Living with the Bay Stormwater Project
Environmental Assessment

September 2, 2020

Project Name:	Living with the Bay Stormwater Project
Project Location:	Village of East Rockaway, Rockville Centre, and Lynbrook; Town of Hempstead, Nassau County, New York
HTFC SHARS #:	N/A
Federal Agency:	U.S. Department of Housing and Urban Development
Responsible Entity:	New York State Homes and Community Renewal
Responsible Agency's Certifying Officer:	Matt Accardi, Assistant General Counsel Governor's Office of Storm Recovery 25 Beaver Street, Fifth Floor, New York, New York 10004 matt.accardi@stormrecovery.ny.gov; (212) 480-6265
Project Sponsor:	Town of Hempstead, Village of Rockville Centre
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Project NEPA Classification:	24 CFR 58.36 (Environmental Assessment)

Environmental Finding:	☒ Finding of No Significant Impact—The project will not result in a significant impact on the quality of the human environment.
	☐ Finding of Significant Impact—The project may significantly affect the quality of the human environment.
Certification	The undersigned hereby certifies that New York State Homes and Community Renewal has conducted an environmental review of the project identified above and prepared the attached environmental review record in compliance with all applicable provisions of the National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.) and its implementing regulations at 24 CFR 58.
Signature	 Matt Accardi

Environmental Assessment Prepared By:	WSP USA, Inc. 96 Morton Street, 8th Floor New York, NY 10014

CERTIFICATION OF NEPA CLASSIFICATION

It is the finding of the New York State Homes and Community Renewal's Housing Trust Fund Corporation that the activity(ies) proposed in its 2020 NYS CDBG-DR project, Long Beach Water Pollution Control Plant are:

Check the applicable classification.

☐ Exempt as defined in 24 CFR 58.34 (a).

☐ Categorically Excluded as defined in 24 CFR 58.35(b).

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and no activities are affected by federal environmental statues and executive orders [i.e., exempt under 58.34(a)(12)].

☐ Categorically Excluded as defined in 24 CFR 58.35(a) and some activities are affected by federal environmental statues and executive orders.

☒ "Other" neither exempt (24 CFR 58.34(a)) nor categorically excluded (24 CFR 58.35).

☒ Part or all of the project is located in an area identified as a floodplain or wetland. For projects located in a floodplain or wetland, evidence of compliance with Executive Orders 11988 and/or 11990 is required.

For activities excluding those classified as "Other," attached is the appropriate Classification Checklist (Exhibit 2-4) that identifies each activity and the corresponding citation.

Signature of Certifying Officer	9/2/2020 Date
Matt Accardi Print Name	Assistant General Counsel Title

CERTIFICATION OF SEQRA CLASSIFICATION

It is the finding of the New York State Housing Trust Fund Corporation that the activity(ies) proposed in its 2020 NYS CDBG-DR project, Long Beach Water Pollution Control Plant, constitute a:

Check the applicable classification:

- [x] Type I Action (6 NYCRR Section 617.4)
- [ ] Type II Action (6 NYCRR Section 617.5)
- [ ] Unlisted Action (not Type I or Type II Action)

Check if applicable:

- [ ] Environmental Impact Statement (EIS) Prepared
- [ ] Draft EIS
- [ ] Final EIS

Signature of Certifying Officer

9/2/2020
Date

Matt Accardi
Print Name

Assistant General Counsel
Title

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ACRONYMS AND ABBREVIATIONS

Asl	above sea level
ADA	Americans with Disabilities Act
BFE	base flood elevation
BMP	best management practice
Boulevards component	East, West, and North Boulevards Stormwater Drainage Improvements component
CAC	Citizens Advisory Committee
CDBG-HR	Community Development Block Grant-Disaster Recovery
CFR	Code of Federal Regulations
dBA	A-weighted decibel
EA	environmental assessment
EFH	Essential Fish Habitat
ERHS	East Rockaway High School
ERHS component	East Rockaway High School component
FEMA	Federal Emergency Management Agency
FIRMS	flood insurance rate maps
GOSR	(New York) Governor's Office of Storm Recovery
HUD	United States Department of Housing and Urban Development
IPaC	Information, Planning, and Conservation System
Lister Park component	Lister Park Improvements component
LWTB Project	Living with the Bay Project
LWTB Stormwater Project	Living with the Bay Stormwater Project
NHP	Natural Heritage Program
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOS	New York State Department of State
PCE	Tetrachloroethylene
RBD	Rebuild by Design

Smith Pond component	Smith Pond Rehabilitation component
SPDES	State Pollutant Discharge Elimination System
STP	sewage treatment plant
USACE	U.S. Army Corps of Engineers
USC	United States Code
USEPA	U.S. Department of Environmental Protection
USFWS	United States Fish and Wildlife Service
WPCP	Water Pollution Control Plant

1 REBUILD BY DESIGN

In June 2013, the United States Department of Housing and Urban Development (HUD) initiated Rebuild by Design (RBD), a competition intended to respond to Hurricane Sandy's devastation in the northeast region of the United States and promote a design-led approach to proactive planning for long-term resilience and climate change adaptation. The winning proposals would be implemented using Community Development Block Grant-Disaster Recovery (CDBG-DR) funding and other public and private-sector funding sources.

In June 2014, following a year-long research and design process, during which the design teams met and collaborated with regional experts, government entities, elected officials, issue-based organizations, local community groups, and individuals, HUD announced that the Nassau County Living with the Bay Project (LWTB Project) was one of the selected projects. As a result, New York State has been allocated $125 million of CDBG-DR program funds to implement the LWTB Project.

The goals of New York State's RBD implementation plan are to make communities more physically, economically, and socially resilient in the face of intense storm events. RBD is focused on promoting projects that strengthen resiliency throughout all aspects of the community, including ecological, economic, and social elements. The built environment helps maintain the natural ecosystem, which reduces vulnerability to disaster impacts and provides collateral benefits to the economy, public health, overall well-being, and quality of life in the community. RBD resiliency projects strive to implement innovative, flexible, and scalable interventions that could be replicated in other parts of the state, nation, and globally. Diversity, redundancy, networked connectivity, modularity, and adaptability are important features of resiliency projects promoted by RBD.

2 LIVING WITH THE BAY PROJECT AND THE RESILIENCY STRATEGY

The LWTB Project and Resiliency Strategy provides a comprehensive suite of thematically consistent and prioritized projects intended to provide long-term resilience and climate change adaptation for Nassau County communities in the Mill River Watershed. The LWTB Project and Resiliency Strategy includes a program of specific projects and potential project locations, consistent with the RBD principles outlined above, to address flooding caused by storm surge and rainfall (flood defense), improve coastal habitat and water quality (ecological restoration), ease public access to the waterfront (access and urban quality), and educate the public on stormwater and environmental management (social resiliency). The LWTB Project and Resiliency Strategy identifies and prioritizes projects and project types with program-specific timeframes and costs for planning, design, permitting, procurement, construction, and project closeout. The Resiliency Strategy is available at https://stormrecovery.ny.gov/content/living-bay-resiliency-strategy.

The Resiliency Strategy documented that flooding problems in the LWTB project area are caused by inadequate drainage collection and conveyance capacity, high tailwater conditions (the level of water downstream of hydraulic structures, i.e., dams, culverts, and outfalls) that make the existing stormwater systems inadequate for critical storms, and undersized flood control structures prone to overtopping during storm surge events. Other documented problems within the LWTB project area include degradation and loss of habitat and flora and fauna, shoreline degradation, and compromised water quality. The Resiliency Strategy documented these challenges at specific sites and developed conceptual plans at each location to address them. The plans were formulated to be consistent with the RBD

program. The LWTB Project and Resiliency Strategy also considered and incorporated sea level rise projections throughout the development of resiliency interventions.

Since completion of the Resiliency Strategy, the Governor's Office of Storm Recovery (GOSR) and the local municipalities have proposed to proceed with the following projects:

- Hempstead Lake State Park: The New York State Office of Parks, Recreation, and Historic Preservation manages the 521-acre park located in the northern portion of the LWTB project area. This project would repair dams to improve existing water management infrastructure in the park; restore and construct wetlands and install floatables catchers and sediment basins to improve water quality; and provide new educational and recreational amenities through trails and an environmental education and resiliency center. The environmental assessment (EA) for this project was finalized in January 2020, and the Finding of No Significant Impact was issued in February 2020.
- Smith Pond Rehabilitation: South of Hempstead Lake State Park, Smith Pond is a 22-acre freshwater pond located in the center of the LWTB project area, north of Sunrise Highway in the Village of Rockville Centre. The proposed improvements at Smith Pond would consist of resiliency interventions, such as habitat restoration, stormwater storage, and improved public access. The Smith Pond project is part of the Proposed Action, and its impacts are evaluated in this EA.
- Lister Park Improvements: South of Smith Pond and just north of East Rockaway High School (ERHS), the Lister Park project would entail stormwater management improvements to the fields within the Village of Rockville Centre: Bligh Field, Centennial Field, and Tighe Field. Additionally, the project would include the installation of living shorelines and streambank stabilization along the Mill River to improve stormwater quality and retention, prevent streambank erosion, and provide recreational and pedestrian connectivity. The Lister Park project is part of the Proposed Action, and its impacts are evaluated in this EA.
- East Rockaway High School: ERHS is situated along the west bank of the Mill River between Centre Avenue and Pearl Street. Design options under consideration would reduce the school's vulnerability to flooding by installing green infrastructure and backflow preventers and stabilizing an eroding shoreline. The ERHS project is part of the Proposed Action, and its impacts are evaluated in this EA.
- East, West, North Boulevards Stormwater Drainage Improvements: This project would reduce stormwater and tidal inundation impacts by installing porous pavement, replacing catch basins, and installing backflow preventers and bioretention basins. The East, West, North Boulevards project is part of the Proposed Action, and its impacts are evaluated in this EA.
- Long Beach Water Pollution Control Plant (WPCP) Consolidation Project: This project would entail the construction of a new force main connection from the existing Long Beach WPCP to the Bay Park Sewage Treatment Plant (STP), conversion of the existing Long Beach WPCP influent pump building into a new flow diversion pump station, and hardening the new flow diversion pump station to protect it from storm surge and sea level rise. This project was not specifically included in the Resiliency Strategy, but its implementation would contribute to the restoration of the coastal marshes in Hewlett Bay, as identified in the Resiliency Strategy. The impacts of this project are being considered in a separate EA being prepared by GOSR.

- Mill River Greenway: This project would develop a continuous greenway from Hempstead Lake State Park and Tanglewood Preserve south to Bay Park and Hewlett Bay. The multiuse path would vary in width and, where practical, typically include 10-foot-wide permeable pavement with water storage and infiltration. The Mill River Greenway project is part of the Proposed Action, and its impacts are evaluated in this EA.

The LWTB Project and Resiliency Strategy was configured such that projects could advance independently, subject to availability of funding. Because the timelines for project development and construction vary, each project would consider the cumulative environmental impacts of the previous project(s). The Smith Pond; Lister Park; ERHS; East, West, and North Boulevards; and Mill River Greenway projects would advance as pilot projects to demonstrate the benefits and feasibility of the array of interventions included in the LWTB Project and Resiliency Strategy—green infrastructure, living shorelines, stormwater sewer replacement and enhancement, ecological rehabilitation, shoreline hardening, and recreational and community connection. These five projects are referred to as "components" of the Living with the Bay Stormwater Project (LWTB Stormwater Project). The LWTB Stormwater Project area comprises these five components sites adjacent to the Mill River and Hewlett Harbor. See **Figures 1** and **2**.

On behalf of Grantee, the State of New York, GOSR, acting under the auspices of the New York State Homes and Community Renewal's Housing Trust Fund Corporation, acting under the authority of the HUD regulations at 24 Code of Federal Regulations (CFR) § 58, and in cooperation with other involved, cooperating, and interested agencies, prepared this EA to analyze potential impacts of the LWTB Stormwater Project, which is part of the larger LWTB Project and Resiliency Strategy. Pursuant to the HUD National Environmental Policy Act implementing procedures, GOSR, as responsible entity, must certify that it has complied with the related laws and authorities identified by 24 CFR § 58 and must consider the criteria, standards, policies, and regulations of these laws and authorities.

Because of the various types and geographic separation of the projects, individual environmental reviews have been prepared for the projects proposed by the LWTB Project and Resiliency Strategy, in accordance with regulatory considerations. The analysis in this EA, including a rigorous assessment of cumulative impacts, provided in **Section 9**, ensures that this review is, at a minimum, no less protective of the environment than its individual considerations. This type of environmental review process best informs the public and decision makers of potential environmental impacts in a unified manner.

Figure 1: Regional Project Location

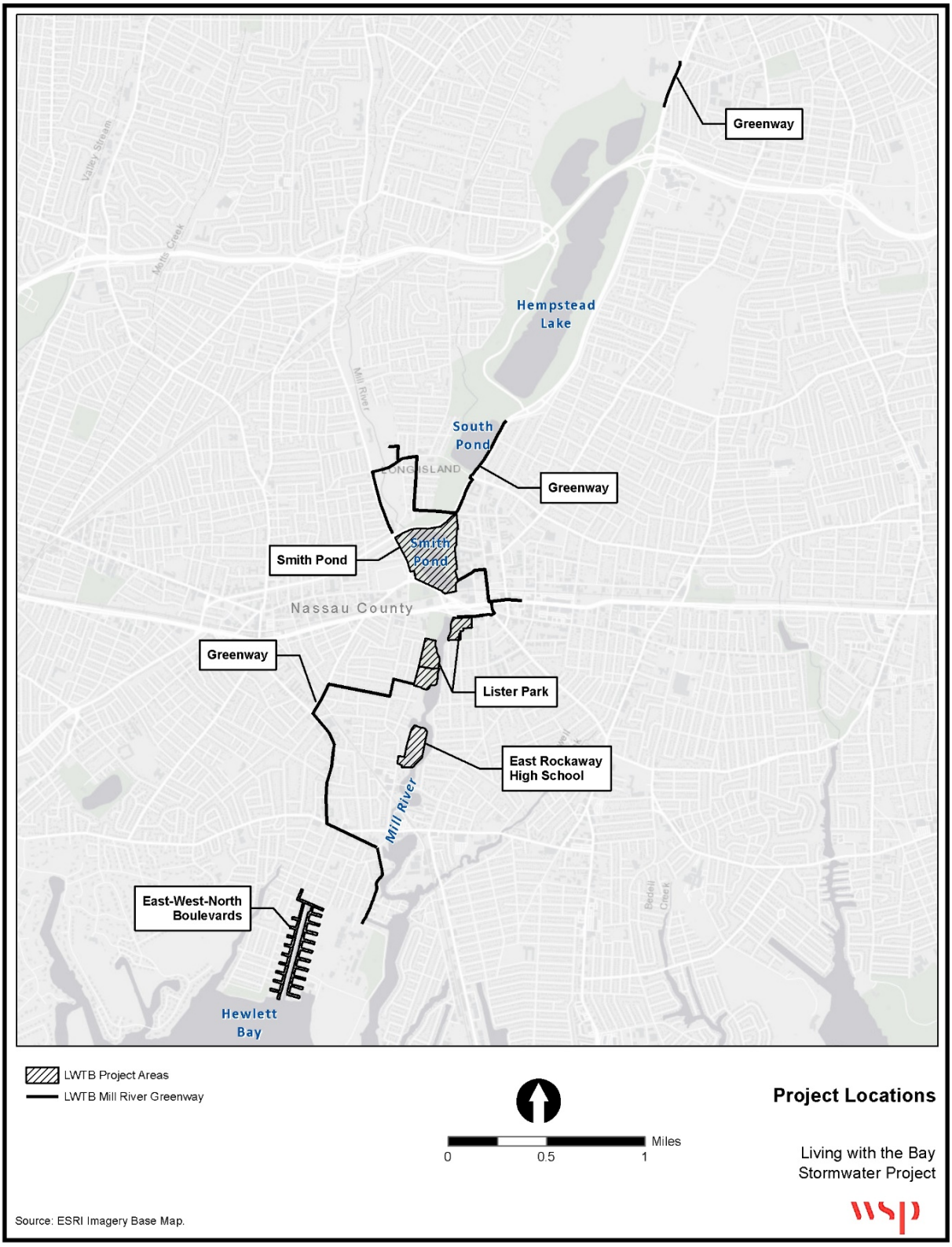

Figure 2: LWTB Stormwater Project Locations

3 LIVING WITH THE BAY STORMWATER PROJECT

As noted above, the LWTB Stormwater Project, analyzed in this EA, comprises the Smith Pond; Lister Park; ERHS; East, West, and North Boulevards; and Mill River Greenway components. Each component would be maintained by the jurisdiction(s) in which it is located. The Smith Pond and Lister Park components include new infrastructure or pathways that would connect to the larger Mill River Greenway component, but both would involve construction separate from the Mill River Greenway component. The purpose and need for the LWTB Stormwater Project and detailed descriptions of each component are as follows.

3.1 PURPOSE AND NEED

The purpose of the LWTB Stormwater Project is to increase community resilience by mitigating local risks from flooding, while incorporating environmental benefits such as water quality improvements, ecological restoration, erosion control, and recreational opportunities. The project components were selected based on practical considerations, including their relative hydraulic connection to the Mill River and to one another and their relative demonstration of beneficial effects. Other considerations included project timelines (i.e., whether they could be accomplished within the grant funding time constraints) and property ownership/control for project implementation.

The project is needed to address flooding caused by rainfall, improve habitat and water quality, mitigate shoreline erosion, ease public access to the waterfront and recreational facilities, increase community connectivity, and educate the public on stormwater and environmental management throughout the communities in Nassau County, New York. Flooding of the project area and/or adjacent roads and properties commonly occurs at the Smith Pond; Lister Park; ERHS; and East, West, and North Boulevards components, whether in heavy storms or due to normal rainfall. Flooding of these components is due to the lack of proper drainage infrastructure. At the Smith Pond component, the habitat and the community's access to the waterfront and pond suffer because of the overgrown aquatic plants and areas of vegetation containing invasive, non-native species. The existing paths in the Smith Pond component are narrow and overgrown, limiting passage and access to the public, especially during the summer months. Fish are also unable to pass the weir located at Smith Pond, impeding river herring that historically traveled northward up the Mill River to spawn. Water quality throughout the project area and the Mill River suffers due to untreated and uncontrolled runoff from parking lots (including those at ERHS and Lister Park), erosion of the shoreline, and debris and sediment from inadequate drainage infrastructure (such as at East/West/North Boulevards). Additionally, flooding and overgrown vegetation restrict the public's access and connectivity throughout the Mill River area; sidewalks and crosswalks in the area are obstructed or do not possess appropriate safety measures, such as ADA compliant walkways or striping at crosswalks.

3.2 SMITH POND REHABILITATION COMPONENT[1]

Smith Pond is the confluence point of two primary drainage branches, Pines Brook from the northwest and Mill River from the northeast. The pond also connects an upstream freshwater system to a downstream tidal and saltwater system. The pond collects flow and nutrient loads for the entire watershed. The low-lying areas along the east and west banks are subject to flooding during 25-year and larger storm events. The Smith Pond component would address the pond's high nutrient loads, silt, sedimentation, and excessive weed growth that are currently affecting aquatic life and recreational

[1] Unless noted otherwise, information for this section draws on GOSR 2020a, 2019a.

uses; protect the area from storm surges and flooding; complete structural repairs to the pond weir that currently allows for groundwater excretion and impedes fish movement; and ease public access to the area.

3.2.1 Existing Conditions

The Smith Pond component site is located in the Village of Rockville Centre at Morgan Days Park (**Figures 1 and 2**). The site is bordered by Merrick Road and the Long Island Rail Road to the south, Ocean Avenue to the west, Peninsula Boulevard to the north, and residential properties to the east. Morgan Days Park includes Smith Pond and a concrete-timber weir in its southern outlet. Additionally, the park contains two parking lots, paved and unpaved paths, overlooks, tennis courts, a baseball field, and other site amenities. The west side of Morgan Days Park is undeveloped and completely vegetated with forested habitat. Most public use occurs on the east side of the pond.

The pond is overgrown with aquatic plants and areas of vegetation containing invasive, non-native species that affect the natural balance of flora and fauna in the park. Sediment has accumulated in the pond, which has decreased its depth (resulting in a shallower pond) and led to an overabundance of aquatic plants. **Figure 3** shows one area of the pond that is overgrown with aquatic plants. During a 25-year storm event (10.8 feet above sea level [asl]), as well as during larger storm events, the water level in the pond rises such that it floods adjacent roadways and properties near Merrick Road and on the east side of Morgan Days Park.

Two overlook areas are provided along the pond shoreline—a newly constructed pond overlook deck located along the eastern shore near the basketball courts and a paved overlook area located on the northeast bank of the pond above the Mill River inflow point. The eastern overlook is a newer wood decking structure in good condition that includes interpretive signs and bollard lighting on the trail leading up to it. The northeast overlook area consists of deteriorated pavement and lacks railings or a landing to allow for comfortable and safe public viewing. Both overlooks are connected to a series of paths provided for pedestrian use. The existing paths consist of approximately 1,825 feet of 6-foot wide asphalt pavement and dirt. This network of paths is limited, and some of the dirt paths are narrow and overgrown, making passage nearly impossible, especially in the summer when vegetative growth is at its highest (**Figure 3**).

The weir that serves Smith Pond is more than 50 years old and needs repair to ensure its longevity. The receiving channel consists of multiple concrete pads with cracks. The weir and the receiving channel are shown in **Figure 3**. There is no passage for fish around the weir. As such, it impedes river herring that historically traveled northward up the Mill River to spawn.

The two parking lots are located on the east side of Morgan Days Park at Maine Avenue to the north and Nassau Street to the south. They contain 70 and 75 spaces, respectively. Untreated and uncontrolled runoff from these parking lots drains westward through the park and into the pond, transporting accumulated sediments and pollutants from the lots into the river.

Figure 3a: Smith Pond Examples of Overgrown Aquatic Vegetation (Left) and Overgrown Path (Right)

Figure 3b: Smith Pond Weir (Left) and Receiving Channel (Right)

3.2.2 Proposed Improvements

The proposed improvements include installation and construction of floodwalls and a floodgate, improvements to the access road to the existing weir, rehabilitation of the weir and surrounding area, and installation of a fish ladder. Additionally, porous pavement parking lots, greenway path enhancements, and improvements at the northern overlook and the culvert headwall are proposed. After invasive plant species are removed, native vegetation would be planted. Further description of each element is below. A site plan outlining the proposed improvements is shown in **Figure 4**. Detailed design drawings are included in **Appendix A1**.

3.2.2.1 Floodwall and Floodgate

Vinyl sheet pile floodwalls with a timber cap along Merrick Road and Claude and Nassau Streets would be installed to prevent off-site flooding for up to the 100-year storm event. See **Appendix A1** for the plan and profile views of the east and west floodwalls.

A 35-foot-wide passive floodgate would be incorporated into the wall at the southern parking lot on Nassau Street, east of the weir. The gate would remain open under lower storm events to allow overland stormwater to drain into the pond. Under larger flood events (i.e., the 25-year event when waters would begin flooding the area), stormwater from the pond would flood into the gate structure, causing the gate to rise (and close) and preventing off-site flooding to neighboring infrastructure and properties. The gate foundation would be constructed on timber piles with a concrete cap.

3.2.2.2 Weir Enhancements and Access Road

The deteriorated timber sheeting and wall on the downstream face of the weir would receive a new concrete-block face. The adjacent timber bulkheads and piles would be removed and replaced with a new concrete bulkhead that would be tied into the weir and receiving-channel concrete slab. The receiving concrete slab would also be repaired for various cracks and splits.

Additionally, along the access road to the weir from Merrick Road, a 15-foot-wide compacted, dense-graded aggregate would be placed with a 2 percent cross slope for drainage. Minor earthwork would occur to allow the access road to act as part of the floodwall system. Approximately 75 trees would be removed during construction of the weir access road. In lieu of an additional floodgate along this access road, the profile would be modified to create a peak crest elevation that matches the top of the floodwall height to create a fully encapsulated floodwall protection system.

3.2.2.3 Fish Ladder

Improvements at Smith Pond would also include construction of a fish ladder at the weir to allow the upstream migration of adult river herring (alewife and blueback herring) for spawning in Smith Pond. This pool and chute fish ladder would operate at a range of streamflows that occur during the spring. Each pool would be 6-feet-long by 6-feet-wide with a minimum depth of 2.5 feet and a drop per pool of 0.5 feet.

