage. The types of materials that would be stored include oil, transmission fluid, brake fluid, pesticides and fertilizer. All hazardous materials would be stored in accordance with OSHA guidelines.

In order to secure the facility, the NPS would use a transparent fencing assembly to deter unauthorized access and vandalism of the facility. The NPS is proposing to use anti-climb fence technology versus the traditional chain link and barbed wire. The NPS would consider fence solutions that are the least intrusive from an aesthetics standpoint.

The NPS would prepare and implement a landscape plan after the new facilities are constructed and site restoration activities begin. The landscape plan would include the replacement of any trees that would be removed during construction with the same or similar species that are native to the northeastern United States. The landscape plan would also include supplemental plantings of trees and shrubs, as appropriate, around the facility. Plantings may be strategically placed for aesthetic purposes as a part of the facility design or to screen the facility from the athletic fields or residences on New Dorp Lane.

Stormwater management would also be included in the design of the new maintenance facility at Miller Field. The NPS would incorporate various techniques for stormwater management including the construction of inlets and pipes to connect the maintenance facility to existing stormwater infrastructure in the area, and low impact development techniques such as drainage swales, bioretention areas, or infiltration basins.

The NPS would construct a fueling station at the new maintenance facility that would include a 1,000 gallon above-ground fuel storage tank and fuel dispensing system. The fueling station would be designed in accordance with all appropriate FEMA and NPS guidelines for the construction of fuel storage within the regulatory floodplain. In addition, the fuel storage tank and dispensing system would be surrounded with bollards, or similar barriers, as a safety measure to protect the tank from potential vehicle collisions. The bollards would also serve as a

fire protection/prevention measure in addition to an automatic system shut-off system that would be incorporated into the fueling station.

SITE DESCRIPTION

The Federal Emergency Management Agency (FEMA) is the principal source for floodplain mapping in the United States. FEMA identifies areas that are considered at high risk of flooding. Flood prone areas are located at or below Base Flood Elevations (BFE), also known as the 100-year floodplain. The 100-year flood is defined as a flood that has a 1 percent chance of being equaled or exceeded in any given year. FEMA also identifies the 500-year floodplain, which represents areas of moderate flood risk (0.2 percent chance of being equaled or exceeded in any given year). According to FEMA Flood Insurance Rate Map (FIRM) Panel 3604970328G (FEMA 2013a), the entire project area at Miller Field is located within the 500-year regulatory floodplain of the Lower New York Bay (see **Attachment 3**).

According to the effective 2007 FEMA Flood Insurance Study (FIS) prepared for Richmond County, NY, the established 1 Percent Annual Chance flood elevation (i.e. the 100-year floodplain elevation) at Miller Field is 8.7 feet and the .02 Percent Annual Chance flood elevation (i.e. the 500-year floodplain elevation) at Miller Field is 10.8 to 10.9 feet above mean sea level (FEMA 2007). Areas below this elevation are subject to wave generated coastal flooding from storm surges predominantly associated with hurricanes and nor'easters with a moderate to high level of flood risk. Since the 2007 FIS, a preliminary FIS report was issued in 2013 with a projected effective date of May 16, 2016. Data provided in this report show an increase of approximately three (3) feet in the 100-year flood elevation and approximately four (4) feet in the 500-year flood elevation within the Lower New York Bay area (FEMA 2013b). According to the 2013 preliminary FIS, the revised 1 Percent Annual Chance flood elevation (i.e. the 100-year floodplain elevation) at Miller Field is 11.8 feet above mean sea level, and the .02 Percent Annual Chance flood elevation (i.e. the 500-year floodplain elevation) is 15.3 feet above mean sea level (FEMA 2013b). The revised floodplain elevations from the 2013 FIS account for the effects of climate change on sea-level rise, coastal storm surge, etc.

Miller Field and the surrounding area are located on Staten Island's East Shore. The majority of the area consists of small businesses and residences situated on small lots in high densities, with approximately 16 people per acre (NYC 2013). Communities surrounding Miller Field are made up of a network of residential streets from Mill Road to Cedar Grove Avenue to the South and from Oldfield Street to Father Capodanno Boulevard to the Northeast. Due to the amount of development that has taken place in the past 15 years, the East Shore area of Staten Island is comprised of a vast majority of impervious surface which affects the natural functions of the floodplain (NYC 2013).

Floodplains provide a variety of benefits to natural environments and human society. Benefits provided by the floodplain at Miller Field are primarily associated with the infiltration, storage,

and transport of flood waters during storms. The coastal geomorphology at the project area is comprised of post-glacial deposits and glacial outwash plains making this area more susceptible to ongoing flooding and erosion concerns (NYC 2013).