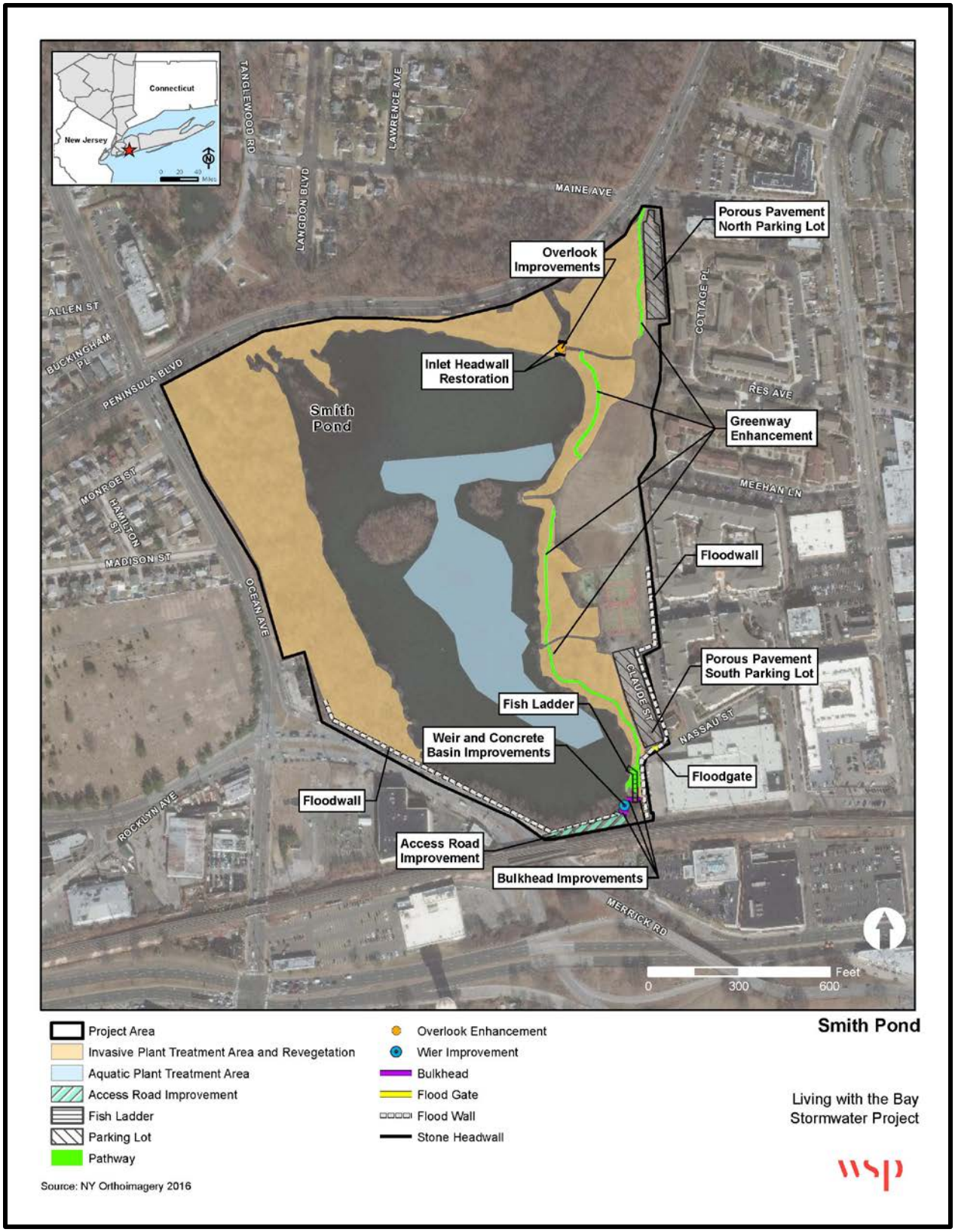

Figure 4: Smith Pond Proposed Improvements

3.2.2.4 Porous Pavement Parking Lots

The surfaces of the existing parking lots would be stripped and replaced with porous pavement systems designed to manage the 10-year storm event and would be pitched toward Smith Pond so events that exceed the 10-year storm capacity of the porous pavement system would drain toward the pond.

3.2.2.5 Repair of Inlet Headwall and Wing Walls

Structural repairs including tuck-pointing all exposed mortar joints, repairing stones, replacing the deteriorated wall cap, cleaning and sealing of all stone surfaces, and final cleaning would be made to the existing inlet headwall and wing walls at the northeast inlet to the pond.

3.2.2.6 Invasive Vegetation Removal

Upland/wetland invasive vegetation removal would occur annually along the north, east, and west shorelines of Smith Pond. All work in these land areas would be performed by hand and would include additional herbicide treatment and cutting to deter future growth. Removal of invasive plant species would improve the ecological health of the pond and its buffers and allow existing native plantings to thrive. Native vegetation would be replanted following completion of construction and invasive species removal. A total of 798 trees and shrubs would be planted as part of the forest enhancement and restoration and greenway plantings. Planting areas, species, and quantities are listed in **Appendix B**.

Aquatic vegetation removal of overgrown lily pads in Smith Pond would occur via mechanical methods. Most of the lily pads in the pond have been identified as native species, but they are overgrown to the point that they interfere with public use of the pond. According to the New York State Department of Environmental Conservation (NYSDEC), up to 75 percent of the total lily pad growth could be removed. Routine maintenance from the Village of Rockville Centre would be required to manage the regrowth of lily pads in areas where they have been removed. The Village of Rockville Centre would implement these operation and maintenance requirements following construction.

3.2.2.7 Greenway Enhancements

An existing paved path crosses Morgan Days Park from the southern limit of the northern parking lot to the paved area of the basketball courts and southern parking lot. Additionally, an unmaintained and overgrown dirt path runs along the eastern shoreline of Smith Pond. A new greenway would be constructed using the existing alignments of the paved and dirt pathways and would run from the northern limits of the northern parking lot along the southern shoreline of Smith Pond, with portions of the pathway returning to the open field paved pathway. The new greenway would terminate in the south at a new overlook area by the fish ladder and weir and would provide a continuous connective path from the northern limits of the site to the southern limits and connect the three proposed overlooks (two existing and one new). To implement the new greenway, the existing pathway would be cleared and grubbed to be replaced by the proposed 6-foot-wide greenway with profiles and cross slopes that would meet the requirements of the Americans with Disabilities Act (ADA). The new greenway would be constructed with a porous pavement similar to the parking lots but with reduced thicknesses.

The northern overlook area at the northeast outfall and the new southern overlook area at the weir would be connected to the greenway. These areas would be cleared and grubbed, stripped, and then resurfaced with porous pavement similar to the porous pavement used elsewhere on the greenway. Split rail fence would be constructed around the overlook area, which would face Smith Pond to the north and the fish ladder to the south, providing pedestrians with an observation location.

In addition to the new greenway and overlook enhancements, electrical conduits and wiring would be installed along the proposed greenway for low-level bollard lighting that would provide additional security features to the greenway. Conduit would also be run to various locations identified by the Village to upgrade and add additional park security cameras later.

The above portions of the greenway would be constructed as part of the Smith Pond component, but these portions of the greenway would connect to the larger proposed Mill River Greenway component, described in **Section 3.6** and shown in **Figure 15** (in **Section 3.6.1**, below). Specifically, the northern tip of the proposed greenway would connect to the middle northern portion of the Mill River Greenway component at Maine Avenue, and the southern tip of the proposed greenway would connect to the middle southern portion of the Mill River Greenway component at the end of Nassau Street.

3.3 LISTER PARK IMPROVEMENTS COMPONENT[2]

During Hurricane Sandy, Lister Park and the surrounding residential areas were inundated from the Mill River. Eroding shorelines and vegetation communities along the river were damaged or destroyed. Homes located in the area are susceptible to flooding as a result of a 100-year storm event. The Lister Park component would address flooding to village assets and residences during heavy rainfall events, tidal backup, and sunny-day flooding during regular rain and tide events. In addition, it would address erosion issues along the east and west banks of the Mill River that experience high river velocities and storm surge, and bicycle and pedestrian access issues to the waterfront that are currently limited by the presence of thick vegetation.

3.3.1 Existing Conditions

The Lister Park component proposes improvements at three Village of Rockville Centre facilities—Tighe Field, Centennial Field, and Bligh Field—and the establishment of a living shoreline within Lister Park.

Tighe Field is located on the east side of the Mill River and consists of a blacktop parking lot, active soccer field, a small recreational area, and undeveloped land. Immediately to the east of Tighe Field is Windsor Avenue and an office park. An apartment complex lies to the south. Merrick Road and Sunrise Highway are to the north, and Mill River is to the west. Centennial Field is located on the east side of the Mill River and consists primarily of a blacktop parking lot with a small portion of landscaped terrain on its northern end. Mill River is to the east, and Chester Road is to the west. Tennis courts and a baseball field are to the north and south, respectively. An overlook is present along Mill River to the east of the parking lot. Bligh Field is located on the east side of the Mill River, south of Centennial Field, and consists of two baseball diamonds within a mowed sports field and a blacktop parking lot. Mill River is to the east; South Park Avenue is to the north; and Riverside Road is to the west. During high tide events, water from the Mill River can overflow across the field and affect properties to the east of the site. **Figure 5** provides photographs of each field.

[2] Unless noted otherwise, information for this section draws on Tetra Tech 2019.

The water's edge consists primarily of natural shoreline with sections of bulkhead and concrete end walls. A portion of the existing shoreline is shown in **Figure 5,** and an overview of the existing shoreline types is shown in **Figure 6**. Saplings and mature trees are present, but because the shoreline is susceptible to erosion, many of them have been felled or are leaning over the river. Common trees along the water's edge are black locust (*Robinia pseudoacacia*), red mulberry (*Morus rubra*), boxelder maple (*Acer negundo*), tree-of-heaven (*Ailanthus altissima*), and black walnut (*Juglans nigra*). Wetland areas are filled with common reed (*Phragmites australis*).

Figure 5a: Tighe Field (Left) and Centennial Field Parking Lots (Right)

Figure 5b: Bligh Field (Left) and Shoreline Erosion at Lister Park (Right)

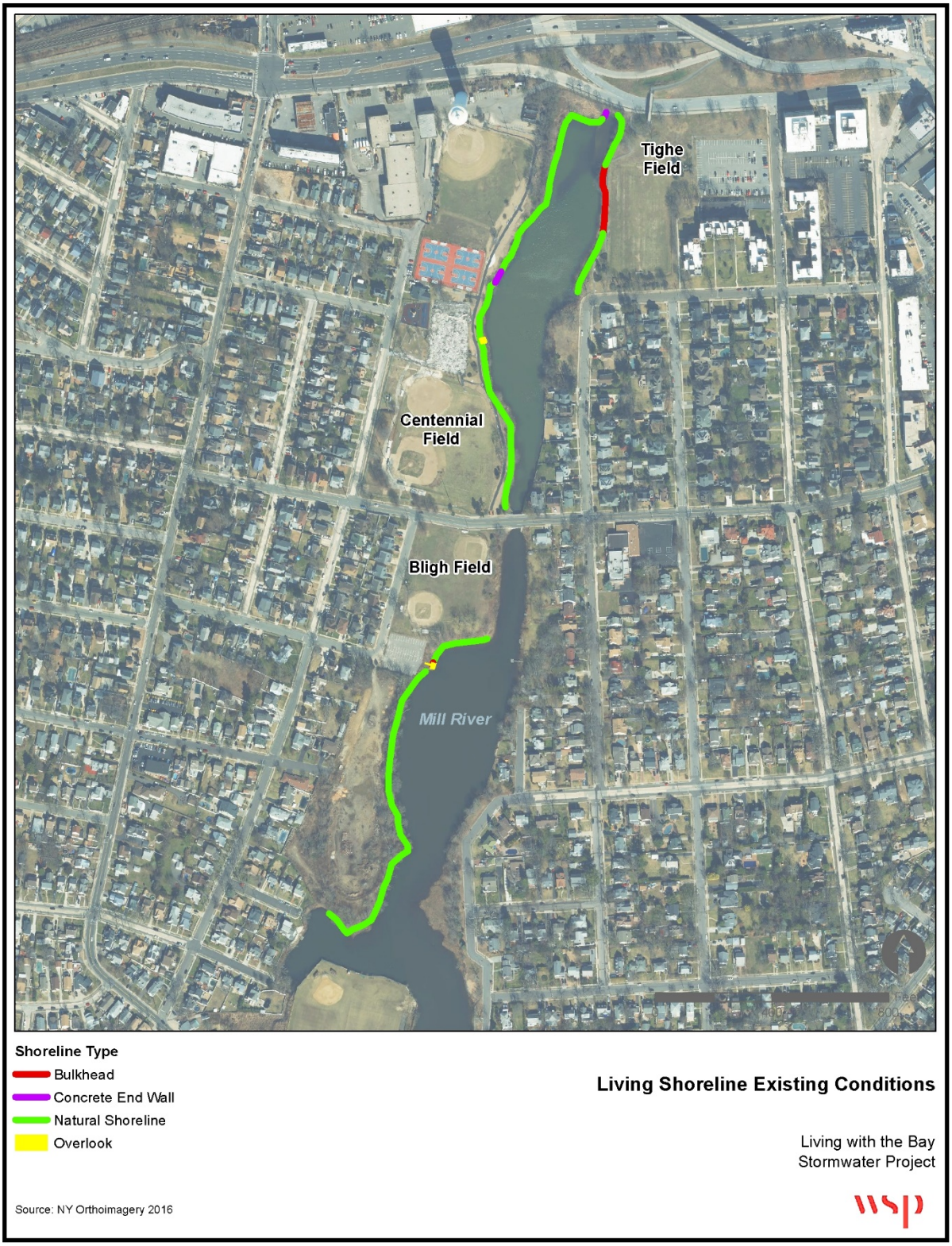

Figure 6: Living Shoreline Existing Conditions

3.3.2 Proposed Improvements

3.3.2.1 Tighe Field

The proposed changes to Tighe Field include constructing a bioretention basin, improving walkways and the parking lot, and enhancing the site's drainage capabilities. See the design drawings in **Appendix A2**. These improvements are discussed in detail below and are shown in **Figure 7**.

Bioretention Basin

A bioretention basin is proposed at the northwest corner of the Tighe Field parking lot. The 3,420-square-foot proposed bioretention basin has been designed to capture and treat 90 percent of all 24-hour rain events from the parking lot and surrounding catchment area. Additionally, a split-rail fence would be constructed around the bioretention basin, and 10 large trees, 10 small trees, and 24 shrubs would be planted around the basin. Meadow grass would be used to provide planting buffer around the split-rail fence and basin.

Drainage

A drainage system leading to the bioretention basin would be installed and would include a pre-cast, polymer concrete trench drain around the outer north and west sides of parking lot; two catch basins between the parking lot and the basin; a pre-cast, polymer concrete drain basin with a 15-inch dome grate; two drain outlets; and a 6-inch pipe installed at the corner of the parking lot leading to a 12-inch pipe that drains to the bioretention basin.

Parking Lot and Connecting Routes

The concrete curb on north and west sides of parking lot would be removed, and the edge of the parking lot would be restored without a curb. During rain events, this improvement would allow stormwater runoff from the parking lot to reach the bioretention basin so it could be treated prior to discharging into the Mill River. Approximately 16 pre-cast concrete bumpers would replace the curb at the head of the parking spaces to act as a barrier between cars and the end of parking stalls for parking lot safety.

An ADA-compliant curb with a detectable warning surface would replace the current non-ADA compliant walkway at the north end of the parking lot. Additionally, a new, reinforced 4-foot sidewalk between the parking lot and new bioretention basin would replace the existing walkway. Any signage related to the site would be restored at the end of construction.

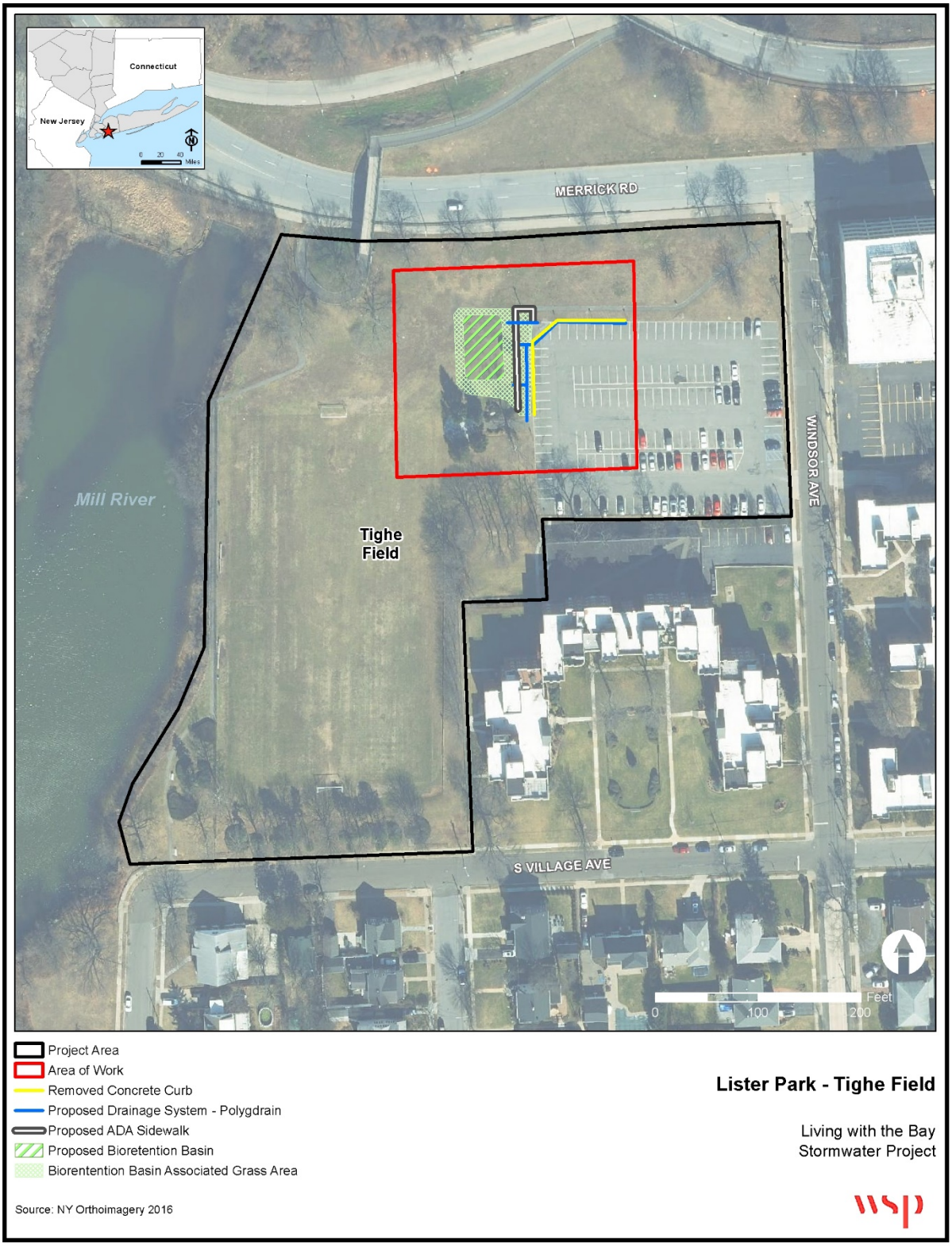

Figure 7: Lister Park (Tighe Field) Proposed Improvements

3.3.2.2 Centennial Field

The proposed changes to Centennial Field would include constructing a bioretention basin, improving the parking lot and its connecting trails, and enhancing the site's drainage capabilities. The changes are described below and are shown in **Figure 8**.

Bioretention Basin

A bioretention basin is proposed immediately north of the Centennial Field parking lot. The area of disturbance associated with the basin would be cleared of existing shrubs and trees. The 1,240-square-foot bioretention basin has been designed to capture and treat 90 percent of all 24-hour rain events from the parking lot and surrounding catchment area. Following completion of the basin, six small trees, six large trees, and 36 shrubs would be planted. The entire bioretention basin would be seeded with a wetland seed mix, which would include fox sedge (*Carex vulpinoidea*), spotted joe-pye weed (*Eutrochium maculatum*), blueflag iris (*Iris versicolor*), soft rush (*Juncus effuses*), woolgrass (*Scirpus cyperinus*), and switchgrass (*Panicum virgatum*). Mulch would be placed for the planting zone surrounding the seeded area.

Drainage

Runoff from the parking lot would sheet flow to a grass island in the center of the parking lot. The grass area would be graded as a swale to collect and convey stormwater runoff to the bioretention basin, where it would be treated prior to discharging into an existing 18-inch storm drainpipe, through which it would flow to the Mill River.

Parking Lot and Connecting Routes

The parking lot would be fully reclaimed, during which old asphalt and base materials would be pulverized, mixed with cement and water, and compacted to produce a strong, durable base. Each of the 84 parking spaces would be 9 feet by 18 feet. Two of these spaces would be ADA accessible. The existing precast concrete bumpers would be removed before construction and relocated until the parking lot is repaved, then they would be reinstalled. The parking lot striping and directional arrows would be repainted. Additionally, a new curb would be installed at the parking lot entrance from Chester Road.

The area around the parking lot would be graded and seeded with grass. All four connections from the parking lot to either the roadway or the surrounding trails would align with the existing roadway or trails. Any signage related to the site would be restored at the end of construction. The Centennial Field overlook along Mill River to the east of the parking lot would have its decking replaced, but its foundation would remain in place.

Figure 8: Lister Park (Centennial Field) Proposed Improvements

3.3.2.3 Bligh Field

The proposed changes to Bligh Field would include constructing a greenway path, installing new crosswalks and sidewalks, improving the parking lot, and improving the site's drainage capabilities. The changes are described below and shown in **Figure 9**.

Parking Lot

The parking lot would go through a full-depth pavement reclamation process, during which old asphalt and base materials would be pulverized, mixed with cement and water, and compacted to produce a strong, durable base. Porous concrete pavement in parking spaces and asphalt along the circulation route of parking lot would also be installed. Each of the 53 parking spaces would be 8.5 feet by 17 feet. Two of these spaces would be ADA accessible. The parking lot striping and directional arrows would be repainted.

The existing fence along the northern side of the parking lot and the existing slide gate and fence on the western side of parking lot would be removed. Wooden guardrails are proposed for the north and east sides of the parking lot on the same sides as the proposed greenway. A knee wall would be installed on the western side of the parking lot, and pole-mounted light fixtures would be placed around the lot.

Drainage

To improve drainage, Bligh Field would be re-graded, and an earthen berm would be constructed along the western side of the field from the intersection of South Park Avenue and Riverside Road to the parking lot. Along the proposed berm, native plant species would be installed.

The sidewalk on the southern side of South Park Avenue, between Oceanview Road and Riverside Road, would be removed to provide a higher elevation to the west and a lower elevation to the east to assist with the directional flow of water to the drainage system. A self-closing flood barrier, pipe-to-manhole connector for the existing drain, and drainage outlet from the self-closing flood barrier would be installed across the north of Riverside Road at the end of the removed sidewalk to help protect the housing to the west from flood events. Automated flood gates would be installed along Riverside Road.

Three drainage relief pipes would be installed at low points along the proposed greenway. An outfall back-flow preventer would be added to the existing outfall under the Mill River overlook at the east side of the parking lot.

Figure 9: Lister Park (Bligh Field) Proposed Improvements

Pedestrian Access

An access ramp to the existing Mill River overlook, which would be replaced, is proposed on the east side of the parking lot. The sidewalk would be removed on the southern side of South Park Avenue between Oceanview and Riverside Roads. The sidewalk removal would continue around the corner of the Riverside Road-South Park Avenue intersection and extend south along a short portion of Riverside Road. The existing curb along South Park Avenue would be removed, and a knee wall would be installed.

On the opposite side of Riverside Road, a concrete sidewalk would be installed along the east side of Riverside Road and the south side of South Park Avenue. Four crosswalks are proposed for rehabilitation or installation:

1. *A crosswalk over South Park Avenue along Mill River would connect the existing and proposed greenways*—ADA-compliant curb ramps, detection warning surfaces, and crosswalk stripes would be installed. Brick pavers, two trash bins, two benches, and brick pillars with a park plaque sign are proposed for the Bligh Field side of the roadway.
2. *A crosswalk over South Park Avenue immediately east at the intersection with Riverside Road*—This crosswalk would connect to the proposed concrete sidewalk on the northwest corner of Bligh Field. ADA-complaint curb ramps, detection warning surfaces, and crosswalk stripes would be installed.
3. *A crosswalk over Riverside Road, west of Bligh Field*—This crosswalk would connect to the proposed concrete sidewalk on the northwest corner of Bligh Field. ADA-compliant curb ramps, detection warning surfaces, and crosswalk stripes would be installed.
4. *A crosswalk over Riverside Road at the southwest corner of Bligh Field and the northwest corner of the parking lot*—The crosswalk would connect to the proposed greenway and would include ADA-compliant curb ramps, detection warning surfaces, and crosswalk stripes. As noted above, brick pavers, two trash bins, two benches, flood panels, and brick pillars with a park plaque sign are proposed for the Bligh Field side of the roadway.

Pedestrian crossing signs would be installed along the roadway before each crosswalk.

Additional Features

The existing baseball field fencing would be demolished, and the existing benches would be relocated. New fencing would be reconstructed. This work would be coordinated with the Village of Rockville Centre.

Coordination with the local utility would occur to install a new pole-mounted transformer and utility meter on site. Additionally, a pull box with an open bottom and two mouseholes would be added to the south side of the parking lot.

The Bligh Field overlook along Mill River to the east of the parking lot would also have its decking replaced; its foundation would remain in place.