Low Primary Frontal Dunes (PFDs) occur outside the project area in the Special Flood Hazard Area (SFHA) along the Franklin D. Roosevelt Boardwalk and New Dorp Beach. Low PFDs provide coastal flood protection and help to stabilize beaches and other coastal areas from erosive forces created by waves during storm events (FEMA 2007). During Hurricane Sandy, peak storm surges were observed with wave heights of approximately 13-15 feet from South Beach to Great Kills Harbor. Due to the timing of when the storm hit Staten Island, the sand dunes along the beaches were washed away from peak storm tides at 16 feet. In order to minimize future damage caused by increased flood elevations in coastal areas, beach nourishment as well as dune reconstruction projects have occurred as an emergency measure to protect the shoreline from future storms. In addition, floodwalls and levees are being considered as part of the New York City's Comprehensive Coastal Protection Plan, in cooperation with the US Army Corps of Engineers, which substantiates the need to minimize future flood losses (NYC 2013).

JUSTIFICATION FOR USE OF THE FLOODPLAIN

The purpose of the proposed project at Miller Field is to construct a permanent maintenance facility outside of the 100-year regulatory floodplain as identified on FEMA FIRM Panel 3604970328G (FEMA 2013a). On the FIRM Panel, the proposed project area at Miller Field is outside of the 100-year regulatory floodplain, but within the 500-year regulatory floodplain. All of Miller Field is located within either the 100-year or 500-year floodplain and therefore the most suitable location for the proposed maintenance facility would be in the area of moderate flood risk (500-year regulatory floodplain).

MITIGATION MEASURES

Avoidance and minimization measures were applied throughout the project design to reduce impacts to the floodplain. Furthermore, the NPS set out to design the facility to be resilient to flooding in accordance with the latest FEMA and NPS guidelines. As a response to climate change and the associated increased risk of coastal storm surge from sea level rise, the NPS has issued a handbook to address climate change and natural hazards. The handbook provides decision-makers with facility design and construction guidance to maximize resiliency against coastal flood risk (NPS 2015). In consideration of the latest NPS guidelines, the following mitigation measures would be implemented to minimize impacts to the floodplain and to make the maintenance facility at Miller Field resilient to coastal flooding:

- In accordance with the latest NPS guidelines, and to make the maintenance facility more resilient to flooding, the NPS would elevate all structures encompassing the facility to a

minimum of two feet above BFE (i.e. the 100-year regulatory floodplain elevation) (BFE+2) as identified in the 2013 preliminary FIS for Richmond County (FEMA 2013b).

- In accordance with the latest NPS guidelines, and to make the maintenance facility more resilient to flooding, the NPS would elevate critical systems (i.e. heating and air conditioning units, fire protection, security, computers, etc.) to a minimum of three feet above BFE (i.e. the 100-year regulatory floodplain elevation) (BFE+3) as identified in the 2013 preliminary FIS for Richmond County (FEMA 2013b). BFE+3 is equal to or greater than the water surface elevation of the 500-year flood.
- To reduce the risk of the proposed fuel storage tank from becoming dislodged and floating away during a flood, the NPS would elevate the fuel storage tank and its components (i.e. hoses) to a minimum of three feet above the BFE (BFE +3) as identified in the 2013 preliminary FIS for Richmond County (FEMA 2013b). BFE+3 is equal to or greater than the water surface elevation of the 500-year flood.
- Upon completion of any work within the floodplain, site restoration of disturbed areas would be performed including vegetation establishment using NPS-approved native seed mixes and plantings.
- Stormwater management would be implemented into the design of the facility, as appropriate, to store and convey stormwater to existing stormwater infrastructure.

CONCLUSION

In summary, although the proposed maintenance facility at Miller Field would result in an increase in impervious area that would reduce the infiltration capacity of the floodplain, and the addition of buildings and other structures would decrease the flood storage capacity and the ability of the floodplain to transport flood waters, these floodplain impacts would be minimal and would not result in adverse impacts to floodplain functions that would be detectable. Due to the small-scale of the project, no increase in flood elevations or undue risks to human health or property would occur. To minimize impacts to the floodplain and in order to make the maintenance facility resilient to flooding, the NPS would elevate all structures a minimum of two feet above the BFE (BFE+2) as identified in the 2013 preliminary FIS for Richmond County (FEMA 2013b). The NPS would also elevate critical systems and the proposed fuel storage tank a minimum of three feet above BFE (BFE +3) as identified in the 2013 preliminary FIS for Richmond County (FEMA 2013b) to minimize flood risks in accordance with the latest NPS guidelines.

The NPS finds that this proposed action is consistent with the policies and procedures of Director's Order #77-2: *Floodplain Management*.