Greenway Enhancements

A 670-linear-foot, 10-foot-wide porous, asphalt greenway would run along the edge of the river between Bligh Field and the river. The path would end at South Park Avenue to the north. To the south, the greenway would run parallel to the north side of the parking lot and would meet a new crosswalk

proposed along Riverside Road. Additionally, the greenway path would split at northeast corner of parking lot and extend 85-linear feet on the eastern side of the lot.

Three drainage relief pipes would be established at low points along the proposed greenway, 11 large trees would be planted, pole-mounted light fixtures would be installed, and native plant species would be planted where no plants previously existed.

This portion of the greenway would be constructed as part of the Lister Park component, but it would connect to the larger proposed Mill River Greenway component, described in **Section 3.6** and shown in **Figure 15** (in **Section 3.6.1**, below). Specifically, the end of the proposed greenway and crosswalk at Riverside Road would connect to the northern tip of the southern portion of the Mill River Greenway component along Mill River Avenue. The proposed greenway would connect with the existing trail east of Bligh Field on its north side.

3.3.2.4 Living Shoreline

A living shoreline is a green infrastructure technique used to protect and stabilize shorelines that uses natural materials such as plants, sand, or rock. Living shorelines can be used in combination with hard shoreline stabilization structures, like riprap or bulkheads, and provide numerous benefits, including nutrient pollution remediation, essential fish habitat (EFH) structure, and buffering of shorelines from waves and storms. Research indicates that living shorelines are more resilient than bulkheads in protecting against the effects of hurricanes (NOAA 2019).

Living shorelines would be installed along the Mill River to stabilize the water's edge, reduce erosion, and provide valuable habitat to enhance coastal resilience. The living shoreline would be constructed with small backhoes and by hand. Stone sills would be installed by backhoes, and coir logs planted with salt-marsh bulrush (*Schoenoplectus robustus*) would be staked in by hand. Additional native tidal wetland vegetation would also be planted along the shoreline. The total limit of disturbance for the shoreline would be 220,639 square feet or approximately 5.07 acres. Rock sills would be continuous throughout the living shoreline, although they would be used away from areas with stabilized and preserved trees to protect them from damage. Upland and wetland vegetation would be planted between the rock sills. A site plan is shown in **Figure 10**.

Of the 246 trees in the area of disturbance, the work would remove 91 trees. Of the remaining 155 trees, 56 of them would be stabilized by placing soil over existing tree roots to a maximum of 3 inches. The other 99 trees, which consist primarily of healthy, mature red mulberry, American sycamore (*Platanus occidentalis*), black walnut, and boxelder maple, would remain in place. **Appendix A2** provides a schedule of the species and diameter of trees to be removed, stabilized, and preserved. An assortment of large trees, small trees, shrubs, herbs/grasses, and landscape plugs, and seed mix would be planted throughout the living shoreline limit of disturbance and adjacent area (see **Section 7.4.2** and **Appendix B**).

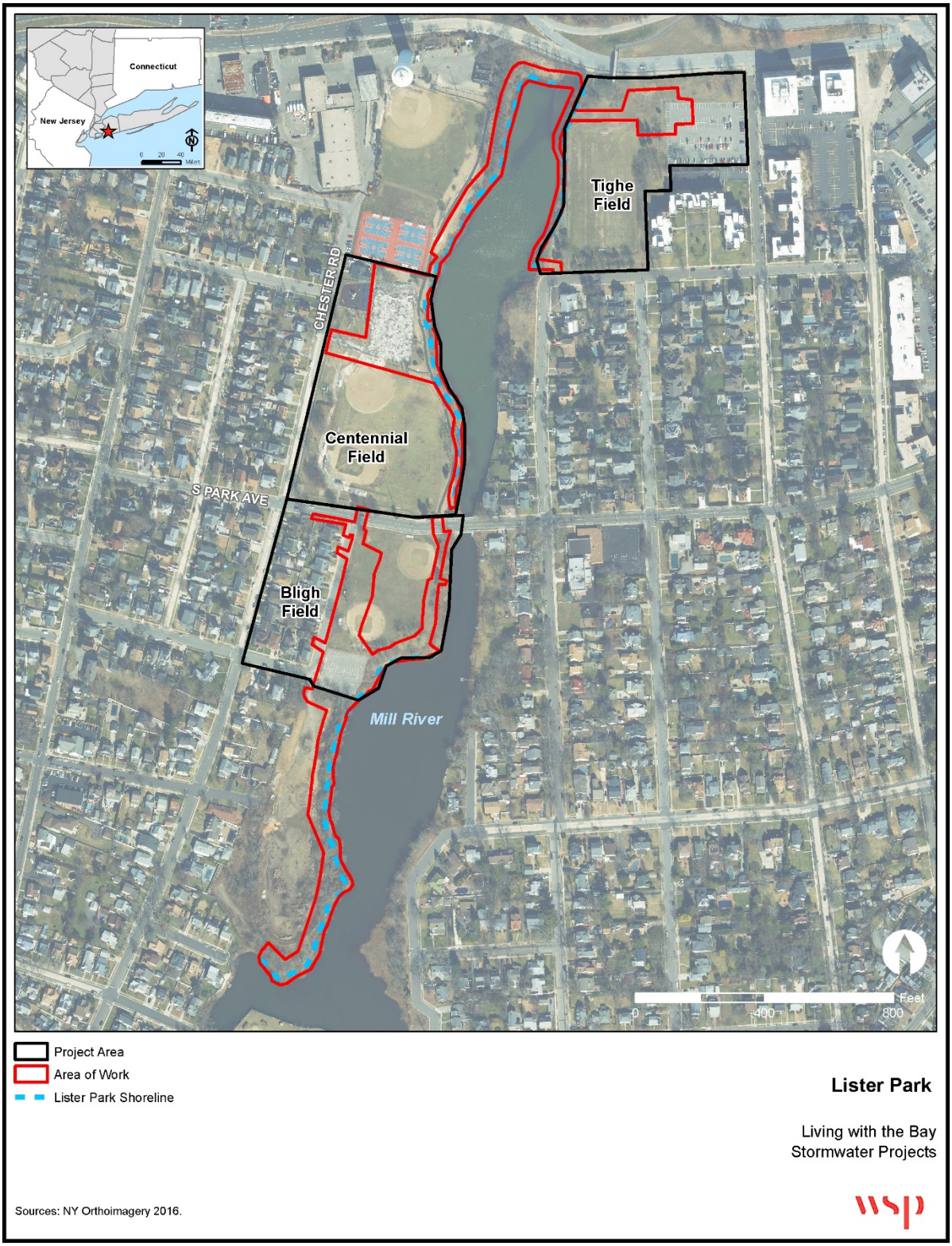

Figure 10: Lister Park (Living Shoreline and Fields) Proposed Area of Work

3.4 EAST ROCKAWAY HIGH SCHOOL COMPONENT[3]

The ERHS component would address flooding during heavy rainfall events and tidal surge at the school campus and sports field. Hurricane Sandy inundated the high school, leaving its grounds severely damaged and eroded the land supporting vegetation communities along the river. The faculty parking lot continues to routinely flood during storms and sunny-day flooding is common in the area given its low-lying terrain. Shorelines along the east and west banks of the Mill River experience erosion from high river velocities and tidal surge. Continued erosion could threaten the use of the entire field for both school activities and community recreation.

3.4.1 Existing Conditions

The ERHS component is located in the Village of East Rockaway, Nassau County, New York (See **Figures 1** and **2**). Most of the ERHS component is on the west bank of Mill River along Ocean Avenue and south of the Lister Park component, but a smaller area is located on the eastern shoreline. The proposed changes would occur primarily along the shoreline of the high school property, with minor changes inside the perimeter of the high school buildings and sports field.

The high school consists of the main campus building, the school district center, and a large, natural grass sports field to the north. The north and east sides of the sports field and the east side of the high school campus (the existing faculty parking lot) are directly adjacent to the Mill River. An existing timber bulkhead runs along the river, and a guiderail separates the campus parking lot from the river; however, the central portion of the site behind the football field bleachers contains approximately 705 linear feet of unstabilized shoreline, leading to erosion of the existing shoreline and vegetation. A combination of natural vegetation and fencing separates the sports field from the river, and riprap exists at the northeast corner of the sports field. The parking lot consists of approximately 85 spaces. Bleachers and a scoreboard are on the east side of the field between the football field and the shoreline. On the east side of the river, a bulkhead and small fence separate the river from a residential area on River Avenue. An 18-inch underground reinforced concrete pipe drains stormwater from the River Avenue to the Mill River. Photos of existing conditions are shown in **Figure 11**.

[3] Unless noted otherwise, information for this section draws on Tetra Tech 2018a,b.

Figure 11a: East Rockaway High School Athletic Field (Left) and Shoreline Vegetation (Right)

Figure 11b: East Rockaway High School Bulkhead (Left) and Faculty Parking Lot (Right)

3.4.2 Proposed Improvements

The proposed improvements for the ERHS component include bulkhead and drainage improvements, installation of green infrastructure, parking lot enhancements, and the addition of an emergency generator. An overview of proposed improvements is shown in **Figure 12,** and detailed drawings are provided in **Appendix A3**.

3.4.2.1 Bulkhead and Shoreline Improvements

On the western side of the Mill River, the existing fencing and guiderail along the bulkhead, trees, and vegetation would be removed. The existing bulkhead surrounding the school property would be elevated by 2 feet above the current grade, and approximately 705 linear feet of proposed bulkhead would be installed landward of the mean high-water line along the eastern side of the existing athletic field. A typical bulkhead cross-section is shown in **Appendix A3.**

A 3-foot-wide French drain with a 12-inch perforated high-density polyethylene pipe is proposed on the eastern side of the sports field. This drain would provide a future connection point for discharge into the Mill River for the proposed turf field underdrainage system that the School District would design and construct. The eastern side of the sports field would be preserved and maintained. The existing shipping container, shed, bleachers, and score board would be relocated. At two locations, additional piping would connect the perforated high-density polyethylene pipe invert to the bulkhead, and two backflow preventers would be installed at those locations.

3.4.2.2 Green Infrastructure

A rain garden and a hydrodynamic separator to treat the water quality volume generated by the faculty parking lot would be installed on the east end of the site, adjacent to the faculty parking lot, to treat 90 percent of all 24-hour rain events.

3.4.2.3 Emergency Generator

An emergency generator would be installed in an existing alcove area on the rear property of the high school near the existing interior electrical room and adjacent to an existing generator that provides power to the school sump pump system. The proposed 350-kilowatt generator would be located above the base flood elevation (BFE) of 11 feet and equipped with a 1,024-gallon diesel fuel tank capable of providing full power to the existing demand loads for main school building for 24 to 36 hours. The generator would also serve as a power source for a community emergency shelter in the event of such a power loss.

3.4.2.4 Parking Lot

The entire parking lot would be replaced with new asphalt pavement, graded to direct stormwater runoff to the proposed green infrastructure to the east, and restriped. Two spots would be gained from former no-parking zones.

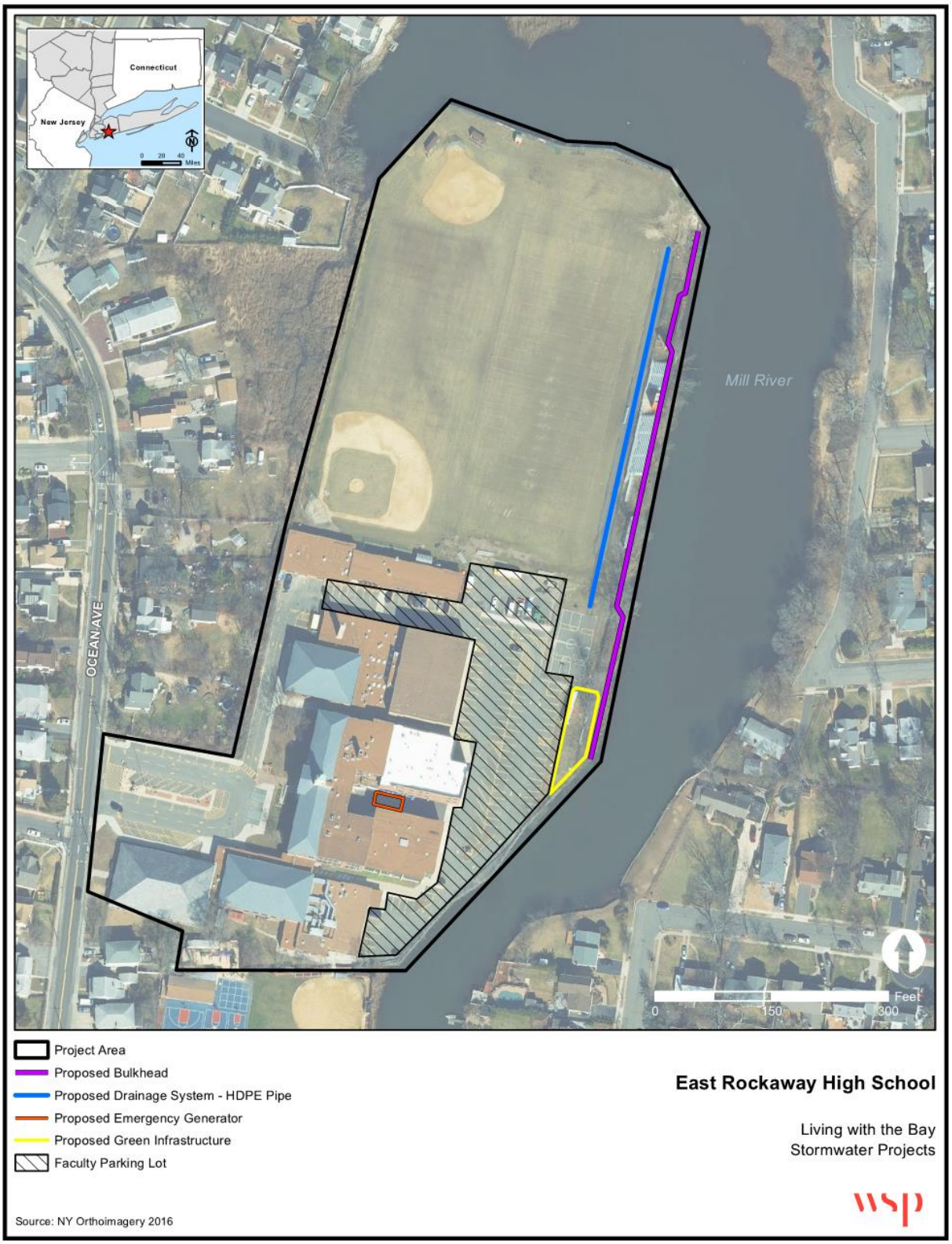

Figure 12: East Rockaway High School Proposed Improvements

3.5 EAST, WEST, AND NORTH BOULEVARDS – STORMWATER DRAINAGE IMPROVEMENTS COMPONENT[4]

The East, West, and North Boulevards Stormwater Drainage Improvements component (Boulevards component) would improve outfall piping and catch basins to (1) prevent flooding of streets, including East Boulevard, West Boulevard, North Boulevard, the cross streets of both boulevards, and Hewlett Point Avenue; (2) improve water quality; and (3) improve public safety and access in the Bay Park area during tidal and storm surges. The component would also address the undersized stormwater system, which currently cannot handle the quantity of water that is directed to the system during tidal and storm events.

3.5.1 Existing Conditions

The Boulevards component is located in a residential neighborhood in Bay Park, a hamlet in the southwestern portion of the Town of Hempstead with an estimated population of approximately 2,100. Bay Park is bordered by Hewlett and Hewlett Harbor to the west, East Rockaway to the north, Oceanside to the east, and Hewlett Bay to the south. Long Beach protects the mainland of Bay Park from the Atlantic Ocean. The Grand Canal extends north-south between East and West Boulevards; Higbie Creek extends north-south, west of West Boulevard. Both waterways flow into Hewlett Bay and the greater West Hempstead Bay.

The existing drainage infrastructure does not operate properly primarily because the drainage outfalls are located below the high tide elevation, which allows tidal waters to enter the drainage system through the unprotected outfalls and overflow inlet structures onto the streets. In addition, most outfalls are not equipped with backflow valves or gates, which allow debris and sediment to obstruct water flow and lead to frequent maintenance. East and West Boulevards are approximately 30 feet wide and are currently sloped in a way that limits the discharge of surface water flow and exacerbates flooding in the area. Photos of existing conditions are shown in **Figure 13.**

[4] Unless noted otherwise, information from this section draws on Town of Hempstead, Department of Engineering 2020.

Figure 13a: East, West, and North Boulevards Deteriorated Bulkhead (Left) and Deteriorated Storm Drain (Right)

Figure 13b: East, West, and North Boulevards Ponding on Sidewalk (Left) and Sediment Accumulation at Drain (Right)

3.5.2 Proposed Improvements

Flood prevention and stormwater management improvements that use both conventional and green infrastructure are proposed at several intersections and roadways in the hamlet of Bay Park in a waterfront residential neighborhood that frequently floods due to tidal backup during high tides. The Boulevards component would alter approximately 7,630 linear feet of roadway on East, West, and North Boulevards and various nearby side streets in the vicinity. These alterations are discussed below.

The improvements would encompass the full length of West Boulevard (2,700 linear feet, plus 1,700 feet of adjacent side streets), the full length of East Boulevard (2,500 linear feet, plus 730 feet of side streets), and a 750-linear-foot section of North Boulevard plus 60 feet of intersecting side street. The eastern and western portions of the following side streets would be involved: Cooke, Dewey, Sampson, Sperry, Evans, Hudson, Fulton, Martin, Court, and East Bayview Streets. Design drawings are shown in **Appendix A4**, while a site overview with proposed improvements is shown in **Figure 14**.

Proposed stormwater improvements would include the installation of conventional storm sewer structures, such as catch basins, storm drainpipes, and manholes. The proposed improvements would also include the installation of in-line check valves to prevent water backflow from Grand Canal and Higbie Creek into the storm sewer.

To increase resiliency, two bioretention basins would be installed at the ends of West Evans Street and Court Street West. Each basin would be approximately 3,200 square feet in size. The basins are expected to improve the quality of stormwater runoff by allowing the water to percolate through the system where it is treated. The slowed, cleaned water would then infiltrate the soils, groundwater, or nearby waterways.

Minor roadway enhancements would be performed at the East, North, and West Boulevards, including the installation of gutters and curbs. Roadways would be milled and paved in all work areas. Driveways and areas adjacent to the roadways would be replaced and reseeded, respectively.

Table 1 provides an inventory of the proposed interventions along each roadway, respectively:

Table 1: Proposed Elements for the East, West, and North Boulevards Stormwater Drainage Improvements Component

Proposed Element	West Boulevard	North Boulevard	East Boulevard
Stormwater Management			
Replace catch basin(s)	✔ (22)	✔ (3)	✔ (26)
Install in-line check valve	✔ (6)	✔ (1)	✔ (11)
Install storm drainpipes	✔	✔	✔
Reset frames and grates manholes	✔ (12)	✔ (2)	✔ (5)
Install bioretention basin	✔ (3)		
Elevate roadways	✔	✔	✔
Install concrete valley gutters	✔		✔
Install curb gutters	✔	✔	✔

Proposed Element	West Boulevard	North Boulevard	East Boulevard
Install concrete curbs	✔	✔	✔
Install porous asphalt with new stone reservoirs (3,454 square feet)	✔ (5)		
Install porous pavers (1,177 square feet)		✔	
Post Construction			
Mill and pave	✔	✔	✔
Replace driveways and grass	✔	✔	✔

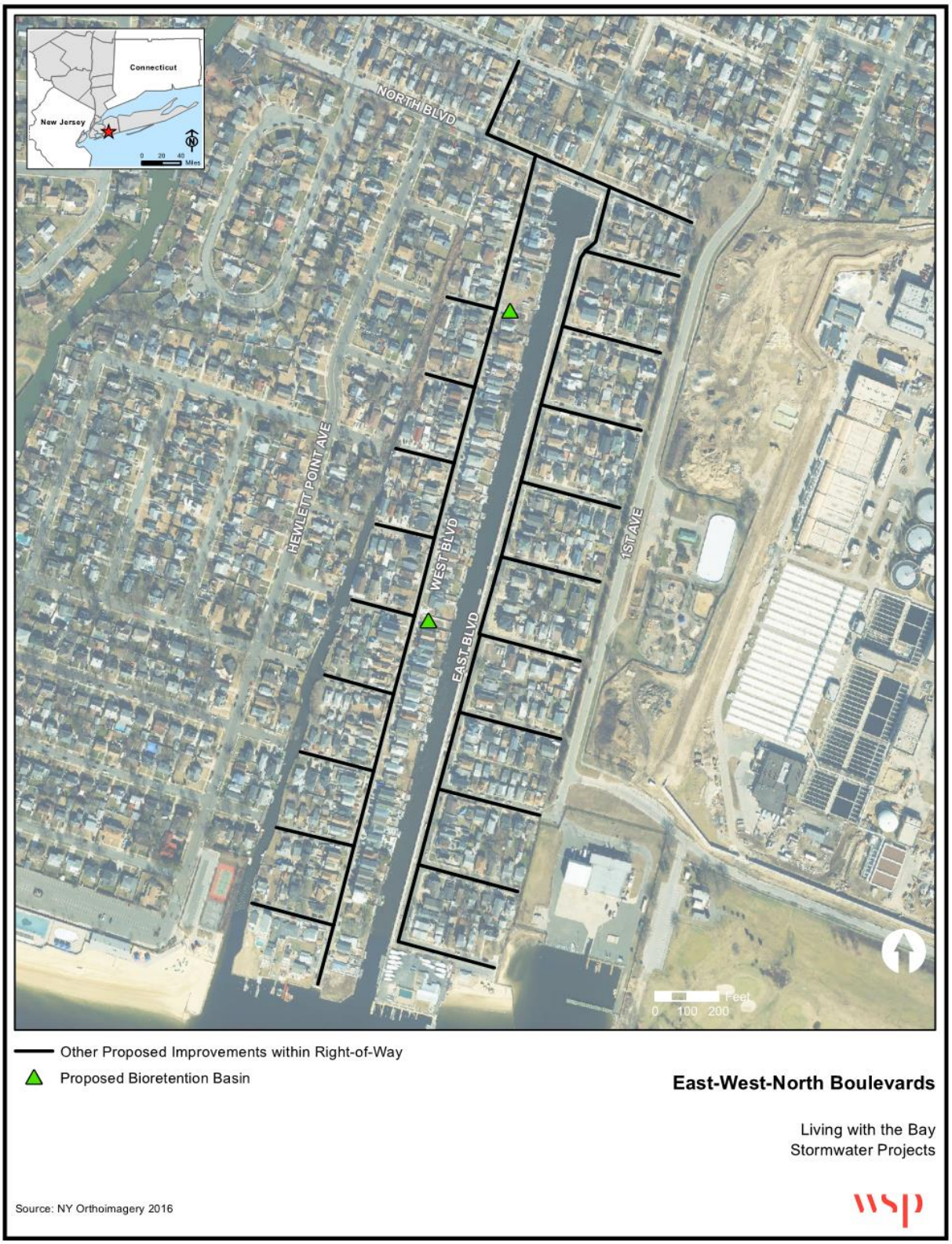

Figure 14: East, West, and North Boulevards Proposed Improvements

3.6 MILL RIVER GREENWAY COMPONENT[5]

The purpose of the Mill River Greenway component is to increase recreational opportunities and public safety along Mill River by expanding accessibility to and along the river, improving surrounding sidewalks and crosswalks, and installing wayfinding and signs for historical sites. The component is needed to take the currently disconnected recreational and open resources in the area, including schools, and link them into a coherent system of pedestrian and bicycle paths. Existing trails, gateways, and waterfront access with the Mill River Greenway component would be combined to develop sites along the Mill River that are currently underused and/or unreachable and use these sites to help meet the objectives of the LWTB Project and Resiliency Strategy.

3.6.1 Component Sections

This component would span approximately 5.1 miles across multiple communities, including the Villages of Hempstead, Rockville Centre, Lynbrook, and East Rockaway, and the Town of Hempstead (see **Figures 1** and **2**). Because the greenway connects these communities, it would provide access to the Mill River, South Pond, Smith Pond, and Hempstead Lake.

The overall area along Mill River is ideal for biking, walking, and boating, but the existing trails toward or along the river are discontinuous or concentrated within unconnected areas. Much of the river's edge has been privatized, and the public areas that remain are disconnected from the pathway network. Public access to waterways and continuous walking and bicycle paths is limited. The entire greenway, including existing trails, proposed greenway in the LWTB Stormwater Project components, and greenway pathing in other LWTB projects, is shown in **Figure 15**. The proposed Mill River Greenway component would comprise four sections:

1. The northern portion would run alongside the northern edge of Peninsula Boulevard, adjacent to Hempstead High School. It would connect to the middle northern portion via the existing multiuse trail along Peninsula Boulevard or the Hempstead Lake State Park trail to the south. Note that the Hempstead Lake State Park portion was analyzed previously in the EA for the Hempstead Lake State Park Project (HUD 2019).
2. The middle northern portion would run parallel to South Pond, cross Maine Avenue, and include the community just north of there. It would connect to the middle southern portion through the proposed Smith Pond greenway.
3. The middle southern portion would reside entirely within the Village of Rockville Centre and connect Smith Pond from Nassau Street to the surrounding community. This portion of the greenway would connect to the southern portion of the greenway through existing trails and the proposed Lister Park greenway.
4. The southern portion would begin at Compton Street in East Rockaway, travel through the Village of East Rockaway, and end at Bligh Field.

The location of each section is shown in **Figure 15**. The greenway elements included in the Smith Pond and Lister Park components are proposed separately from this Mill River Greenway component. These sections are designed to connect and match with the overall Mill River Greenway component to provide connectivity to the surrounding community. These sections of greenway are described in detail in their respective sections above (**Section 3.2.2.7** and **Section 3.3.2.3**).

[5] Unless noted otherwise, information for this section draws on GOSR 2019b.

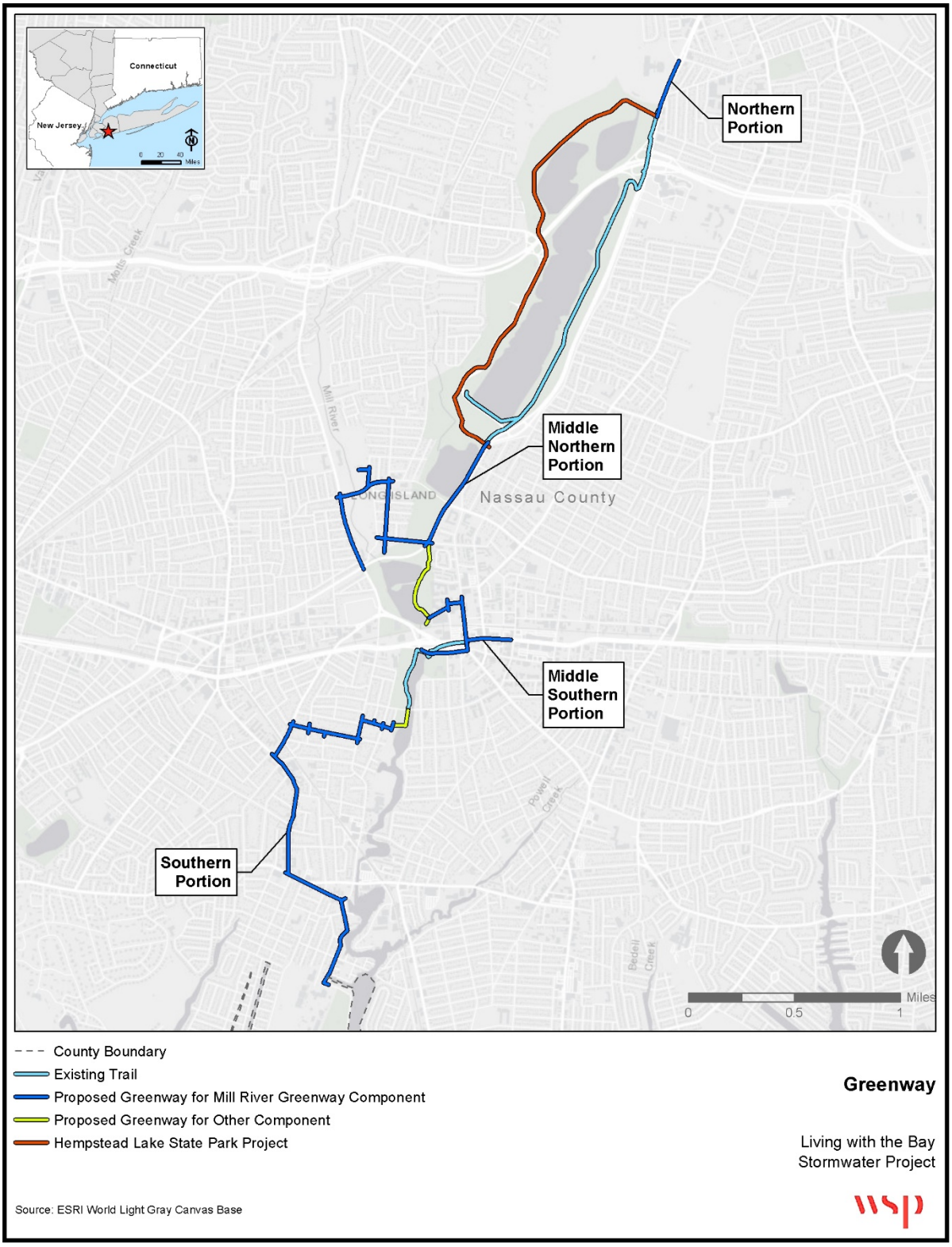

Figure 15: Existing Trails and Proposed Greenway

3.6.2 Existing Conditions

The existing conditions throughout the four portions of the Mill River Greenway are similar in nature. The sidewalks and crosswalks throughout the component site are located primarily within residential and commercial areas, and the pathways usually lead to recreational amenities in the general area.

Sidewalks are generally in fair condition and are usable by the general public; however, many include sections where the pavement has deteriorated or heaved. Other portions have overhanging vegetation from yards or overgrown vegetation from lack of maintenance. While most of the sidewalks meet the 4-foot width for ADA compliance, many of the walkways are obstructed or upheaved by road signs and trees. In several commercial areas, the sidewalks are wider, commonly double the width or more of the 4-foot sidewalks. Sidewalks not made of concrete are either black asphalt or red brick.

Crosswalks along the route commonly have faded or non-existent striping. Associated curb ramps often have detectable warning surfaces, though it is more common than not for their slopes or turning space to be insufficient to meet ADA compliance. Other crosswalks do not have sufficient slopes or turning space and possess no detectable warning surfaces. In some locations, curb ramps are not present. Limited locations have distinct striping and new ADA-compliant curb ramps. Photos of existing conditions are shown in **Figure 16**.

Figure 16: Mill River Greenway Example of Overgrown Vegetation (Top-Left), Non-Existent Vegetation (Top-Right) and Obstructed Sidewalks (Bottom)

3.6.3 Proposed Improvements

3.6.3.1 Northern Portion

Two ramps along the western side of Peninsula Boulevard, at the intersections of West Graham Avenue and President Street, would be replaced. The crosswalk at President Street would be restriped, and a section of sidewalk just south of that intersection would be replaced. In total, 123 linear feet of sidewalk would be replaced.

Signs designating the path of the Mill River Greenway would be installed at intersections and crosswalks where the greenway is proposed to begin, end, or change direction. Signs would be placed at the beginning of the Mill River Greenway, at the President Street crosswalk, and at the end of the northern portion where the Mill River Greenway continues south by way of the Hempstead Lake State Park trail or the existing multiuse trail along Peninsula Boulevard. **Appendix A5** includes design drawings for the Mill River Greenway component, and **Table 2** identifies and summarizes the changes proposed.

Table 2: Proposed Elements for the Mill River Greenway Component

Proposed Element	Northern Portion	Middle Northern Portion	Middle Southern Portion	Southern Portion
Improved sidewalks	✔ (123 LF)	✔ (5,304 LF)	✔ (683 LF)	✔ (3,046 LF)
New sidewalks		✔ (820 LF)	✔ (165 LF)	
Crosswalk improvements	✔ (1)	✔ (14)	✔ (10)	✔ (26)
Curb ramp improvement	✔ (2)	✔ (18)	✔ (29)	✔ (50)
Tree removal		✔ (4)		
Vegetation trimming / removal		✔		✔
Install additional signage	✔	✔	✔	✔

LF — linear feet

3.6.3.2 Middle Northern Portion

Sidewalk replacement or reconstruction would occur intermittently along 36 planned sections (5,304 linear feet) of sidewalks in the middle northern portion. Longer, continuous sections of sidewalk would be replaced at the eastern side of Ocean Avenue and the northwestern side of Peninsula Boulevard. A new sidewalk would be installed along Maine Avenue. In addition, four trees would be removed along Ocean Avenue near Peninsula Boulevard to prevent further sidewalk damage.

At most intersections throughout the middle northern portion, curb ramps would be replaced, and crosswalks would be striped. For example, at the intersection of Maine Avenue and Peninsula Boulevard, three of four ramp curbs would be replaced, and the striping across the road would be repainted to make the crosswalks ADA compliant. Similar work would be completed at designated intersections throughout the middle northern portion. In total, 18 curb ramps would be replaced, and 14 crosswalks would be restriped.

Signs designating the path of the Mill River Greenway would be installed at intersections and crosswalks where the greenway changes direction, such as the turn from Lakeview Avenue onto Ocean Avenue.

Signs currently present along Ocean Avenue, Howard Street, and Henry Street would be relocated outside the sidewalk, and new posts would be installed. The middle northern portion would connect to the middle southern portion through the proposed Smith Pond greenway.

3.6.3.3 Middle Southern Portion

Sidewalk replacement or reconstruction would occur intermittently along 18 planned sections (683 linear feet of improved sidewalks) of the entire middle southern portion. Longer, continuous sections of sidewalk would be reconstructed or installed along the western side of North Centre Avenue between Morgan Days Lane and Sunrise Highway, and new sidewalks would be installed along Nassau Street, near Smith Pond (165 linear feet). In addition, the manhole present on the southern side of Merrick Road would be reset after the sidewalk is replaced.

Curb ramp replacement and crosswalk striping would occur at most of the intersections throughout the middle southern portion to make the crosswalks ADA compliant. Twenty-nine curb ramps would be replaced, and striping would occur at 10 crosswalks.

Signs designating the path of the Mill River Greenway would be installed at intersections and crosswalks where the greenway changes direction, such as the transitions from North Centre Avenue across Merrick Road and across Lincoln Avenue continuing on Merrick Road. This portion of the Mill River Greenway would connect to the southern portion of the greenway through existing trails and the proposed Lister Park greenway.

3.6.3.4 Southern Portion

Sidewalk replacement or reconstruction would occur intermittently along the southern portion at 41 planned sections (3,046 linear feet of improved sidewalks). Longer, continuous sections of sidewalk would be replaced on the northern side of Mill River Avenue from Bayview Road to Riverside Road; the western side of Ocean Avenue from Garfield Place to Vincent Place; the southern side of Garfield Place from Clark Street to Ocean Avenue; and the western side of Atlantic Avenue from Maxwell Street to Scranton Avenue. In addition, the valves at the southern end of 5th Avenue would be reset, and the vegetation would be trimmed back from the sidewalk along Mill River Avenue after sidewalk replacement.

Curb ramp replacement and crosswalk striping would occur at most of the intersections in the southern portion. Fifty curb ramps would be replaced, and 26 crosswalks would be restriped. At the northern corner of the intersection of Maxwell Street and Atlantic Avenue, two sections of broken curb would be replaced.

Signs designating the path of the Mill River Greenway would be installed at intersections and crosswalks where the greenway is proposed to begin, end, or change direction, such as the turn from Main Street onto Front Street.

4 EXISTING CONDITIONS AND TRENDS [24 CFR § 58.40(A)]

This section identifies conditions at the sites associated with the components and analyzes impacts or effects that would result from implementing the proposed actions considered in this EA. The proposed actions are described in **Section 3**.

4.1 LAND USE

Land uses within the LWTB Stormwater Project components vary. **Table 3** describes the current land uses surrounding each project component.

Table 3: Current Land Use

LWTB Stormwater Project Component	Land Uses
Smith Pond Rehabilitation	Current land use is park/recreational. Adjacent land uses are a mix of high-density residential, low-density residential, commercial, park/recreational, transportation, and institutional (religious).
Lister Park Improvements	Current land use is park/recreational. Land uses adjacent are high- and low-density residential, institutional (schools), transportation, and public (Department of Public Works lot).
East Rockaway High School	Current land use is institutional (school). The adjacent and surrounding land uses are low-density residential and commercial.
East, West, and North Boulevards Stormwater Drainage Improvements	Current land use is primarily low-density residential with limited commercial uses. Adjacent land uses are residential, park/recreational and public (Bay Park Water Reclamation Facility).
Mill River Greenway	Current land use, as well as the adjacent and surrounding land uses, are a mix of high and low-density residential, commercial, educational, recreational, and public. This component spans several different communities throughout the Town of Hempstead.

4.2 FLOODPLAIN MANAGEMENT

Federal Emergency Management Agency (FEMA) flood data for the project area are depicted on **Figure 17**. Flood zones and BFE, if available, for each component are listed below. BFE indicates the water surface elevation resulting from a flood that has a 1-percent chance of occurring in any given year. The floodplain for each LWTB project component is noted in **Table 4**.

Smith Pond Rehabilitation Component

Smith Pond lies within the 100-year floodplain, Zone A, which is a special flood hazard area that is subject to flooding by the 1 percent annual chance flood. The water surface elevation for this occurrence was not determined. Uplands surrounding the pond area are mapped as Zone X, which designates an area of minimal flood hazard.

Table 4: Federal Emergency Management Agency-Designated Floodplains

LWTB Stormwater Project Component	FEMA Designated Floodplain	FEMA Flood Insurance Rate Map Number
Smith Pond Rehabilitation	Zone A, Zone X	36059C0216G & 36059C0217G
Lister Park Improvements	Zone AE (BFE 9 feet), Zone X, & 0.2% annual chance flood hazard zone	36059C0216G, 36059C0217G, 36059C0218G, 36059C0219G
East Rockaway High School	Zone AE (BFE 10 feet), Zone X	36059C0218G & 36059C0219G
East, West, and North Boulevards Stormwater Drainage Improvements	Zone AE (BFE 9 feet)	36059C0218G
Mill River Greenway	Zone X, Zone AE (BFE 9-10 feet) & 0.2% annual chance flood hazard zone.	36059C0210G, 36059C0216G, 36059C0217G, 36059C0218G, 36059C0219G

Source: FEMA 2020

Lister Park Improvements Component

Most of the site lies within Zone AE with a BFE elevation of 9 feet[6]. Zone AE consists of special flood hazard areas subject to inundation by the 1 percent annual chance flood or 100-year storm event. The eastern portion of Tighe Field is mapped as Zone X, and the southwest portion of Centennial Field is located within the 0.2 percent annual chance flood (or 500-year storm event) hazard zone.

East Rockaway High School Component

Most of the site lies within Zone AE with a BFE of 10 feet. However, the northern extent of the site is in Zone AE with a BFE of 11 feet, and the southern extent lies within Zone AE with a BFE of 9 feet. A developed portion in the southwest corner of the site is mapped as Zone X.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

The site lies within Zone AE with a BFE elevation of 9 feet. Immediately south of the site, Hewlett Bay is mapped as a Zone VE. VE zones, also known as coastal high hazard areas, are areas subject to high velocity water including waves; they are defined by the 1 percent annual chance flood limits and wave effects of 3 feet or more.

Mill River Greenway Component

Much of the proposed greenway alignment lies within Zone X. The southern portion crosses a 0.2 percent annual chance flood hazard zone, and the southern extent of the alignment lies within Zone AE with a BFE ranging from 9 to 10 feet.

These floodplain lands were previously disturbed during construction of their respective development. The FEMA Flood Insurance Rate Maps (FIRMS) that cover each component area are provided in **Appendix C**.

[6] All BFE are provided in North American Vertical Datum of 1988.

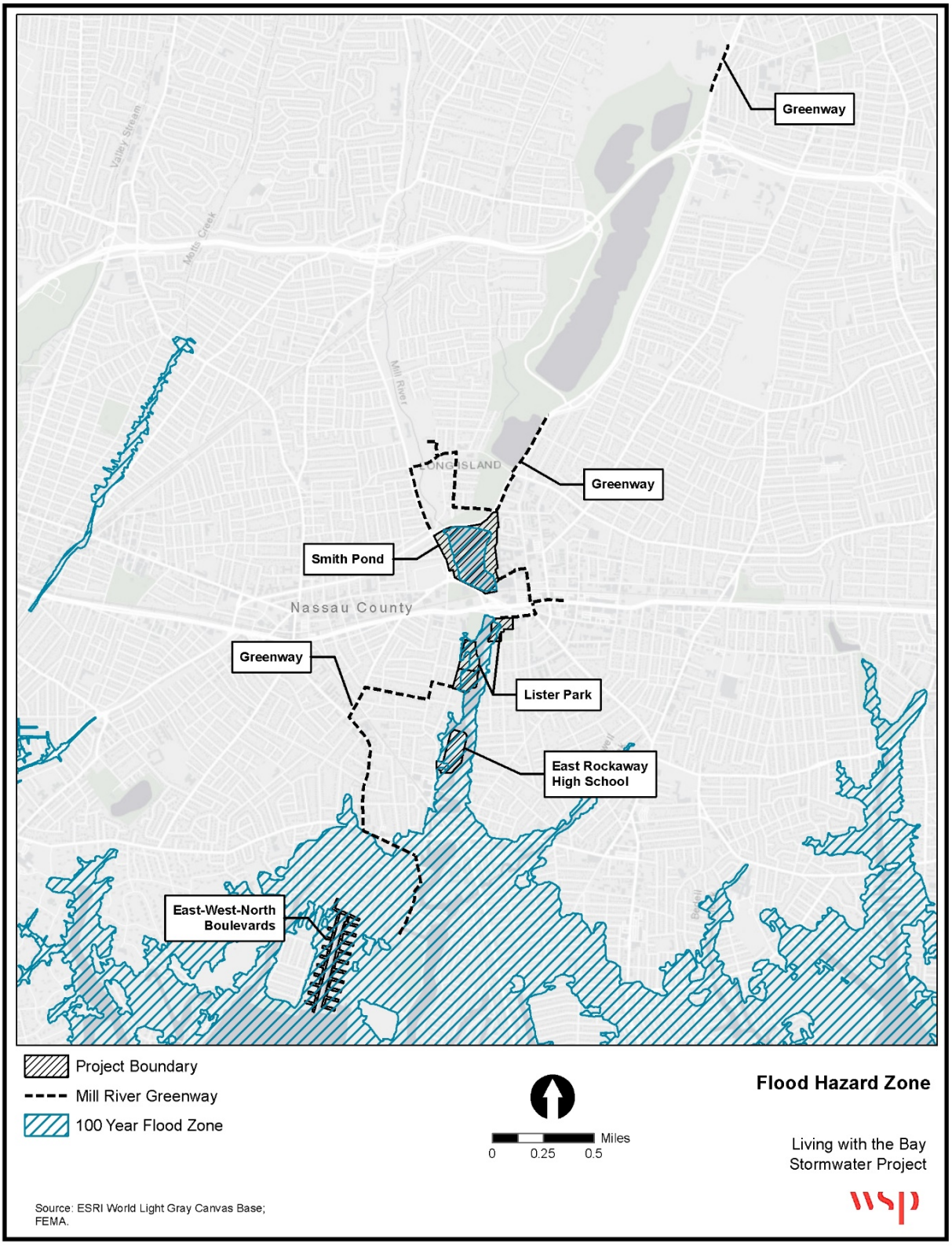

Figure 17: Flood Hazard Map

4.3 COASTAL ZONE MANAGEMENT AND COASTAL BARRIERS

Congress enacted the Coastal Zone Management Act of 1972 (16 United States Code [USC] §§1451–1464) to balance the competing demands of growth and development with the need to protect coastal resources. Its stated purpose is to "preserve, protect, develop, and, where possible, to restore or enhance, the resources of the Nation's coastal zone. . .” The primary means of achieving this balance is through a coastal zone management plan developed and adopted by each state and designed to regulate land use activities that could affect coastal waters. **Figure 18** depicts the New York State coastal zone boundary in the LWTB Stormwater Project area.

The Coastal Barrier Resources Act was enacted in 1982, with the goal of removing historical federal incentives that subsidized and encouraged development of coastal barriers and resulted in the loss of natural resources. The Act and subsequent amendments designated relatively undeveloped coastal barriers along the Atlantic, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and Puerto Rico coasts as part of the Coastal Barrier Resources System and made these areas ineligible for most new federal expenditures and financial assistance. **Figure 19** depicts the Coastal Barrier Resource System in the LWTB Stormwater Project area.

The Lister Park, ERHS, Boulevards, and Mill River Greenway components are located within the coastal zone boundaries of New York State. None of the components are located within a coastal barrier resource system.

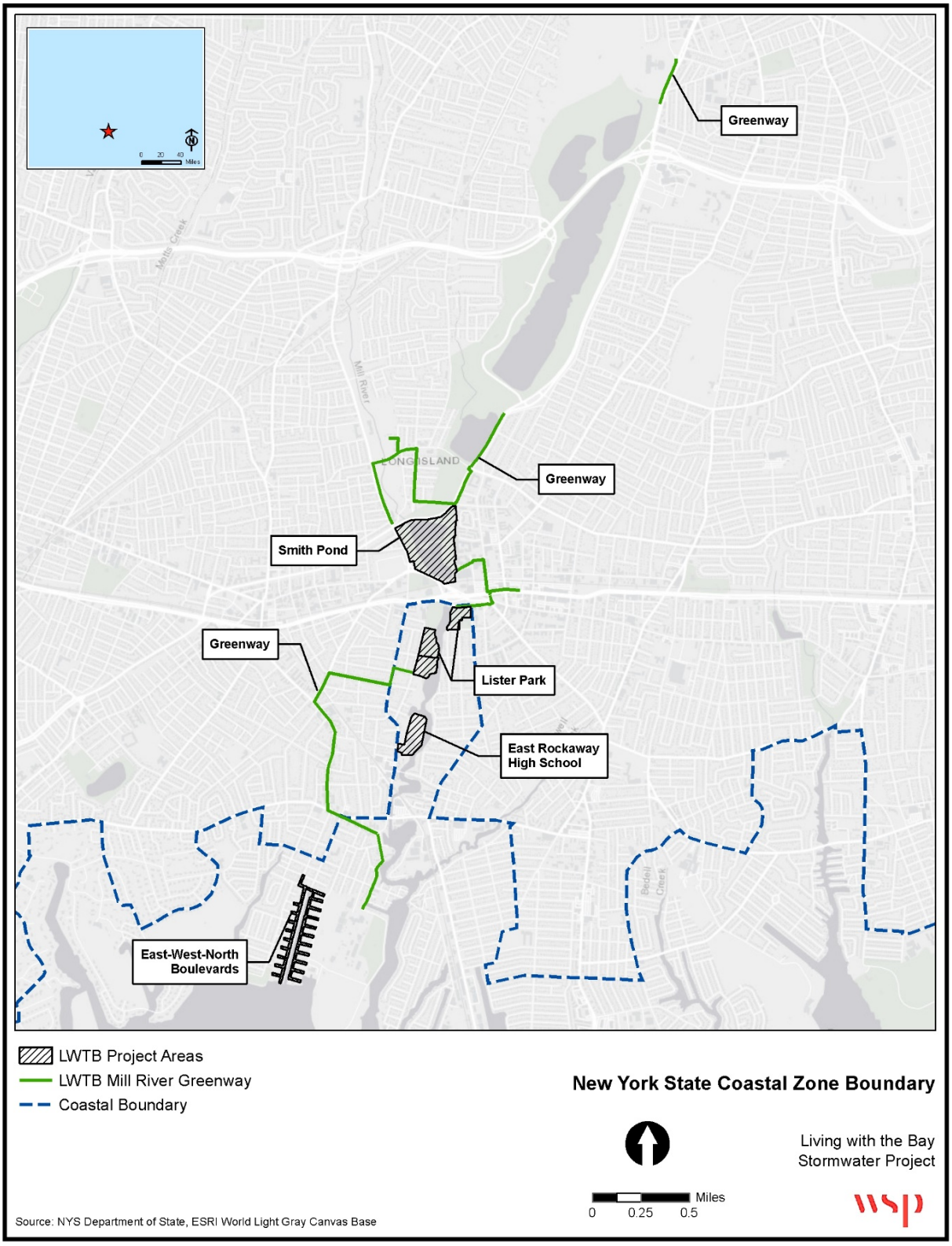

Figure 18: Coastal Zone Boundary

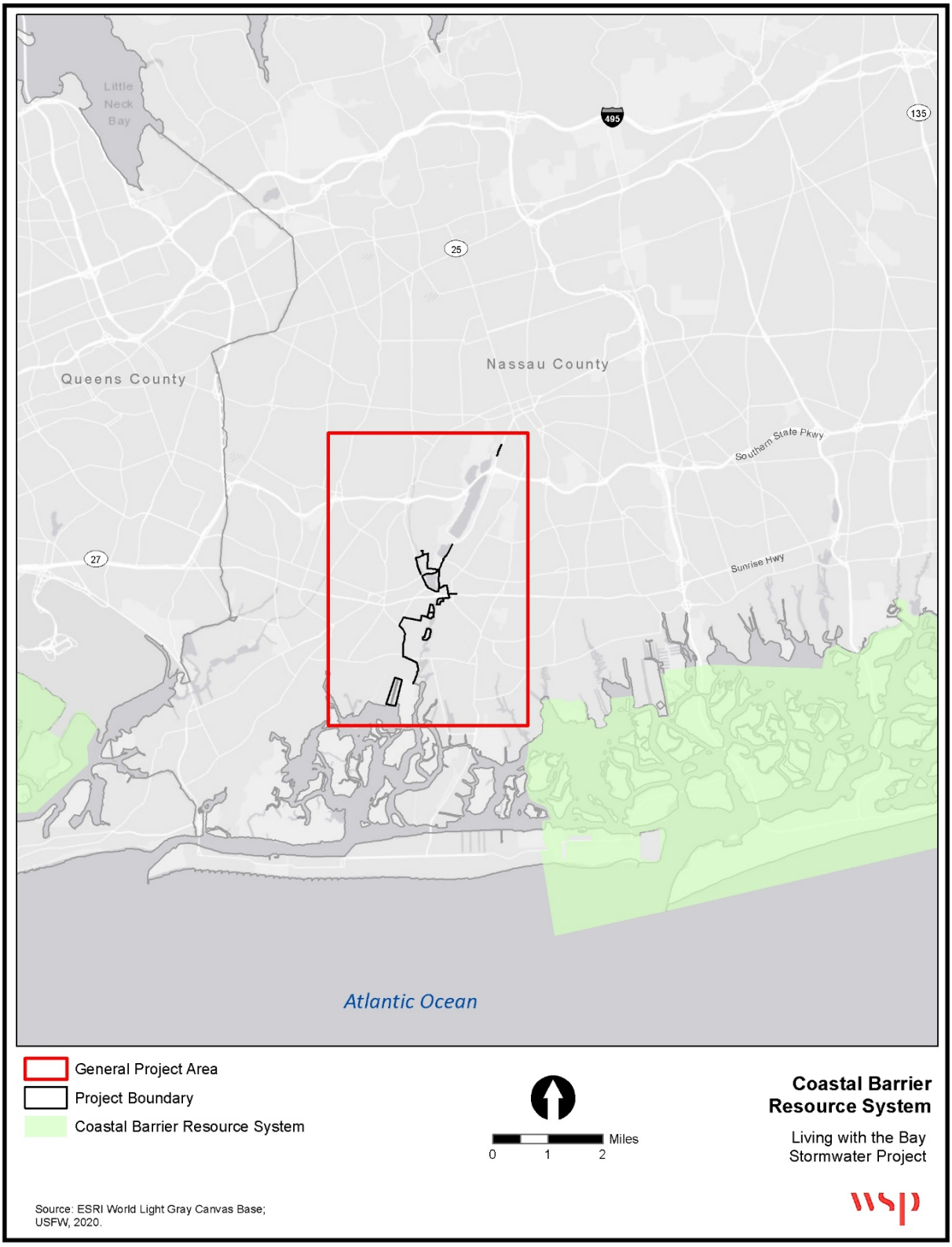

Figure 19: Coastal Barrier Resource System

4.4 CULTURAL AND ECOLOGICAL RESOURCES

4.4.1 Cultural Resources

The Area of Potential Effect (APE) comprises the five project locations as shown in **Figure 2**. The locations of new ground disturbance among the five project components is shown in **Figure 20**.