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- 2013a Preliminary Flood Insurance Rate Map (FIRM) Panel 3604970328G. FEMA Map Service Center. Online: <https://msc.fema.gov/portal/advanceSearch>. Accessed February 09, 2015
- 2013b FEMA Flood Insurance Study, Richmond County, City of New York. FEMA Map Service Center. Online: <https://msc.fema.gov/portal/advanceSearch>. Accessed February 09, 2015

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<http://www.nps.gov/policy/DOrders/DO77-2--Floodplains.pdf>. Accessed January 16, 2015.
- 2015 *Addressing Climate Change and Natural Hazards. Facility Planning and Design Considerations Level 3 Handbook*. January 2015.

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FLOODPLAIN STATEMENT OF FINDINGS

ATTACHMENTS

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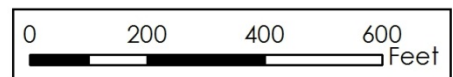


Attachment 1: Miller Field Project Area

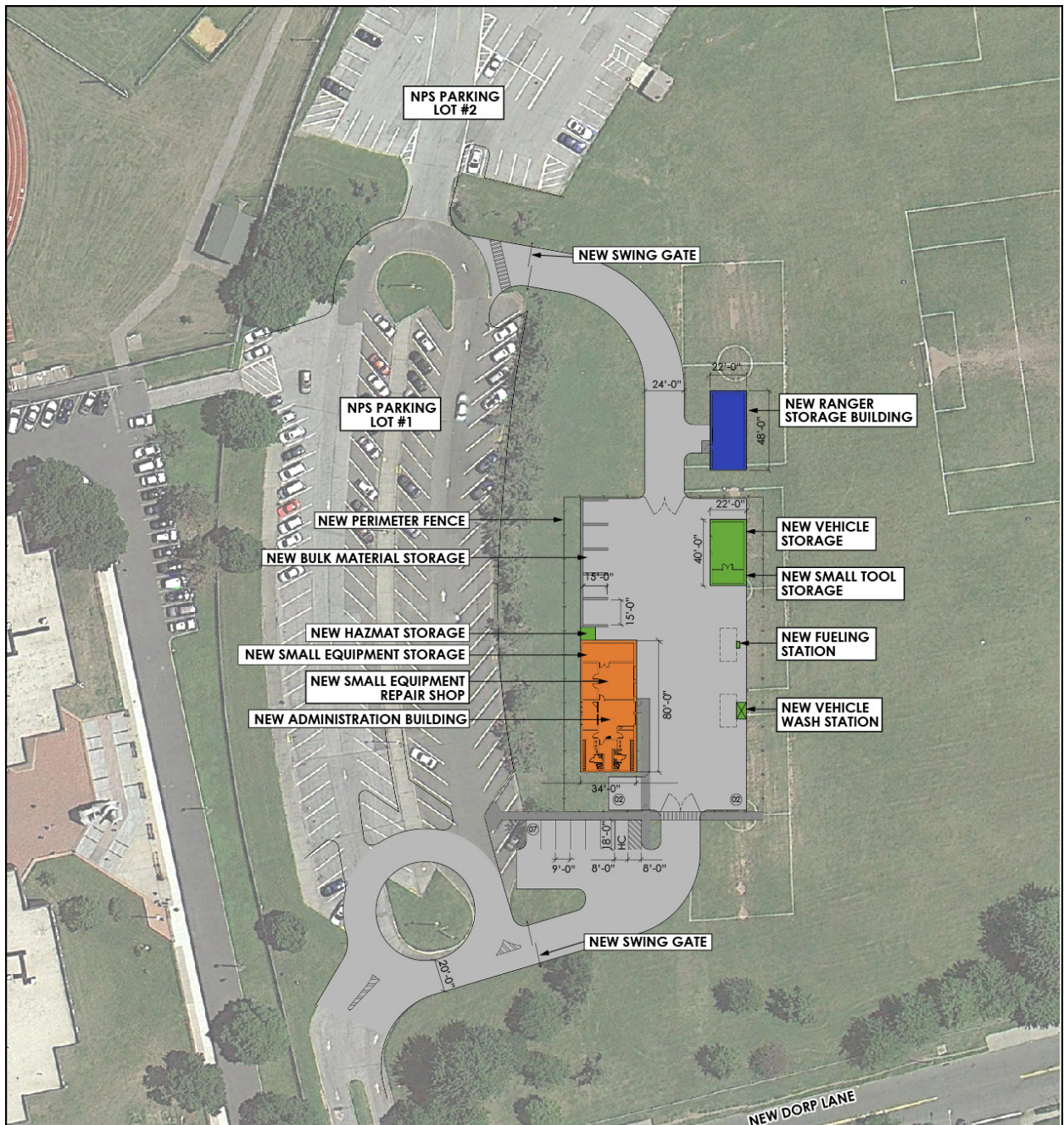
Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment

Legend

 Project Area New Facility Park Boundary



Data Source: NPS



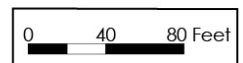
Attachment 2: Location & Layout of the Permanent Maintenance Facility