4.4.1.1 Smith Pond Rehabilitation Component

Archaeological Resources

No archaeological sites are located within the Smith Pond project area. Archaeologists have recorded one archaeological site within a 1-mile radius of the project area. In the Cultural Resource Information System, the Smith's Pond Pump Station Site (A059-47-004), a ca. 1870 emergency pump station, is mapped adjacent to the project area.

Historic (Standing) Structures

No historic structures are located within the Smith Pond project area. Six properties listed in the National Register of Historic Places (NRHP) are within 1.0 mile of the project area. These properties are detailed in **Table 5**.

Table 5: National Register of Historic Places-Listed Properties Within 1 Mile of the Smith Pond Project Area

NRHP No.	Property/District Name	Distance from Project Area	Period of Significance
15NR00059	Rockville Cemetery and Mariners Monument	65 meters (213 feet) west	1799–1943
07NR05780	House at 474 Ocean Avenue (Luning House)	599 meters (1,965 feet) southwest	ca. mid-nineteenth century
90NR01732	United States Post Office-Rockville Centre	616 meters (2,021 feet) southeast	ca. 1937
07NR05778	House at 73 Grove Street	846 meters (2,775.59 feet) northwest	ca. 1840–1933
07NR05779	House at 251 Rocklyn Avenue (Brower House)	1,148 meters (3,766 feet) southwest	ca. 1793–1938
97PR03283	Haviland-Davison Grist Mill	1,527 meters (5,009 feet) south	ca. 1689–1900

4.4.1.2 East Rockaway High School/Lister Park Improvements Components

Archaeological Resources

No archaeological sites are located within the ERHS and Lister Park project areas. Archaeologists have recorded one archaeological site located within a 1-mile radius of the project areas. In the Cultural Resource Information System, the Smith's Pond Pump Station Site (A059-47-004), a ca. 1870 emergency pump station, is mapped adjacent to the Smith Pond project area.

Historic (Standing) Structures

No historic structures are located within the ERHS and Lister Park project areas. Seven properties listed in the NRHP are within 1.0 mile of the project area. These properties are detailed in **Table 6**.

Table 6: National Register of Historic Places -Listed Properties within 1 Mile of the East Rockaway High School and Lister Park Project Areas

NRHP No.	Property Name	Distance from Project Area	Period of Significance
15NR00059	Rockville Cemetery and Mariners Monument	479 meters (1571 feet) northwest	1799–1943
07NR05780	House at 474 Ocean Avenue (Luning House)	300 meters (984 feet) west	ca. mid-nineteenth century
97NR01169	Haviland-Davison Grist Mill	478 meters (1,568 feet) west	1689-1900
14NR06578	Denton Homestead	405 meters 1,329 feet) (southwest	
90NR01732	United States Post Office-Rockville Center	561 meters (4,459 feet) northeast	ca. 1937
07NR05778	House at 73 Grove Street	1,359 meters (2,775.59 feet) northwest	ca. 1840–1933
07NR05779	House at 251 Rocklyn Avenue (Brower House)	870 meters (2,854 feet) southwest	ca. 1793–1938

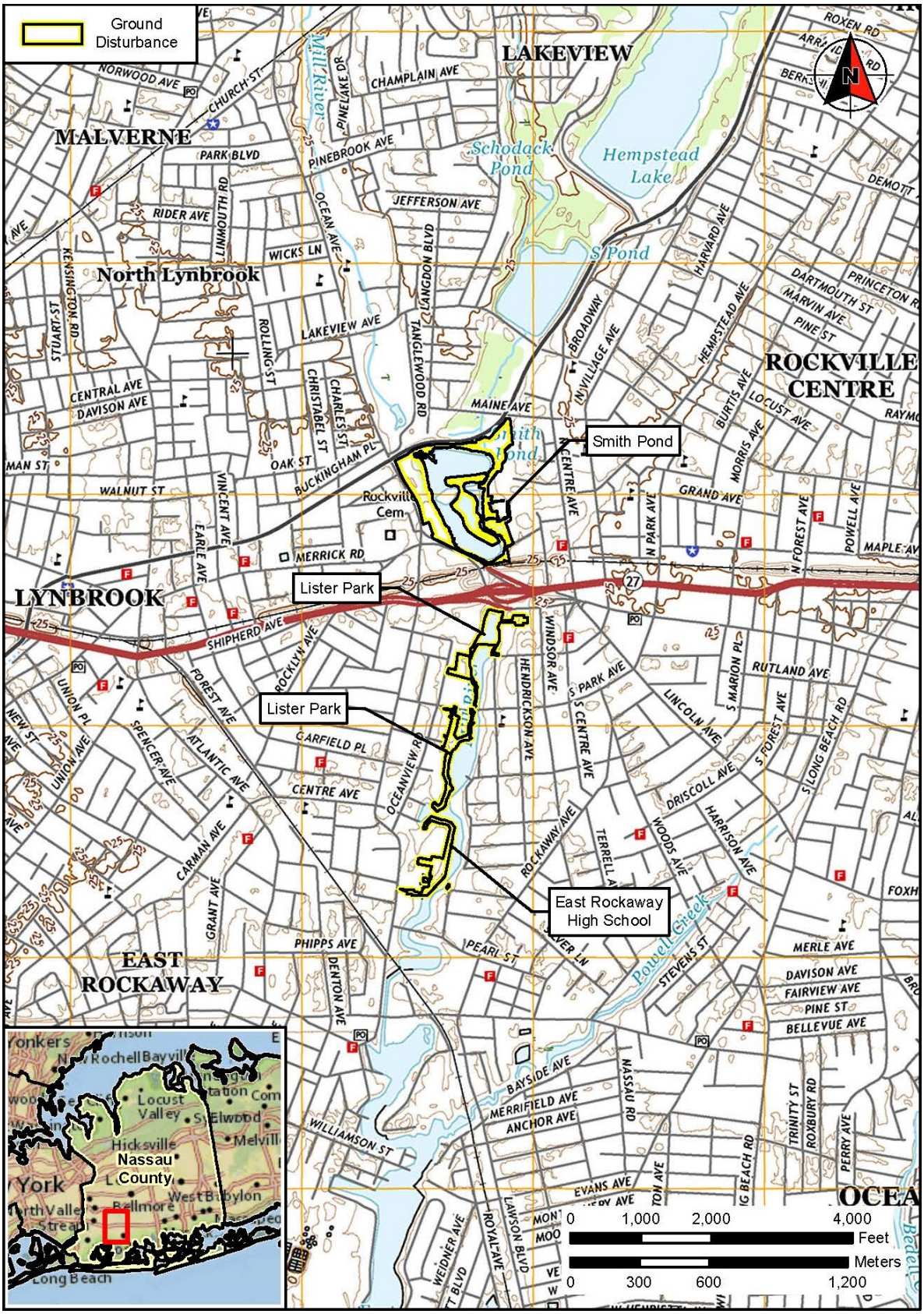

Figure 20: New Ground Disturbance in Project Area

4.4.2 Ecological Resources

4.4.2.1 Wetlands

Wetlands in the project area are described below for each component. Wetlands mapped by U.S. Fish Wildlife Service (USFWS) National Wetlands Inventory (NWI) are depicted on **Figure 21**. NWI wetlands are classified based on *The Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). NYSDEC freshwater and tidal wetlands are depicted on **Figure 22**.

Smith Pond Rehabilitation Component

NWI maps lake, riverine, and freshwater pond wetlands within the site. Smith Pond is designated as lacustrine, limnetic, unconsolidated bottom, permanently flooded, diked/impounded (L1UBHh). Portions of the Mill River at the inlets and outlet of Smith Pond are classified as riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH). A freshwater pond classified as palustrine, unconsolidated bottom, permanently flooded, excavated (PUBHx) is mapped in the northeast corner of the site.

NYSDEC regulates Smith Pond as a freshwater wetland. The wetland identification number assigned to Smith Pond site is L-3, and it is classified as a Class I wetland.

Tetra Tech delineated approximately 29.6 acres of freshwater wetlands and 300 linear feet of ephemeral stream within the site in 2017 (see **Appendix D**). The delineated wetlands include approximately 25.9 acres of lacustrine wetlands and 3.7 acres of palustrine wetlands. Scrub shrub dominated fringe wetlands are present along the eastern shore of Smith Pond, while forested/scrub shrub wetlands are more prevalent along the western shore. Fringe wetlands surround most of the smaller eastern island but only occur along the northern shore of the larger western island. The fringe wetlands are approximately 6-feet wide; however, a wider (approximately 200-feet wide) palustrine forested/scrub shrub/emergent community is present in the northwestern corner of Smith Pond.

Lister Park Improvements Component

NWI maps the Mill River within the confines of the site as estuarine, subtidal, unconsolidated bottom with a subtidal water regime (E1UBL). Two palustrine, scrub-shrub, broad-leaved deciduous (PSS) wetlands with a seasonally flooded water regime are mapped contiguous to the eastern and western sides of the river in the central portion of the site. A riverine, lower perennial, unconsolidated bottom with a permanently flooded water regime (R2UBH) wetland is mapped in the northern portion of the site, and a small segment of riverine, unknown perennial, unconsolidated bottom with a permanently flooded water regime (R5UBH) wetland is mapped contiguous to the western edge of the mapped estuarine wetland at the South Park Avenue bridge.

NYSDEC maps the extent of the Mill River within the site as littoral zone, with a small freshwater marsh mapped along the shoreline at the southern extent.

Tetra Tech delineated the wetlands within the site in 2017 (see **Appendix D**). The boundary of one estuarine wetland comprising littoral zone, intertidal marsh, and high marsh, was delineated along the shoreline of the Mill River.

East Rockaway High School Component

The site does not include any NWI-mapped wetlands, although NWI maps the Mill River adjacent to the site as E1UBL, and NYSDEC maps it as littoral zone. A small tidal tributary with vegetated wetlands flowing into the Mill River is located along the western side of the football field.

Tetra Tech delineated wetlands adjacent to the site in 2017 (see **Appendix D**). The boundary of one estuarine wetland, consisting of littoral zone, intertidal marsh, and high marsh, was delineated along the shoreline of the Mill River.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

There are no mapped wetlands within the site. NWI mapped the canal adjacent to the site as E1UBL, and NYSDEC mapped it as littoral zone.

Mill River Greenway Component

There are no mapped wetlands within the proposed greenway alignment. The northern portion of the alignment is adjacent to an NWI-mapped riverine, intermittent, streambed, seasonally flooded (R4SBC) wetland. The middle northern portion of the alignment is adjacent to NYSDEC-mapped freshwater wetlands; NWI maps these wetlands as PUBHx, L1UBHh, R2UBH, and palustrine, emergent, persistent (PEM1C). The southern extern of the southern portion of the alignment is adjacent to wetlands classified by NWI as E1UBL and by NYSDEC as littoral zone.

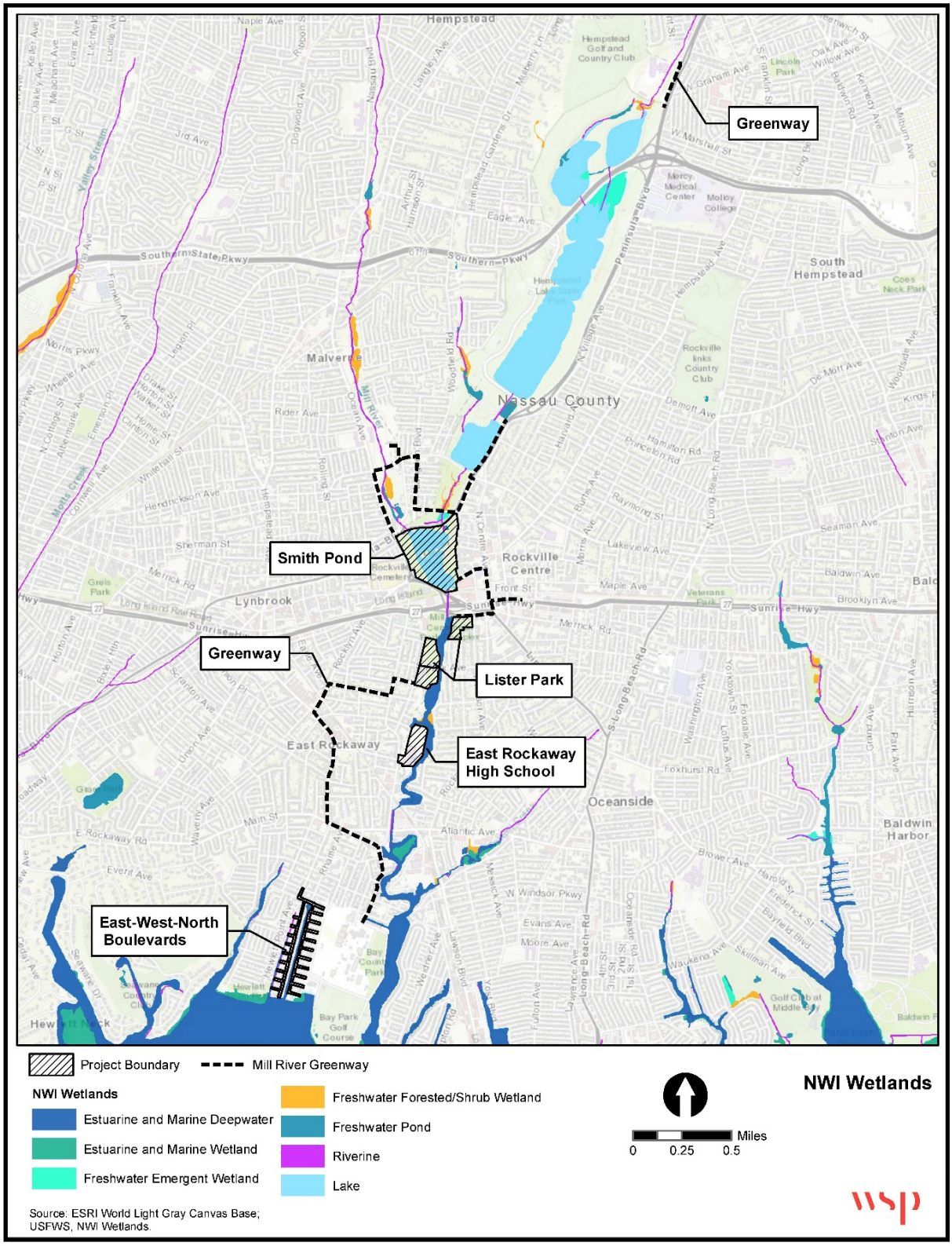

Figure 21. National Wetland Inventory Map

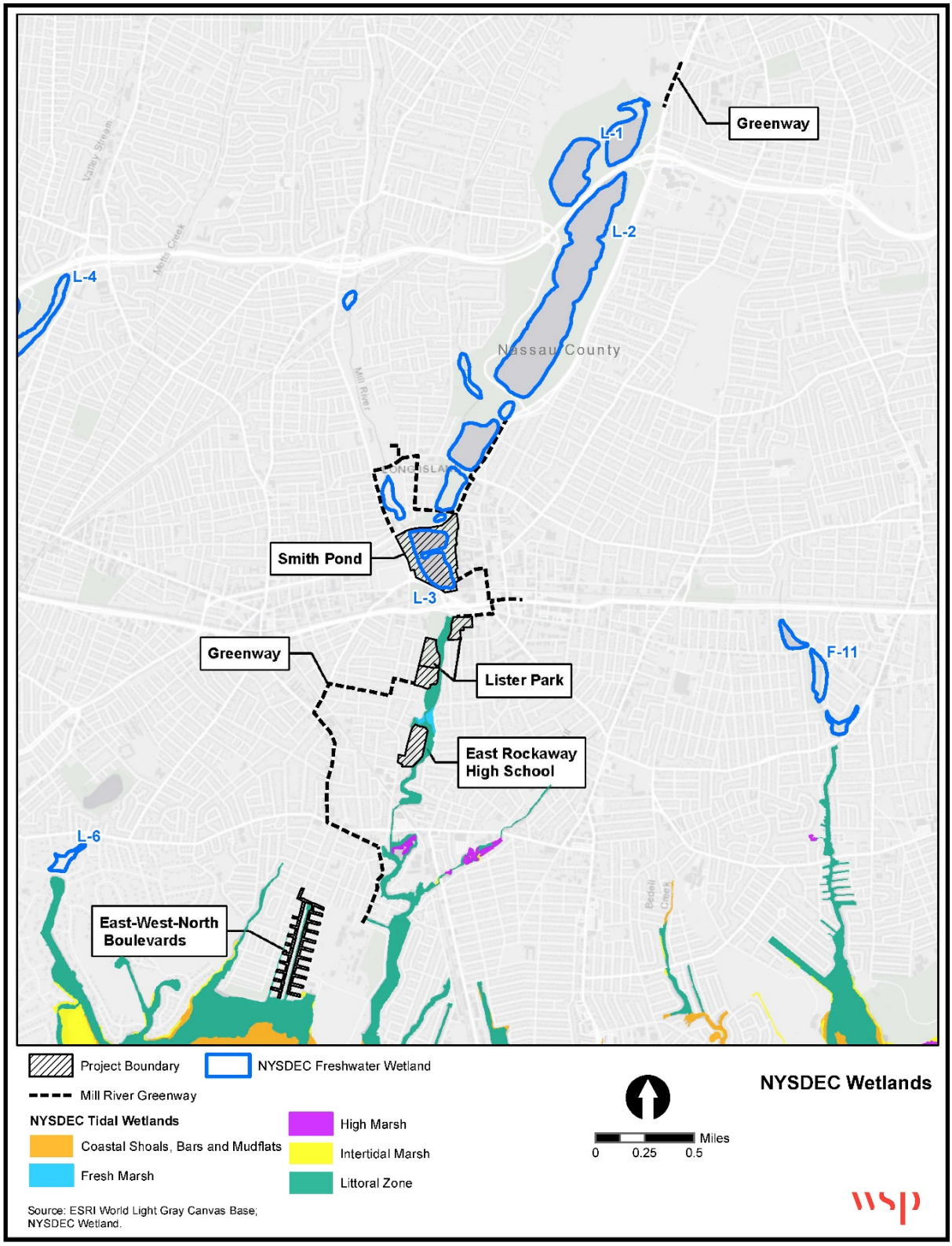

Figure 22: NYSDEC Wetlands Map

4.4.2.2 Water Quality

Four of the five project components contain or are located immediately adjacent to bodies of water. The Mill River Greenway component is the only component that is not associated with a waterbody, and it is not discussed in this section.

The project components are located in the South Oyster Bay/Jones Inlet Watershed (HUC 02030202). Stormwater and urban nonpoint runoff are sources of pathogens and pollutants in the area.

Smith Pond Rehabilitation Component

Smith Pond is a freshwater pond at the confluence point of two primary drainage branches of the Mill River that enter Smith Pond from the northeast and the northwest. The NYSDEC Environmental Resource Mapper classifies Smith Pond as Class C surface water, which indicates a best usage for fishing.

Smith Pond serves as the divide in the Mill River between the upstream freshwater system and the downstream tidal saltwater system, which begins approximately 750 feet downstream of the weir. The nearest major surface waterbodies are Hewlett Bay, approximately 2.5 miles south, and the Atlantic Ocean, approximately 5.5 miles south of the pond.

Smith Pond is included on the 2018 New York State Section 303(d) List of Impaired Waters (NYSDEC 2018). The waterbody is included on Part 1 of the list as an individual waterbody with an impairment requiring development of a total maximum daily load due to phosphorus; it is included on Part 2b of the list as restricted for fish consumption because of chlordane. The suspected source of phosphorous is an on-site wastewater treatment system; the suspected source of chlordane is contaminated sediments. Public bathing and recreational uses are considered impaired, and Smith Pond is not currently used as a source of drinking water.

Lister Park Improvements and East Rockaway High School Components

The NYSDEC Environmental Resource Mapper classifies the Mill River within the confines of the site as Class SC (saline surface waters). The best usage for Class SC waters is fishing. These waters are suitable for fish, shellfish, and wildlife propagation and survival. The water quality is generally suitable for primary and secondary contact recreation; however, other factors may limit its use for these purposes. Mill River is not included on the 2018 New York State Section 303(d) List of Impaired Waters (NYSDEC 2018).

East, West, and North Boulevards – Stormwater Drainage Improvements Component

The NYSDEC Environmental Resource Mapper classifies Hewlett Bay as Class SA (marine waters). Class SA indicates a best usage for shellfishing for market purposes, swimming and other recreation, and fishing.

Hewlett Bay is included on the 2018 New York State Section 303(d) List of Impaired Waters (NYSDEC 2018). The waterbody is included on Part 1 of the list as an individual waterbody with impairment requiring development of a total maximum daily load due to nitrogen; it is on Part 2c of the list as restricted for fish consumption because of pathogens. The suspected source of nitrogen is surrounding municipalities, such as Bay Park; the suspected source of pathogens is urban and stormwater runoff. Public bathing and recreational uses are considered impaired, and Hewlett Bay is not currently used as a source of drinking water.

4.4.3 Biological Resources

4.4.3.1 Vegetation

A desktop review of available resource mapping, previous reports, and species inventories was conducted to identify vegetation resources in the project area, including significant natural communities. Significant natural communities are rare or high quality wetlands, forests, grasslands, ponds, streams, and other types of habitats considered significant from a statewide perspective by the NYSDEC Natural Heritage Program (NHP).

Smith Pond Rehabilitation Component

Significant Natural Communities. According to NHP and the NYSDEC Environmental Resource Mapper, there are no significant natural communities near this site.

Upland Vegetative Communities. A vegetated upland buffer of deciduous forest surrounds Smith Pond, composed predominantly of white mulberry (*Morus alba*), black locust, black cherry (*Prunus serotine*), Norway maple (*Acer platanoides*), red oak (*Quercus rubra*), white oak (*Quercus alba*), red maple (*Acer rubrum*), and gray birch (*Betula populifolia*). Steep banks with dense vegetation of Japanese knotweed (*Fallopia japonica*), grape (*Vitis* sp.), green briar (*Smilax* sp.), honeysuckle (*Lonicera* spp.), oriental bittersweet (*Celastrus orbiculatus*), poison ivy (*Toxicodendron radicans*), and common mugwort (*Artemisia vulgaris*) are present around the pond perimeter. Other invasive species occurring within and around the perimeter of the pond include hydrilla (*Hydrilla verticillata*), garlic mustard (*Alliaria petiolata*), broad-leaved helleborine (*Epipactis helleborine*), multiflora rose (*Rosa multiflora*), Norway maple, tree-of-heaven, black locust, porcelain-berry (*Ampelopsis brevipedunculata*), and English ivy (*Hedera helix*).

Wetland and Aquatic Vegetative Communities. The nearshore areas of Smith Pond are heavily colonized by spatterdock (*Nuphar lutea*). White water lily (*Nymphaea odorata*), duckweed (*Lemna* sp.), and water meal (*Wolffia* sp.) are also present in the shallow areas of the pond. The predominant submergent plant species is hornwort (*Anthocerotopsida*), which dominates the deeper fringes of the spatterdock bands around the shoreline.

Dominant tree species in the fringe wetlands include red maple and black willow (*Salix nigra*). Dominant shrubs include buttonbush (*Cephalanthus occidentalis*), sweet pepperbush (*Clethra alnifolia*), and swamp azalea (*Rhododendron viscosum*). Herbaceous plants in the forested/scrub shrub wetlands primarily consist of poison ivy. The emergent wetlands in the northwest corner of the site contain spatterdock, Pennsylvania smartweed (*Polygonum pensylvanicum*) and purple loosestrife (*Lythrum salicaria*).

Lister Park Improvements Component

Significant Natural Communities. According to NHP and the NYSDEC Environmental Resource Mapper, there are no significant natural communities near this site.

Upland Vegetative Communities. Upland vegetated communities within the site are dominated by maintained lawns, parklands, and wooded edges. These communities are all vegetated by opportunistic species common to disturbed urban and residential environments. Adjacent upland woods are narrow in nature, generally not extending more than 25 feet in width. Dominant vegetation includes boxelder maple, white mulberry, tree-of-heaven, black locust, black cherry, and Norway maple in the tree stratum. Dominant vegetation in the upland shrub layer includes saplings of the above-listed tree

species, multiflora rose, forsythia (*Forsythia* sp.) and poison ivy. Dominant herbaceous species include multiflora rose, aster (*Aster* sp.), mugwort (*Artemesia vulgaris*), bush clover (*Lespedeza* sp.); dominant vines include nightshade (*Solanum dulcamara*), oriental bittersweet, poison ivy, English ivy, and Virginia creeper (*Parthenocissus quinquefolia*).

Wetland and Aquatic Vegetative Communities. The dominant wetland vegetation occurring along the shoreline of the Mill River within the site consists of common reed. Jesuit's bark (*Iva frutescens*) is common at higher elevation of the intertidal wetland. Two stands of smooth cordgrass (*Spartina alterniflora*) were also identified on the eastern shore of the Mill River in intertidal marsh wetlands located between Demott Place and Rodney Place. Other species observed in the intertidal fringe wetland include boxelder maple and multiflora rose in the shrub strata and iris (*Iris* sp.) and jewelweed (*Impatiens capensis*) in the herbaceous layer.

East Rockaway High School Component

Significant Natural Communities. According to NHP and the NYSDEC Environmental Resource Mapper, there are no significant natural communities near the site.

Upland Vegetative Communities. Upland vegetation at the site is consistent with the communities described at Lister Park.

Wetland and Aquatic Vegetative Communities. The site is entirely upland; however, vegetation in adjacent wetlands associated with the Mill River shoreline are consistent with the communities described along the shoreline at Lister Park.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

Significant Natural Communities. According to the NYSDEC Environmental Resource Mapper, this component is adjacent to the Hempstead Bay Wetlands complex, which contains three significant natural communities: low salt marsh, high salt marsh, and salt panne. These natural communities are part of a larger salt marsh complex within a five-bay system and are all considered high quality occurrences of uncommon community types. The number, aerial extent, and integrity of salt marsh complexes in New York are suspected to have declined substantially from their historical state. Primary threats include ditching and draining, dredging and filling, common reed invasion, poor water quality, diking and impoundment, inlet stabilization, shoreline hardening, wrack accumulation, altered sediment budget, subsidence, changes in water circulation patterns, restricted tidal connection, and altered tidal hydrodynamics (**Appendix E**).

Upland Vegetative Communities. The site primarily consists of roadways in a residential neighborhood along a bulkheaded canal. Vegetation consists primarily of scattered street trees and residential properties landscaped with mowed grass, trees, and shrubs.

Wetland and Aquatic Vegetative Communities. The site is entirely upland with no submerged aquatic vegetation mapped in the adjacent canal.

Mill River Greenway Component

Significant Natural Communities. According to NHP and the NYSDEC Environmental Resource Mapper, there are no significant natural communities near the proposed greenway.

Upland Vegetative Communities. Much of the proposed greenway alignment runs through developed neighborhoods dominated by impervious surfaces, with scattered street trees and residential and commercial properties landscaped with mowed grass, trees, and shrubs. The northern and middle southern portions are adjacent to forested areas. Invasive plant species expected to occur along the length of the proposed greenway include Japanese honeysuckle (*Lonicera japonica*), English ivy, Japanese knotweed, and tree-of-heaven.

Wetland and Aquatic Vegetative Communities. The proposed greenway alignment does not contain wetland or aquatic vegetative communities.

4.4.3.2 Wildlife and Fish

All five components are in urban environments that provide limited habitat for wildlife. This limited habitat is fragmented by development and is subject to frequent human disturbance.

Smith Pond Rehabilitation Component

Birds that use the pond and surrounding habitats include barn swallow (*Hirundo rustica*), brant (*Branta bernicla*), ring-billed gull (*Larus delawarensis*), lesser scaup (*Aythya affinis*), mallard (*Anas platyrhynchos*), American black duck (*Anas rubripes*), and Canada goose (*Branta canadensis*). Other wildlife expected to use the habitats surrounding Smith Pond include insects, small mammals, and cosmopolitan bird species.

Smith Pond is a warm water fishery dominated by sunfish, largemouth bass (*Micropterus salmoides*), white perch (*Morone americana*), and yellow perch (*Perca flavescens*). An anadromous alewife (*Alosa pseudoharengus*) run exists below the pond where alewives stack up at the base of the Smith Pond outlet, unable to by-pass the existing weir structure.

Lister Park Improvements Component

Birds that use the waters and associated wetlands along the Mill River within the site include brant, Canada goose, American black duck, ruddy duck (*Oxyura jamaicensis*), northern shoveler (*Spatula clypeata*), and various gull and sparrow species. Wildlife that may use the upland habitats within the site are those adapted for suburban habitats and human disturbance. These species include striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), and gray squirrel (*Sciurus carolinensis*). Common birds in suburban areas include species such as northern cardinal (*Cardinalis cardinalis*), blue jay (*Cyanocitta cristata*), and American crow (*Corvus brachyrhynchos*). Canada geese would likely use the open fields. Non-native species adapted to human disturbance include rock pigeon (*Columbia livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*).

According to the National Oceanic and Atmospheric Administration's (NOAA) EFH Mapper, the waters within the site are designated as EFH for various life stages of 17 species. Based on the low salinity and shallow water depths within the site, EFH for various life stages of four species is expected to occur in the intertidal and shallow open habitats that are present within the site: winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scophthalmus aquosus*), bluefish (*Pomatamus saltatrix*), and summer flounder (*Paralichthys dentatus*). The site may also support forage species, which are an important resource for EFH-designated fish species.

East Rockaway High School Component

Wildlife use of the site is consistent with the species described at Lister Park.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

Wildlife that may use the existing habitats of maintained lawns, scattered trees, and shrub areas would be those adapted for suburban habitats and human disturbance, such as those species described above for upland habitats in Lister Park. Gulls and double-crested cormorant (*Phalacrocorax auritus*) are likely to occur on or near the bulkheads.

Mill River Greenway Component

Most of the proposed greenway alignment provides minimal wildlife habitat because it is immediately adjacent to active roadways in highly developed neighborhoods. Terrestrial wildlife expected to occur along the greenway includes squirrels, chipmunks, muskrats, mice, and raccoons. Forested habitats adjacent to the northern and middle northern sections of the greenway may provide breeding habitat for species such as woodpeckers and migratory songbirds.

4.4.3.3 Threatened and Endangered Species

The USFWS, Long Island Ecological Services Field Office was contacted through the Information, Planning, and Conservation System (IPaC) regarding the potential presence of species under the jurisdiction of the USFWS within the project area. The USFWS Official Species List (included in **Appendix F**) indicates that the following threatened and endangered species may occur in the project area: northern long-eared bat (*Myotis septentrionalis* – threatened); piping plover (*Charadrius melodus* – threatened); red knot (*Calidris canutus rufa* – threatened); roseate tern (*Sterna dougallii* – endangered); sandplain gerardia (*Agalinis acuta* – endangered); and seabeach amaranth (*Amaranthus pumilus* – threatened). There are no critical habitats for these or any other species in the project area. **Table 7** presents a list of these federally listed species and their preferred habitat.

Table 7. Federally Listed Species that may Occur in the Vicinity of the Project

Common Name	Scientific Name	Federal Listing	Suitable Habitat
Northern long-eared bat	*Myotis septentrionalis*	Threatened	Summer: Interior of mature forests with sufficient bark crevices and snags for roosting Winter: Caves and mines
Piping plover	*Charadrius melodus*	Threatened	Foraging: intertidal beach and dunes, mudflats Nesting: open sandy beaches
Red knot	*Calidris canatus rufa*	Threatened	Foraging: intertidal beach and shallow coastal waters, mudflats Nesting: Canadian arctic region
Roseate tern	*Sterna dougallii*	Endangered	Foraging: shallow coastal waters Nesting: open sandy beaches

Common Name	Scientific Name	Federal Listing	Suitable Habitat
Sandplain gerardia	*Agalinis acuta*	Endangered	Pine-barrens grasslands; remnant grasslands
Seabeach amaranth	*Amaranthus pumilus*	Threatened	Nearly pure sand substrate above the high tide line; open sand or sparsely vegetated base of foredunes

Based on the habitat requirements described in **Table 7**, piping plover, red knot, roseate tern, sandplain gerardia, and seabeach amaranth are not expected to occur in the project area. No known northern long-eared bat maternity roosts or hibernacula are nearby; however, northern long-eared bats may use mature, closed-canopy, in upland and riparian forests as summer habitat.

On behalf of GOSR, Seatuck Environmental Association conducted avian surveys along the Mill River corridor between 2016 and 2019 in support of project in the Mill River corridor. Seatuck did not report any sightings of piping plover, red knot, or roseate tern or any other federally listed species at any location surveyed along the Mill River corridor between 2016 and 2019 (Seatuck 2019). Additionally, to date, no sightings of federally protected avian species within the project area have been documented on eBird, an online database of bird observations, or the Breeding Bird Atlas, a statewide survey designed to map the distribution of breeding birds in New York (eBird n.d.; NYSDEC 2008).

IPaC also indicates that the project components could affect 31 species of migratory birds protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, including bald eagles (*Haliaeetus leucocephalus*). Bald eagle may occur as occasional transients, foraging within waters adjacent to the project area, but no breeding eagles have been documented nearby. Golden eagles are not likely to occur near the project area. Migratory birds that may use undeveloped areas in the project area include sparrows, warblers, blackbirds, finches, robins, and wrens. Migratory wading birds (herons/egrets), waterfowl, and shorebird species may use the Mill River as foraging habitat, and forested areas provide breeding habitat for migratory songbirds.

GOSR sent a request to NHP for species records within the project area. NHP's response, received on March 18, 2020 (included in **Appendix E**), indicated no records of state or federally listed species in the vicinity of the components. NHP reported that two rare dragonflies have been documented near the ball fields along the Mill River in Lister Park: seaside dragonlet (*Erythrodiplax berenic*e) and Rambur's forktail (*Ischnura ramburii*). The seaside dragonlet is the only American species of dragonfly that can breed in saltwater. Although this species is typically found in salt marshes, mangrove swamps, and saline lakes, it can also be found in inland freshwater ponds. In contrast to the seaside dragonlet, Rambur's forktail prefer freshwater habitats, and its larvae have been observed in most types of wetland communities.

The likelihood that threatened and endangered species or their habitat occurs within each component site is discussed below.

Smith Pond Rehabilitation Component

The site does not provide suitable habitat for state or federally listed species, although northern long-eared bat may occur as occasional transients in forested areas of the site.

According to the NYSDEC Environmental Resource Mapper, rare dragonflies and damselflies occur near Smith Pond. This site provides suitable habitat for seaside dragonlet and Rambur's forktail.

The site includes the waters of Smith Pond and the drainage basin that discharges to the downstream tidal portion of the Mill River. During permitting for this component, GOSR requested information from the National Marine Fisheries Service (NMFS) regarding the presence of Endangered Species Act-listed threatened or endangered species under NMFS's jurisdiction within the site to NMFS. A response from NMFS on November 8, 2019 (included in **Appendix G**) indicated that no federally listed or proposed threatened or endangered species under its jurisdiction are known to exist in the site. GOSR has determined that the project would have no effect on ESA-listed species under the jurisdiction of NOAA's NMFS.

Lister Park Improvements Component

The site does not provide suitable habitat for state or federally listed species. According to the NYSDEC Environmental Resource Mapper and NHP, rare dragonflies and damselflies occur near this site. As stated above, NHP reported that seaside dragonlet and Rambur's forktail have been documented near the ball fields along the Mill River.

This site includes intertidal waters of the Mill River. Based the NOAA Endangered Species Act section 7 mapper, this component is within 1 mile of waters used by Atlantic sturgeon (*Acipenser oxyrinchus*), green sea turtles (*Chelonia mydas*), Kemp's Ridley sea turtles (*Lepidochelys kempii*), leatherback sea turtles (*Dermochelys coriacea)* and loggerhead sea turtles (*Caretta caretta*). The Mill River within the vicinity of the site does not provide suitable breeding, overwintering, and foraging habitat for Atlantic sturgeon or sea turtles, and they are not expected to occur in nearby waters.

East Rockaway High School Component

This site does not provide suitable habitat for state or federally listed species. According to the NYSDEC Environmental Resource Mapper, rare dragonflies and damselflies occur near the site. This site also provides suitable habitat for seaside dragonlet and Rambur's forktail.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

This site does not provide suitable habitat for state or federally listed species.

Mill River Greenway Component

Forested areas along the proposed greenway alignment may provide potential summer habitat for northern long-eared bats. This summer habitat consists of a wide variety of forested habitats where northern long-eared bats roost, forage, and travel. If present, these bats would likely use forested area adjacent to the middle northern section of the alignment, between Smith Pond and Hempstead Lake.

According to the NYSDEC Environmental Resource Mapper, dragonflies and damselflies occur near this site.

5 FUNDING INFORMATION

Estimated Total HUD Funded Amount: $28.49 million

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR § 58.32(d)]: **$28.49 million**

Project component capital costs are estimated as shown in **Table 8.**

Table 8: Project Component Capital Costs

LWTB Stormwater Project Component	Capital Cost (in $millions)
Smith Pond Rehabilitation	$9.08
Lister Park Improvements	$2.39
East Rockaway High School	$2.14
East, West, and North Boulevards Stormwater Drainage Improvements	$3.84
Mill River Greenway	$11.04
Total	**$28.49**

6 COMPLIANCE WITH 24 CFR 58.5, AND 58.6 LAWS AND AUTHORITIES

6.1 STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 58.6

This section details compliance requirements for the following:

- Airport hazards as defined in 24 CFR Part 51 Subpart D
- Coastal barrier resources as defined in the Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]
- Flood insurance as defined by the Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]

6.1.1 Airport Hazards

6.1.1.1 Citation: *24 CFR § 51, Subpart D*

Based on guidance provided by HUD in Fact Sheet #D1, the National Plan of Integrated Airport Systems was reviewed for civilian, commercial service airports within 2,500 feet of a component site to determine whether consultation with the appropriate civil airport operator is necessary. John F. Kennedy Airport and LaGuardia Airport in Queens, New York, are the nearest airports to the project area. Airport distances from each component are shown in **Table 9**.

The LWTB Stormwater Project components are not within 2,500 feet (approximately 0.473 mile) of either of these airports. No known military airports are within 15,000 feet (approximately 2.84 miles) of the project area, and the project area is not located in an Airport Runway Clear Zone. No additional action is needed (FAA 2019).

Table 9: Airport Distances

LWTB Stormwater Project Component	Distance to John F. Kennedy Airport (mile)	Distance to LaGuardia Airport (mile)
Smith Pond Rehabilitation	6.4	13.83
Lister Park Improvements	6.37	14.19
East Rockaway High School	6.26	14.41
East, West, and North Boulevards Stormwater Drainage Improvements	5.64	14.57
Mill River Greenway	5.86	13.46

6.1.2 Coastal Barrier Resources

6.1.2.1 Citation: *Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC) 3501]*

The Coastal Barrier Resources Act of 1982 and its amendments limit federal expenditures and financial assistance that have the effect of encouraging development on designated coastal barriers. The project components are not located in a coastal barrier resource area or buffer zone; therefore, no further analysis is required. Accordingly, HUD funding can be applied to this project.

6.1.3 Flood Insurance

6.1.3.1 Citation: *Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001–4128 and 42 USC 5154a]*

All project components are located within a Special Flood Hazard Area.

According to the FEMA FIRM Nos. 36059C0210G, 36059C0216G, 36059C0217G, 36059C0218G, and 36059C0219G, dated September 11, 2009, all project components are located within the 1 percent annual-chance (or 100-year) flood hazard zone (see **Figure 17**). The project components do not involve construction of habitable structures, although a new aboveground generator would serve an existing structure (EHRS). ERHS already has flood insurance, and the policy would be updated, if necessary, prior to grant closeout. Flood insurance would be maintained for ERHS.

6.2 Statutes, Executive Orders, and Regulations Listed at 24 CFR 51, 55 and 58.5

This section details compliance requirements for the following:

- Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93
- Coastal Zone Management sections 307(c) & (d)
- Contamination and Toxic Substances as defined at 24 CFR Part 58.5(i)(2)
- Endangered Species as defined by the Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402
- Explosive and Flammable Hazards as defined at 24 CFR Part 51 Subpart C
- Farmlands Protection as defined by the Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658

- Floodplain Management as defined in Executive Order 11988, particularly section 2(a); 24 CFR Part 55
- Historic Preservation as defined by the National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800
- Noise Abatement and Control as defined in the Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B
- Sole Source Aquifers as defined in the Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149
- Wetlands Protection as defined in Executive Order 11990, particularly sections 2 and 5
- Wild and Scenic Rivers as defined in the Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)
- Environmental Justice as defined in Executive Order 12898
- Fish and Wildlife Coordination Act of 1934, as amended
- Magnuson-Stevens Fishery Conservation and Management Act (Public Law 94-265), as amended by the Sustainable Fisheries Act of 1996

6.2.1 Clean Air Act

6.2.1.1 Citation: *Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR §§ 6, 51, 93*

Criteria air pollutants are analyzed at a regional scale. Nassau County is a serious nonattainment area for the 2008 8-hour ozone standard, moderate nonattainment for the 2015 8-hour ozone standard, and a maintenance area for the 1971 maximum carbon monoxide and 2006 24-hour average $PM_{2.5}$ standards (USEPA 2017).

Construction air quality impacts for each project component would be short term and localized. Peak-year construction emissions (during 2021) would be less than the de minimis thresholds for all pollutants for which Nassau County is designated as a non-attainment or maintenance area. See **Appendix H** for detailed calculations. The LWTB Stormwater Project would not substantively affect the New York State Implementation Plan because standard best management practices (BMPs) that control dust and other emissions during construction would be implemented.

The 350-kilowatt generator operating only for testing or during emergency situations (as part of the ERHS component) would not result in combined emissions of hazardous air pollutants in excess of 25 tons per year. As such, the proposed generator would be exempt from prevention and control of air contamination and air pollution permitting requirements pursuant to New York Codes, Rules and Regulations (NYCRR) 201-3.2(c)(6). Regardless, generator emissions would be well below de minimis thresholds and would not qualify as a major source. Therefore, the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines would not apply. See **Appendix H**.

As explained under **Section 7.3.9**, the project components would not result in substantial new vehicle trips or result in changes to traffic patterns. Therefore, a mobile source air quality impact analysis for the direct impacts of the project components is not necessary.

6.2.2 Coastal Zone Management

6.2.2.1 Citation: *Coastal Zone Management Act, sections 307(c) & (d)*

Four of the five project components (Lister Park, ERHS, Boulevards, and Mill River Greenway) are located within the New York State Department of State (NYSDOS)-designated New York State Coastal Zone, and as such are within a Coastal Zone Management Act area. A New York State Federal Consistency Assessment was completed and submitted to the NYSDOS Coastal Resources Consistency Review Unit on March 18, 2020, to determine the components' consistency with New York State's Coastal Management Program. As noted in the coastal zone management consistency assessment included in **Appendix I**, the project components are being designed and would be constructed in a manner that is consistent with all applicable NYSDOS Coastal Management Program State Coastal Policies. As such, the assessment finds that the project components would not result in significant adverse impacts related to the Coastal Zone Management Act. On April 13, 2020, NYSDOS provided a letter stating that there was no objection to the release of funding in support of the LWTB Stormwater Project (see **Appendix I**).

The Town of Hempstead, Village of Hempstead, Village of Rockville Centre, and Village of Each Rockaway do not have NYSDOS-approved Local Waterfront Revitalization Program; therefore, Local Waterfront Revitalization Program coastal zone management requirements are not applicable to the project components.

6.2.3 Contamination and Toxic Substances

6.2.3.1 Citation: 24 CFR §§ 50.3(i) & 58.5(i)(2)

HUD policy requires that the project component sites and adjacent areas be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances where a hazard could affect the health and safety of occupants of the properties or conflict with the intended use of the properties. The responsible entity must use qualified professionals to undertake investigations deemed necessary.

Because the project components would require limited excavation of soils and future uses would continue existing recreational and outdoor educational uses, the project would not intensify use at any site and would not result in operational pathways to exposure to hazardous materials. Therefore, an analysis of contamination and toxic substances was conducted by analyzing NYSDEC database records of contaminated sites.

Any excavated soil generated by the construction of project components would be screened as necessary to remove materials unsuitable for reuse. Unsuitable excavated materials would be disposed off-site in accordance with disposal requirements. Accidental discovery of contaminated soils cannot be entirely ruled out. To ensure that humans and wildlife would not be exposed to contaminated soil and sediments during upland excavation, mitigation to address accidental discovery of contaminants would be addressed through the required NYSDEC permitting processes. Details on this mitigation are discussed in **Section 11.2**.

Smith Pond Rehabilitation Component

This component would require an NYSDEC permit. The locations of ground disturbance are shown in **Figure 20**. No sites listed on the NYSDEC Environmental Site Remediation Database are located in the component site (see **Figure 23**). However, during design development for this project component, the pond sediments were found to contain low levels of accumulated contaminants that likely flowed into

the pond from the upstream watershed during rain events. Therefore, GOSR determined Smith Pond would not be dredged.

As shown in **Figure 23**, the nearest site in the NYSDEC database, 130181 (Lynbrook - Hortonsphere Site), is approximately 0.06-mile southwest of the component along Ocean Avenue and Merrick Road. This site is part of the State Superfund Program. Historical use of the site included a 75,000 cubic foot capacity gas holder tank. There was a release of benzo[a]pyrene into the soil, with concentrations present above the NYSDEC Restricted Use Industrial Soil Cleanup Objectives. NYSDEC determined that there was no apparent threat to the ecology of the site or the immediate area.

The next-nearest sites listed on the NYSDEC database are C130140 (Former Darby Drugs Distribution Center) and C130140A (Former Darby Drugs Distribution Center Off-site). This combined Brownfield project site is approximately 0.08-mile east of the component, along Banks Avenue and Nassau Street. The site has an environmental easement placed on the property under institution and engineering controls. In 2004, a remedial investigation identified a groundwater plume and soil contamination of tetrachloroethylene (PCE) at the property line, emanating from the source in a southerly direction. Historical records indicated a dry-cleaning still unit was present at the site. The depth to groundwater varies from 5 to 9 feet below grade surface and flows in a southerly direction. The maximum concentration of PCE at the property line of Darby site was 5,800 parts per billion, which exceeds the New York State Water Quality Guidance Value of 5 parts per billion (NYSDEC 2020a). As such, it is likely that concentrations would have migrated to the component area. However, a Certificate of Completion was signed in 2011.

Lister Park Improvements Component

This component would require an NYSDEC permit. The locations of ground disturbance are shown in **Figure 20**. The component contains one spill listed on the NYSDEC Environmental Site Remediation Database (see **Figure 23**). The spill (Spill Number 1812558) occurred on March 22, 2019, on private property along Oceanview Road. Three gallons of fuel oil caused by equipment failure were spilled and affected only impervious surfaces. The spill case was closed on March 11, 2020.

The nearest remediation sites are the same as those described for the Smith Pond component. The C130140 (Former Darby Drugs Distribution Center) and C130140A (Former Darby Drugs Distribution Center Off-site) Brownfield site is approximately 0.24 mile north of the Lister Park component, and 130181 (Lynbrook - Hortonsphere Site) is located approximately 0.23 mile north.