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment

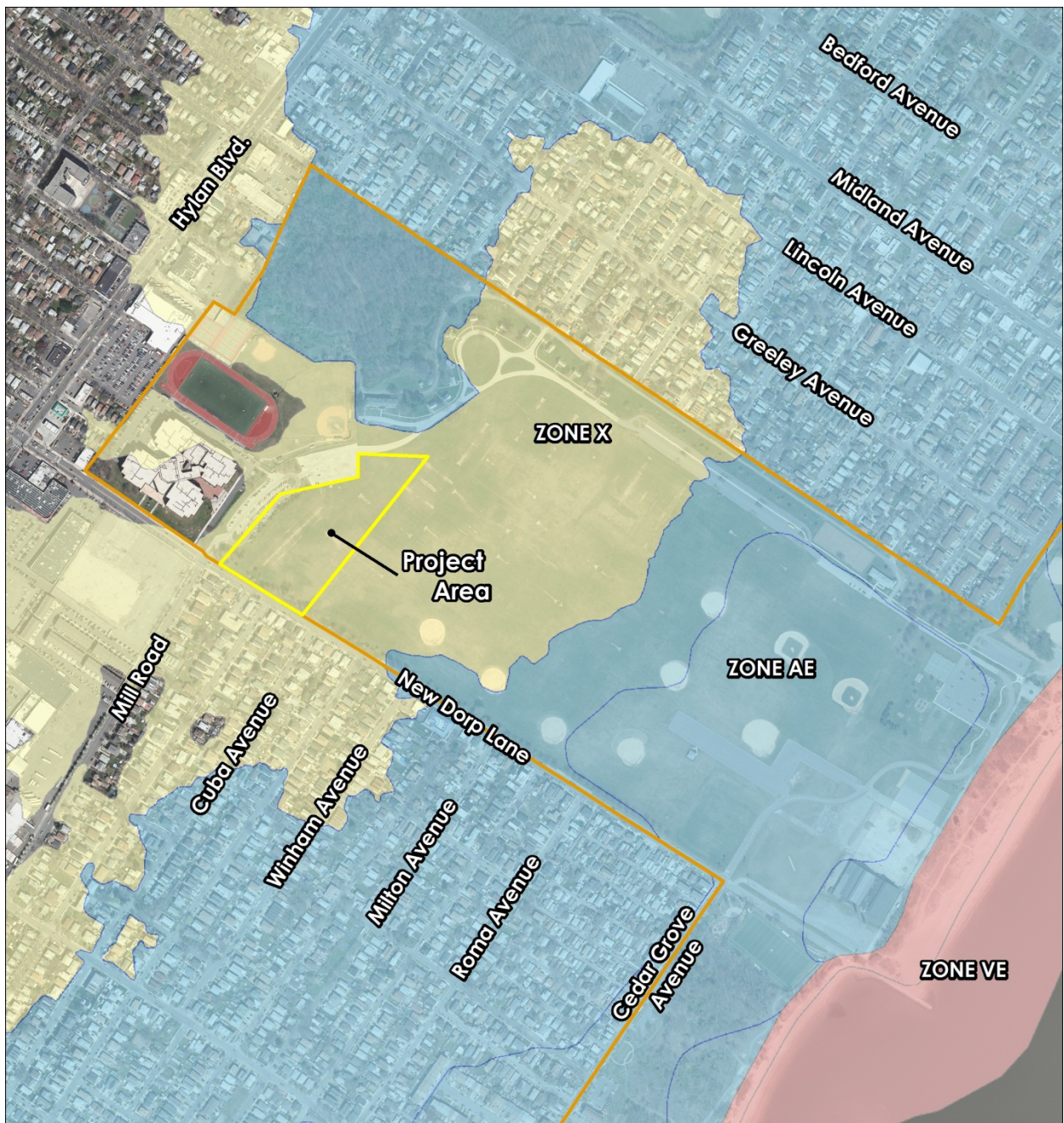


Legend

- Ranger Storage
- Vehicle & Hazmat Storage
- Administration & Small Equipment Repair



Data Source: NPS

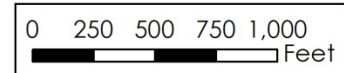


Legend

- 500-Year Floodplain (ZONE X)
- 100-Year Floodplain (ZONE AE)
- 100-Year Floodplain incl. Wave Action (ZONE VE)
- Park Boundary

Attachment 3: FEMA Special Flood Hazard Areas – Miller Field

Gateway National Recreation Area
Relocation of Hurricane Sandy Damaged Maintenance Facilities
to More Sustainable Locations within the Staten Island Unit
Environmental Assessment



Data Source: FEMA FIRM
Panel 3604970328G (2013)



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under US administration.

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