East Rockaway High School Component

This component would require an NYSDEC permit. The locations of ground disturbance are shown in **Figure 20**. The NYSDEC Environmental Site Remediation Database lists three spills within the ERHS component area (see **Figure 23**). The first spill (Spill Number 0411488) occurred on January 25, 2005, on ERHS property. Twenty-five gallons of fuel oil were spilled as a result of a tank overflow and affected the soil. The spill case was closed on February 3, 2005. The second spill (Spill Number 0225327) occurred on November 12, 2002, also on ERHS property. An unknown amount of fuel oil was spilled and affected the soil. The spill case was closed on March 7, 2013. The third spill (Spill Number 0503696) on ERHS property occurred on June 28, 2005, when an unknown amount of fuel oil was spilled and affected groundwater. The spill case was closed on April 12, 2007.

As shown in **Figure 23**, the nearest site listed on the NYSDEC database is C130157 (Minute Man Cleaners), located 0.36-mile south of the component site. According to the proprietor of Minute Man

Cleaners, approximately half a dozen leaks of PCE occurred between 1983 and 1987 as a result of broken gaskets in one of the facility's dry-cleaning machines. Based on investigations conducted to date, the primary contaminant of concern at the site is PCE, which is a compound used in dry-cleaning operations that is still used at the facility. PCE was detected in on-site soils and in on- and off-site groundwater. Elevated levels of PCE were detected in the sediments of the adjacent river and in soil vapor. Residual contamination in the soil, soil vapor and groundwater is managed under a Site Management Plan. A soil vapor extraction system operating at the site will remain active. An environmental easement has been placed on this property under institution and engineering controls (NYSDEC 2020b).

The next-nearest sites are those discussed for the Smith Pond and Lister Park components, above. Both are more than 0.36 mile from the ERHS component.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

This component would require excavation within each of the streets, as shown in **Figure 14**. The component contains one spill listed on the NYSDEC Environmental Site Remediation Database (see **Figure 23**). The spill (Spill Number 1209211) occurred on November 5, 2012, on private property along Fulton Street East. The spill, caused by a storm, involved raw sewage and affected soil, air, and sewer. The spill case was closed on May 10, 2013.

The nearest site listed on the NYSDEC database is C130157 (Minute Man Cleaners), discussed in the ERHS component section above. This site is located 0.5 mile north of the component site. The next nearest sites are located more than 0.61 mile from the component and would not affect the soil at the component site.

Mill River Greenway Component

This component would not require excavation, except for limited surface grading. The NYSDEC Environmental Site Remediation Database lists four spills on roadways adjacent to this component (see **Figure 23**). The first spill (Spill Number 1908869) occurred on December 10, 2019, at the intersection of Peninsula Boulevard and Lakeview Avenue was caused by a traffic accident and included 20 gallons of gasoline. The spill case has not been closed. The remaining three spills (Spill Numbers 8800995, 9008160, and 0400988) occurred on Henry Street in West Hempstead. The three spills ranged in size from 1 gallon to 200 gallons of fuel oil and were caused by equipment failure or human error. All three spill cases have been closed.

The nearest site listed on the NYSDEC database to the Mill River Greenway is the Brownfield site containing the C130140 (Former Darby Drugs Distribution Center) and C130140A (Former Darby Drugs Distribution Center Off-site). This Brownfield site is located in the building adjacent to the sidewalks along Banks Avenue and Nassau Street. This site is discussed under the Smith Pond Rehabilitation component above. Because excavation is not anticipated for the Mill River Greenway component, contaminated soils would not be disturbed or removed from the site.

The next nearest site is C130157 (Minute Man Cleaners), also discussed above. The contamination associated with this site would not affect the Mill River Greenway component.

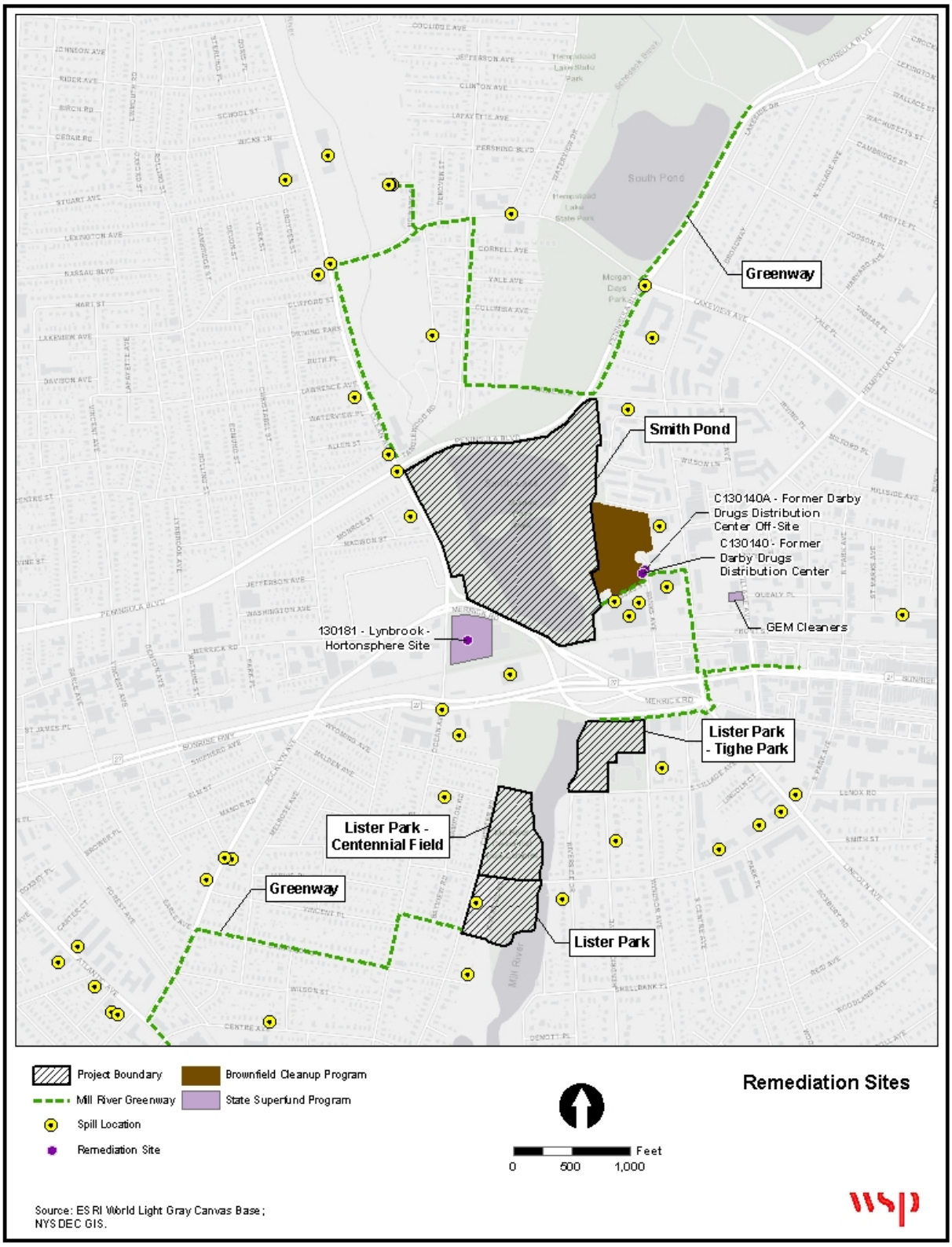

Figure 23a: Remediation Sites

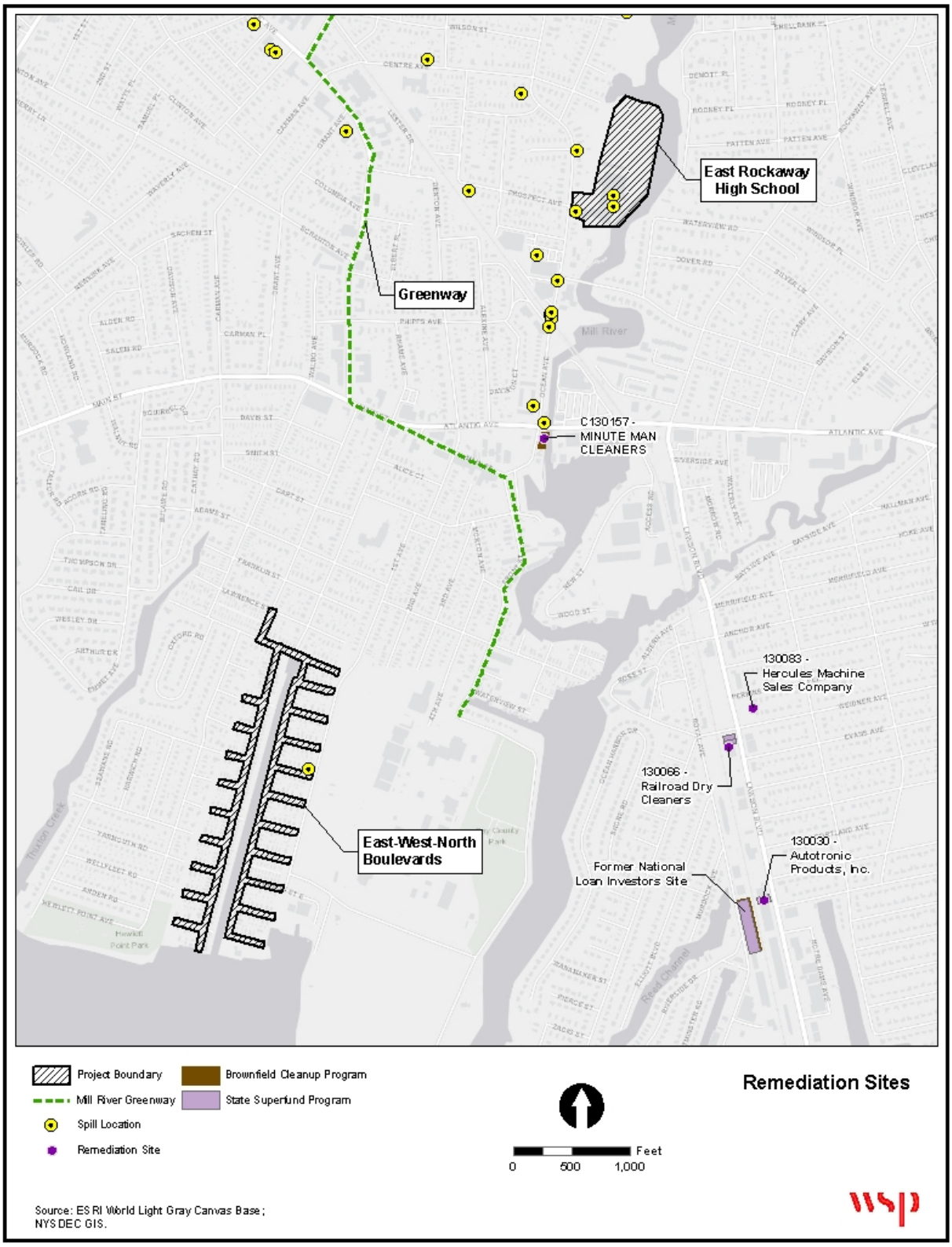

Figure 23b: Remediation Sites

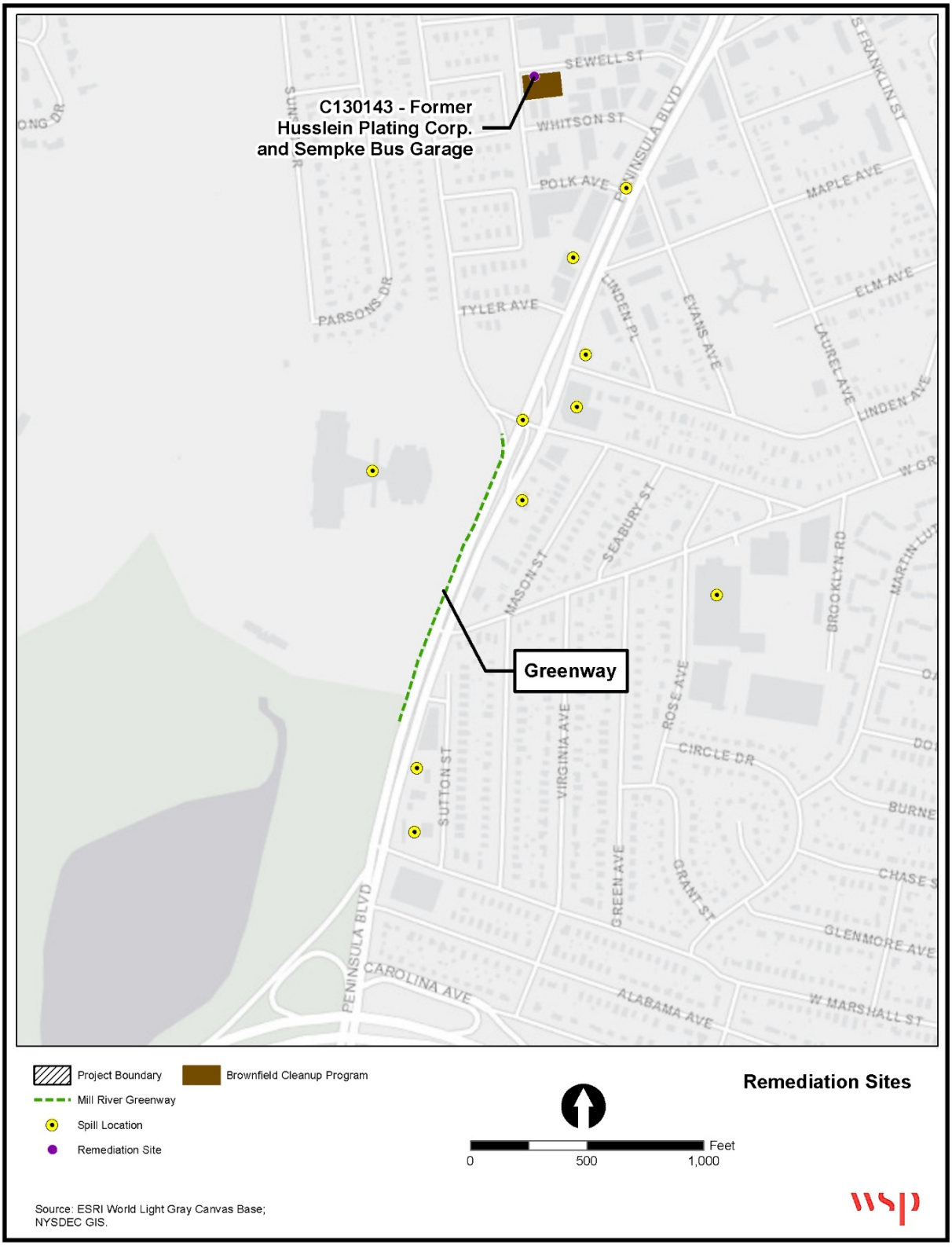

Figure 23c: Remediation Sites

6.2.4 Endangered Species

6.2.4.1 Citation: *Endangered Species Act of 1973, particularly section 7; 50 CFR § 402*

The USFWS IPaC Official Species List (see **Appendix F**) indicates that the following species protected under the Endangered Species Act may occur in the project area: northern long-eared bat (threatened), piping plover (threatened), red knot (threatened), roseate tern (endangered), sandplain gerardia (endangered), and seabeach amaranth (threatened). As discussed in **Section 4.4.3.3**, only northern long-eared bats potentially occur in forested habitats of the project area during the summer. Summer habitat for northern long-eared bats consists of a wide variety of forested habitats where they roost, forage, and travel, although they tend to avoid woodlands with significant edge habitat. The project area is not located near any known or assumed northern long-eared bat hibernacula or maternity roosts.

Potential impacts to threatened and endangered species, including federally protected migratory birds, are discussed below for each component. Overall, the project components would have no effect on piping plover, red knot, roseate tern, sandplain gerardia, or seabeach amaranth and may affect, but are not likely to adversely affect, northern long-eared bat. The project components are not likely to jeopardize the continued existence of vulnerable migratory birds or birds of conservation concern or cause destruction or adverse modification to their designated critical habitat. The components would not result in the "taking," injury, decrease in productivity, or nest abandonment of bald or golden eagles. In March 2020, GOSR initiated consultation with USFWS under section 7(a)(2) regarding potential impacts on species protected under the Endangered Species Act, Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act. GOSR's consultation letter requested acknowledgement from USFWS that it did not object to the determination that the project components would have "no effect" on piping plover, red knot, roseate tern, sandplain gerardia, or seabeach amaranth and "may affect, but not adversely affect" northern long-eared bat.

Smith Pond Rehabilitation Component

Northern long-eared bats may occur in forested areas around Smith Pond; however, they are only expected to occur as occasional transients because of the lack of mature, interior forest habitat. Tree removal association with this component was documented on the *Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form* submitted as part of the USFWS consultation package. Tree removal would occur between November 1 and March 31 while bats are hibernating to avoid affecting them. If tree removal during the active season (April 1–October 31) were unavoidable, a qualified biologist would survey the area to note the presence or absence of the northern long-eared bat prior to clearing.

Migratory birds are expected to temporarily leave the area during construction because of noise and disturbance. Because of the November 1 to March 31 tree-clearing window proposed to protect northern long-eared bats, trees would not be removed during the migratory bird breeding season, which occurs between April 1 and August 31. No significant adverse impacts on threatened and endangered species or federally protected migratory birds are anticipated.

Lister Park Improvements Component

Although no interior forest habitat is associated with this component, tree removal activities were documented on the *Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form* submitted as part of the USFWS consultation package. Potential impacts would be minimized by avoiding tree removal activities during the pup season (June 1 through July 31). If tree removal during the pup season were

unavoidable, a qualified biologist would survey the area to note the presence or absence of the northern long-eared bat prior to clearing.

NHP recommends that work in Lister Park and near the Mill River be conducted so as not to degrade or impair the riverside habitat for seaside dragonlet and Rambur's forktail or water quality of the Mill River (**Appendix E**). This component would not degrade or impair riverside habitat and would improve water quality in the Mill River. Proposed activities at Lister Park include shoreline improvements that may benefit dragonfly species. These species are very skilled fliers and if temporarily displaced during construction, seaside dragonlet and Rambur's forktail are expected to return to the site following completion of construction.

Migratory birds are expected to temporarily leave the area during construction because of noise and disturbance. While the site is within 1 mile of the range of occurrence for Atlantic sturgeon and sea turtles, in-water work for living shoreline installation would have no effect on these listed species. The site is approximately 0.8-mile upstream of these species' range, and the Mill River within the vicinity of the site does not provide suitable breeding, overwintering, or foraging habitat. No significant adverse impacts on threatened and endangered species or federally protected migratory birds are anticipated.

East Rockaway High School Component

Although no interior forest habitat is associated with this component, tree removal activities were documented on the *Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form* submitted as part of the USFWS consultation package. Potential impacts would be minimized by avoiding all tree removal activities during the pup season (June 1 through July 31). If tree removal during the pup season were unavoidable, a qualified biologist would survey the area to note the presence or absence of the northern long-eared bat prior to clearing.

Migratory birds are expected to temporarily leave the area during construction because of noise and disturbance. As discussed above for Lister Park Improvements, this component would not degrade or impair riverside habitat for seaside dragonlet and Rambur's forktail. If present, these species could easily avoid the area during construction and are expected to return to the site once construction is completed. No significant adverse impacts on threatened and endangered species or federally protected migratory birds are anticipated.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

Although no interior forest habitat is associated with this component, tree removal activities were documented on the *Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form* submitted as part of the USFWS consultation package. Potential impacts would be minimized by avoiding tree removal activities during the pup season (June 1 through July 31). If tree removal during the pup season were unavoidable, a qualified biologist would survey the area to note the presence or absence of the northern long-eared bat prior to clearing.

Migratory birds are expected to temporarily leave the area during construction because of noise and disturbance. No significant adverse impacts on threatened and endangered species or federally protected migratory birds are anticipated.

Mill River Greenway Component

Although no interior forest habitat is associated with this component, tree removal activities were documented on the *Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form* submitted as part of the USFWS consultation package. Potential impacts would be minimized by avoiding tree removal activities during the pup season (June 1 through July 31). If tree removal during the pup season were unavoidable, a qualified biologist would survey the area to note the presence or absence of the northern long-eared bat prior to clearing.

Migratory birds are expected to temporarily leave the area during construction because of noise and disturbance. No significant adverse impacts on threatened and endangered species or federally protected migratory birds are anticipated.

6.2.5 Explosive and Flammable Hazards

6.2.5.1 Citation: *24 CFR § 51, Subpart C*

A search of the NYSDEC Bulk Storage Program Database identified chemical or petroleum aboveground storage tanks within 1 mile of each project component site (see **Appendix J**). The project would not involve new residential construction, conversion of nonresidential buildings to residential use, rehabilitation of residential properties that increase the number of units, or restoration of abandoned properties to habitable condition. The proposed generator for ERHS would have a tank, containing approximately 1,024 gallons of fuel. The tank would have appropriate lining/shielding to mitigate the risk of fire and/or explosion and satisfy HUD's separation distance requirements.

6.2.6 Farmlands Protection

6.2.6.1 Citation: Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR § 658

Based on the soil classifications presented in the National Resources Conservation Service report obtained for the project component areas, **Table 10** shows the percentage of land area, by project component, that is classified as prime or other important farmlands; however, because all the land in the project area is committed to urban development, it is not subject to the Farmland Protection Policy Act (USDA 2017).

Table 10: Prime or Important Farmland

LWTB Stormwater Project Component	Percentage of Land Classified as Prime or Other Important Farmland
Smith Pond Rehabilitation	11%
Lister Park Improvements	0%
East Rockaway High School	0%
East, West, and North Boulevards Stormwater Drainage Improvements	0%
Mill River Greenway	4.8%

6.2.7 Floodplain Management

6.2.7.1 Citation: *Executive Order 11988, particularly section 2(a); 24 CFR § 55*

Work associated with the components would occur in areas classified as Zone A, Zone AE with a BFE of 9 feet, and Zone AE with a BFE of 10 feet (see **Figure 17**).

A Floodplain and Wetlands 8-Step Process in accordance with Executive Order 11988: Floodplain Management, and Executive Order 11990: Wetlands, was completed for the proposed LWTB Stormwater Project pursuant to 24 CFR 55.12(a)(4) and is provided in **Appendix K**. The 8-step process includes both an Early and Final Notice to notify the public and agencies about the LWTB Stormwater Project and its potential impacts on wetlands and floodplains.

The project components would permanently impact an estimated 7,606 square feet (0.175 acre) of land located in the 100-year floodplain. Construction of the floodwall at Smith Pond would result in a permanent impact to approximately 568 square feet (0.013 acre) of the floodplain. At Lister Park, construction of the elevated berm and knee wall would result in impacts on 5,250 square feet (0.120 acre) and 1,406 square feet (0.032 acre) of the floodplain, respectively. At ERHS, installation of the bulkhead would result in approximately 382 square foot (0.009 acre) of impact in the floodplain. Approximately 125 cubic yards of fill would be behind the proposed bulkhead. Existing soil would be left in place, and 7 feet of fill would be added along the backside of the bulkhead, which would transition down to the existing grade on a 3 to 1 percent slope.

Detailed hydrologic and hydraulic evaluations were conducted to determine recommended flood mitigation improvements at Smith Pond showed changes in flooding as a result of project implementation are not expected to be more than 0.03 feet and would be completely contained within the limits of Morgan Days Park. The modeling concluded no adverse impact. Hydraulic model simulations of the 100-year flood under both pre- and post-construction conditions were conducted to evaluate the potential changes in BFEs resulting from the implementation of the Lister Park and ERHS components (see **Appendix L**). A two-dimensional numerical model of the Mill River floodplain (encompassing both sides of the Mill River) was used to simulate flood conditions under the FEMA base flood condition that has a mean recurrence interval of 100 years before and after the implementation of the proposed improvements. The hydraulic model study demonstrated that construction of the bulkhead at ERHS and the berm and knee wall at Lister Park, along with the raising of the ERHS athletic field by 2 feet as proposed by the East Rockaway School District, would have very small and localized effects on the flood water elevations in the project area. Comparison of the pre- and post-water surface profile showed no discernable changes in flood levels. Detailed examination of water surface elevations in the vicinity of the proposed improvements showed very small changes in flood levels. Water surface elevation changes in the vicinity of the ERHS athletic field showed a maximum change of 0.01 foot. Water surface elevation in the vicinity of the flood protection berm and knee wall showed a maximum change of 0.05 foot. As such, the proposed project components are not expected to result in permanent adverse impacts on floodplains, and mitigation to address such impacts is not necessary. Additionally, the flood protection berm and knee wall at Lister Park would reduce the flood risk to approximately 16 homes.

Permits would be required from the Villages of East Rockaway and Rockville Centre for construction in the special flood hazard area in accordance with East Rockaway Village Code section 151-11 and Village of Rockville Centre Code section 188-12. Adherence to BMPs during construction would serve to avoid or minimize potential temporary impacts on floodplains. Such measures could include the use of silt

fences to reduce the potential for erosion and sedimentation and the use of turbidity curtains around in-water work areas.

6.2.8 Historic Preservation

6.2.8.1 Citation: *National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR § 800; Tribal notification for new ground disturbance.*

The project components require limited aboveground interventions. No historic architectural resources would be affected.

Portions of Smith Pond, ERSH, and Lister Park are located in an archaeologically sensitive area. Therefore, GOSR prepared Phase IA Archaeological Sensitivity Assessments and undertook a Phase IB archaeological survey (GOSR 2020a) for these project components. The Phase IB archaeological survey entailed a systematic subsurface survey consisting of shovel-pit excavations and analysis of the areas of disturbance for each component (GOSR 2020b). Excavations did not reveal any intact, significant archaeological features or deposits. GOSR has determined that the proposed project would not adversely affect any significant archaeological resources. The New York State Office of Parks, Recreation, and Historic Preservation concurred with this determination in July 2020. See **Appendix M**.

6.2.9 Noise Abatement and Control

6.2.9.1 Citation: *Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR § 51, Subpart B*

A noise technical analysis was prepared and is included in **Appendix N**. Excavation would require heavy construction equipment such as excavators and/or backhoes, cranes, delivery trucks, and other equipment. For most project components, jackhammers (88 a-weighted decibels [dBA]) and concrete trucks (85 dBA) would provide the loudest noise from equipment. For Smith Pond, pile driving would be the loudest activity (95 dBA). The elevated noise levels would be present in areas of active construction activity, and no one area would experience these noise levels for the duration of the total construction period.

The temporary increases in noise levels during construction would be mitigated by complying with local noise ordinances. Town of Hempstead prohibitions limit most construction activities to between 7:00 AM and 6:00 PM on weekdays and require use of mufflers on generators and motor vehicles (Town of Hempstead Code 144-3). The Village of Rockville Centre and Village of East Rockaway limit construction activities to between 8:00 AM and 7:00 PM (Village of Rockville Centre Code 232-7; Village of East Rockaway Code 194-2). The Village of East Rockaway also limits the continuous sound sound-in-air level at or across a real property boundary; the L_{10}may not exceed 80 dBA during construction hours.[7] Contractors would be required to demonstrate compliance with these noise ordinances.

The project components would not result in increased operational noise.

Therefore, no significant noise impacts are expected to occur as a result of the proposed LWTB Stormwater Project.

[7] L_{10} is the noise level exceeded for 10 percent of the time of the measurement duration.

6.2.10 Sole Source Aquifers

6.2.10.1 Citation: *Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR § 149*

The proposed LWTB Stormwater Project is located entirely on the Nassau/Suffolk Sole Source Aquifer system (see **Figure 24**). The project components would not result in substantial net new water demand or increased groundwater pumping and would not introduce new contaminants into the aquifer; however, they would aid in filtering out stormwater contaminants through the bioretention basins and enhanced wetland areas.

An Initial Screen/Preliminary Review was submitted to the U.S. Department of Environmental Protection (USEPA) on March 11, 2020, according to the Memorandum of Understanding between USEPA and HUD dated August 24, 1990 (**Appendix O**). On April 22, 2020, USEPA responded that the proposed project complies with section 1424(e) of the Safe Drinking Water Act and would not pose a significant threat to public health or groundwater resources.

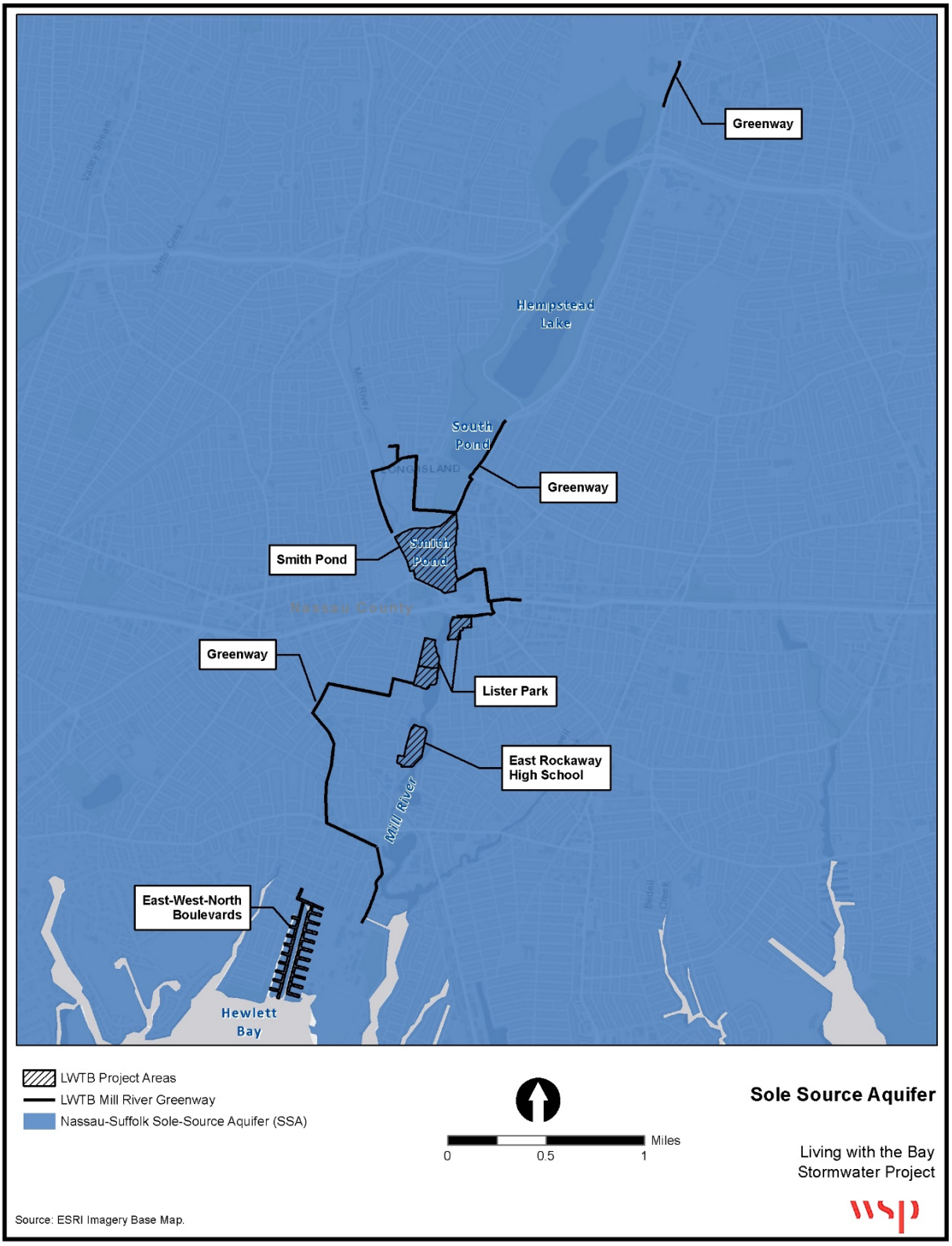

Figure 24: Sole Source Aquifer

6.2.11 Wetlands Protection

6.2.11.1 Citation: Executive Order 11990, particularly sections 2 and 5

NWI mapped waterbodies and wetlands in the project area are depicted on **Figure 21**. Areas below the high tide line and permanently flooded marine and estuarine habitats are considered jurisdictional waters of the United States and are subject to the U.S. Army Corps of Engineers (USACE) regulatory program under section 404 of the Clean Water Act of 1972, as amended. Areas subject to jurisdiction under section 10 of the Rivers and Harbors Act of 1899, as amended, include navigable waters, which begin at the mean high tide line and extend to permanently flooded marine and estuarine habitats.

NYSDEC freshwater and tidal wetlands are depicted on **Figure 22**. NYSDEC regulates tidal wetlands under Environmental Conservation Law, Article 25, "Tidal Wetlands" and freshwater wetlands under Environmental Conservation Law, Article 24, "Freshwater Wetlands." NYSDEC also regulates the upland adjacent area up to 300 feet in width to the landward edge of tidal wetlands, and within 100 feet of the upland boundary of freshwater wetlands.

Smith Pond Rehabilitation Component

Implementation of this component would result in 5.878 acres of temporary impacts and 0.009 acre of permanent impacts on regulated wetlands and waters. Activities within wetlands and adjacent areas for this component would be authorized by the USACE under a Nationwide Permit (NWP) 27 (Aquatic Habitat Restoration, Enhancement, and Establishment Activities) and by the NYSDEC under an Article 24 Freshwater Wetland Permit. Permanent wetland impacts would be limited to the placement of 25.4 cubic yards of fill in 0.009 acre of forested wetland for construction of the fish ladder. Temporary impacts would consist of disturbance to 5.729 acres of open water during the mechanical removal of aquatic plants from Smith Pond; disturbance to 0.003 acre of forested wetland and 0.001 acre of open water for construction access to Smith Pond; disturbance to 0.009 acre of forested wetland during overlook improvements; disturbance to 0.128 acre of open water during structural enhancements of the existing weir and resurfacing the receiving pad below the weir; and disturbance to 0.008 acre of forested wetland during construction access for the repair of the weir and bulkheads. In addition, there would be 0.377 acre of permanent impacts and 0.075 acre of temporary impacts on the NYSDEC-regulated adjacent area required for the construction of the maintenance access road for the weir, fish ladder installation, construction of portions of the greenway path, and removal of invasive plants and planting of native plants. No compensatory mitigation is required as the wetland loss is limited to 0.009 acre and the project would result in enhancements to existing wetland habitat and water quality benefits within downstream portions of Mill Creek and associated tidal wetlands.

Lister Park Improvements Component

Implementation of this component would result in 0.361 acre of permanent impacts and 0.509 acre of temporary impacts on regulated wetlands and water. Permit coordination is ongoing, but activities within tidal wetlands and adjacent areas for this component would be authorized by the NYSDEC under an Article 25 Tidal Wetland Permit and for just wetlands by the USACE under either an Individual Permit or a NWP 13 – Bank Stabilization. Installation of the living shoreline and replacement of the overlooks at Lister Park would result in 0.141 acre of temporary impacts on open water during installation of the coir logs and turbidity barriers. Converting the open water to intertidal wetland (living shoreline) would permanently impact 0.310 acre of open waters. Installation of the living shoreline, which would include wetland enhancement (native plantings), would also result in 0.369 acre of temporary impacts to tidal wetlands. There would be 0.051 acre of permanently impacted intertidal wetland from placement of

rock sills and lining for the living shoreline. Approximately 0.529 acre of adjacent area would be permanently impacted. Overall, proposed activities would result in a net increase of 0.310 acre of wetland habitat. Silt fencing would be installed to prevent sediment and debris from discharging off-site in stormwater runoff, and inlet filters would be installed in existing catch basins to prevent construction sediment and debris from entering the existing stormwater system and discharging into waterbodies during construction.

East Rockaway High School Component

This component would result in permanent impacts on 382 square feet of regulated adjacent area from the installation of the bulkhead. Approximately 16 cubic yards of fill would be placed landward of the bulkhead, below the mean higher high-water line. Permit coordination is ongoing, but activities within wetlands and adjacent areas for this component would be authorized by the NYSDEC under an Article 25 Tidal Wetland Permit and by the USACE under either an Individual Permit or a NWP 13. Silt fencing would be installed to prevent sediment and debris from discharging off-site in stormwater runoff during land-based construction, and inlet filters would be installed in existing catch basins to prevent construction sediment and debris from entering the existing stormwater system and discharging into waterbodies during construction.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

This component would not affect regulated waters, wetlands, or adjacent areas. Although NYSDEC mapped the adjacent canal as littoral zone wetland, the regulated adjacent area extends seaward from existing fabricated structures such as paved streets and bulkheads.

Mill River Greenway Component

This component would not affect regulated waters, wetlands, or adjacent areas. Impacts to wetland-adjacent area resulting from construction of the greenway adjacent to Smith Pond are discussed above under the Smith Pond Rehabilitation Component.

6.2.12 Wild and Scenic Rivers

6.2.12.1 Citation: *Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)*

Nassau County contains no wild and scenic rivers as designated by the U.S. Department of the Interior and NYSDEC. Therefore, the LWTB Stormwater Project would have no impacts on wild and scenic rivers.

6.2.13 Environmental Justice

6.2.13.1 Citation: Executive Order 12898

Based on data from the 2000 U.S. Census, two components, Smith Pond and the Mill River Greenway, are in or adjacent to a potential environmental justice area, as defined by NYSDEC (USEPA 2016) (see **Figure 25**). However, as presented in the Clean Air, Noise Abatement and Control, and Transportation and Accessibility analyses in this EA, construction impacts would be temporary and not significant.

Once complete, the LWTB Stormwater Project would have no potential for new or continued disproportionately high or adverse human health and environmental effects on minority or low-income populations. The project would benefit residents, including environmental justice populations, through the expansion of trails in Smith Pond and Lister Park and the construction the greenways, which would

improve connectivity and access to the park and fields, and the implementation of improved flood mitigation infrastructure.

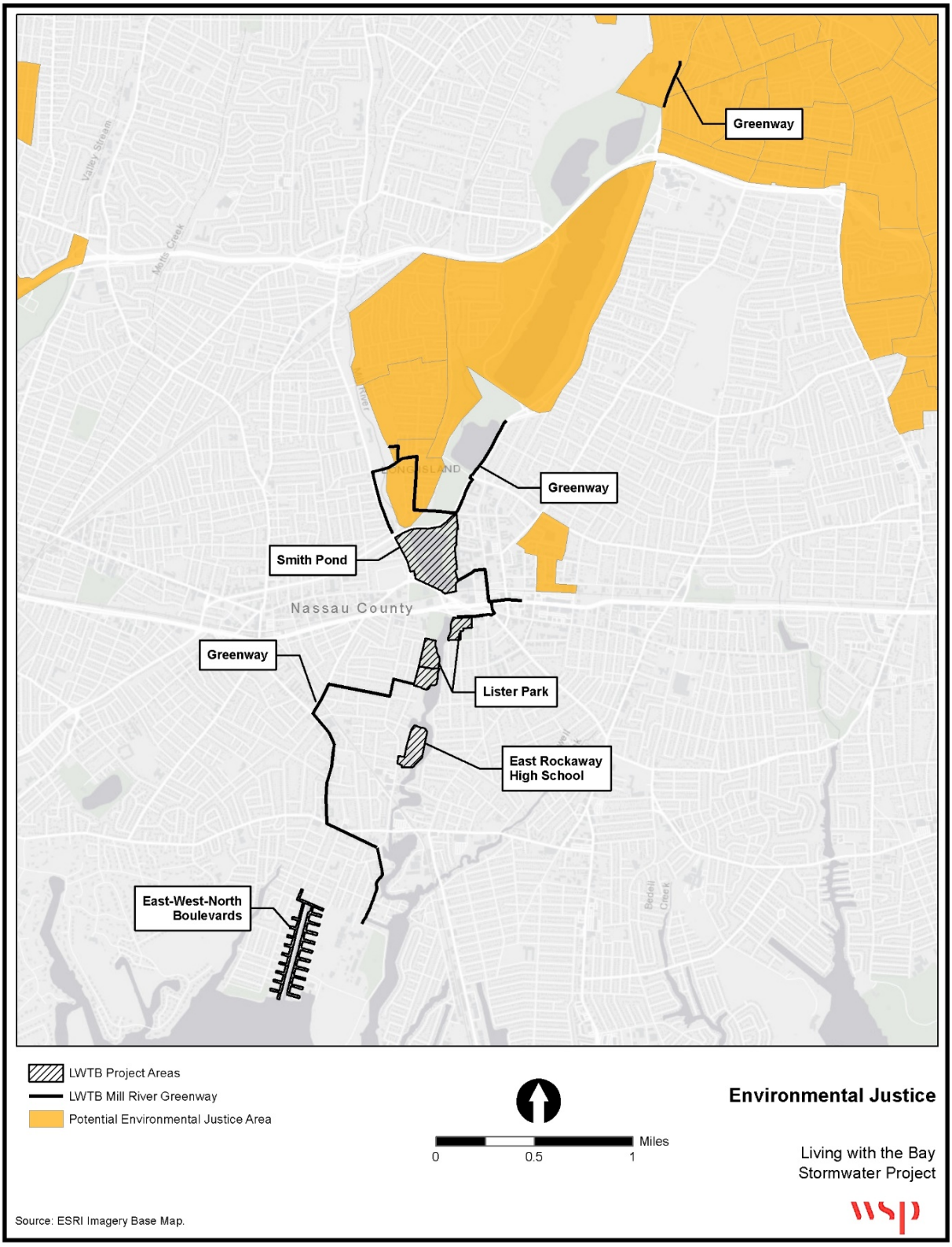

Figure 25: Environmental Justice Areas

6.2.14 Magnuson-Stevens Fishery Conservation and Management Act

6.2.14.1 Citation: 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all federal agencies to assess the potential impacts that proposed actions and alternatives may have on EFH. EFH is defined as waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

Only the Smith Pond Rehabilitation and Lister Park Improvements components involve in-water work. Smith Pond is not designated as EFH. Weir improvements would occur in diadromous fish habitat, but temporary cofferdams would prevent fish from entering the affected area, avoiding fish exposure to stressors during construction. The installation of the fish ladder would result in beneficial effects on diadromous fish migration.

Impacts to EFH-designated species or habitat, or forage species during construction of the Lister Park component would be temporary and localized. While the installation of the living shoreline would result in the conversion of open water to intertidal shoreline and minor loss of wetland, there would be no net loss of EFH as a result of the project. The project would result in enhancement of existing intertidal EFH.

An EFH Assessment for the LWTB Stormwater Project was submitted to NMFS; correspondence from NMFS dated June 18, 2020 (included in **Appendix G**), stated that NMFS agrees with the finding of the EFH assessment that the adverse effects of the project on EFH would not be substantial. The letter also stated that NMFS has no objections to the project and that additional EFH conservation recommendations were not warranted.

6.2.15 Fish and Wildlife Coordination Act

6.2.15.1 Citation: Fish and Wild Life Coordination Act of 1934, as amended, particularly sections 661 - 667(e)

The amendments enacted in 1946 require consultation with the Fish and Wildlife Service and the fish and wildlife agencies of States where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted . . . or otherwise controlled or modified" by any agency under a Federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources."

Implementation of the components would not result in the modification to waters, such as impoundment, diversion, channel deepening, or any other control or modification to natural streams or bodies of water. Fish and wildlife habitat that may be temporarily disturbed during component construction would be enhanced or restored to pre-existing conditions. The components would enhance ecosystems functions that support wildlife habitat in the area by addressing flooding caused by storm surge and rainfall and improving coastal habitat and water quality.

7 ENVIRONMENTAL ASSESSMENT FACTORS [24 CFR 58.40; REF. 40 CFR 1508.8 & 1508.27]

Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features, and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate.

Credible, traceable, and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed, and applicable permits or approvals have been obtained or noted.

7.1 LAND DEVELOPMENT

7.1.1 Conformance with Plans, Compatible Land Use and Zoning, Scale and Urban Design

There would be no change to designated land uses or use of the existing LWTB Stormwater Project component sites. All project components would be consistent with existing plans and zoning ordinances. The components would be consistent with Nassau County Master Plan and local zoning, ordinances, and plans that have been implemented by the Town of Hempstead and the Villages of Hempstead, Rockville Centre, Lynbrook, and East Rockaway.

7.1.2 Soil Suitability, Slope, Erosion, Drainage, Stormwater Runoff

7.1.2.1 Soil Suitability/Slope/Erosion/Drainage/Stormwater Runoff

The project components would be constructed in areas with negligible slope. Slopes would be designed to conform to engineering standards.

As indicated in **Section 6.2.3**, there are no known historical uses at the Smith Pond, ERHS, Boulevards, or Mill River Greenway component sites that would have contributed to upland soil contaminants; these sites are either undeveloped or have been developed with their current use. Excavation of soils would occur at the Smith Pond, Lister Park, and Boulevards component sites, as detailed below.

Increased erosion could occur during the construction of project components. However, the potential for impacts from construction would be minimized through adherence to BMPs. Sediment control fences, inlet protectors, and inlet filters would be used throughout the components to reduce sediment runoff into nearby waterways. The project components would entail minimal construction of new structures, and instead would predominantly comprise flood protection and stormwater improvements.

The LWTB Stormwater Project would benefit Smith Pond, Mill River, and downstream locations of the Mill River. As a benefit, overall flows to the Mill River would be slowed and reduced, and flows would include less sediment and other pollutants, which would decrease erosion and improve water quality in the Mill River and Hewlett Bay.

Smith Pond Rehabilitation Component

Installing the fish ladder and moving sediment from below the weir would require the excavation of approximately 3,790 cubic yards of soil. This excavation would adhere to design requirements for slope safety, and areas with steeper slopes would be shored as necessary during the fish ladder installation. The excavated material would be tested in a sampling and handling plan, and it would be disposed off-site by the contractor to a licensed facility.

Vegetation removal and excavation activities could increase erosion at Smith Pond; however, native species would be planted to help combat erosion. The total area of impervious surfaces would decrease because impervious paths and parking lots would be replaced with a pervious pavement. The proposed rehabilitation activities would disturb more than 1 acre of land and as such must obtain coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. The SPDES General Permit requires the use of New York State Standards and

Specifications for Erosion and Sediment Control, dated November 2016, and preparation of a Stormwater Pollution Prevention Plan to incorporate appropriate BMPs during construction activities.

Work locations were selected to avoid, to the extent practicable, water edges. Dewatering would occur, and water would be filtered before being discharged into the pond. Additionally, a 15-foot-wide compacted dense-graded aggregate would be placed with a 2 percent cross slope for drainage along the access road from Merrick Road to the weir. The component would result in a net decrease of impervious surfaces of 1.19 acres; this decrease would allow for increased stormwater infiltration and an associated reduction in stormwater runoff.

The proposed floodwalls would be installed to prevent off-site flooding, and the 35-foot-wide floodgate would be incorporated into the wall at the southern parking lot. The gate would remain open under lower storm events to allow overland stormwater to drain into the pond. Under larger flood events (i.e., the 25-year event when waters would begin flooding the area), stormwater from the pond would flood into the gate structure, causing the gate to rise (and close) and preventing off-site flooding to neighboring infrastructure and properties.

The Smith Pond component would not influence floodplain functions outside the component site because the site is not located in the floodplain.

Lister Park Improvements Component

The three fields that make up Lister Park consist of approximately 19.7 acres. The total disturbance for the component area is 6.84 acres; however, no more than 5 acres would be disturbed at one time. Approximately 3 acres of the proposed disturbance (e.g., creating the bioretention basins or the berm at Bligh Field) would involve excavation-related earthmoving activities. The maximum depth of excavation would be approximately 5 feet.

At Centennial Field, runoff from the parking lot would sheet flow to a grass swale in the center of the parking lot and convey stormwater runoff to the bioretention basin. The runoff would be treated prior to discharging into an existing 18-inch storm drainpipe, through which it would flow to the Mill River.

At Bligh Field, an earthen berm constructed to 9.75 feet in elevation, or approximately 2.65 to 3.65 feet above the ground surface, would be built along the western side of the field. The berm would intercept runoff to avoid sheet flow over the field, divert runoff towards the Mill River, stop runoff from flowing over the adjacent roadway and housing, and limit where runoff begins to concentrate. The sidewalk on the southern side of South Park Avenue, between Oceanview Road and Riverside Road, would be removed to provide a higher elevation to the west and a lower elevation to the east to assist with the directional flow of water to the drainage system. A self-closing flood barrier, pipe-to-manhole connector for the existing drain, and drainage outlet would be installed to help protect the housing to the west from flood events. Three drainage relief pipes would be installed at low points along the proposed greenway. A knee wall would be installed on the western side of the parking lot to redirect stormwater runoff. Construction of the elevated berm and knee wall would result in impacts on 0.120 acre and 0.032 acre of the floodplain, respectively.

Living shorelines would be installed along the Mill River shoreline to stabilize shorelines and reduce erosion. Trees and shrubs would be planted to decrease erosion. The proposed improvements would result in a net decrease of impervious surfaces, totaling 0.32 acre; this reduction would increase

stormwater infiltration and reduce stormwater runoff. Additionally, bioretention basins would be created and parking lots repaved with porous materials to decrease and filter stormwater runoff.

East Rockaway High School Component

Creation of the green infrastructure and installation of the drainpipe in the athletic field would require excavation; however, the installation of the drainpipe would improve site drainage. The entire parking lot would be graded to direct stormwater runoff to the proposed green infrastructure to the east. Impervious surfaces would decrease by 0.18 acre; this decrease would reduce the amount of stormwater runoff. The installation of the bulkhead would be result in 0.009 acre of impact in the floodplain and is not expected to result in permanent adverse impacts on floodplains.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

A 0.37-acre area would be excavated to create bioretention basins and install storm drainpipes. The maximum disturbed area at any point in time would be no larger than 0.5 acre, and the maximum depth of the excavation would be 8.8 feet. No material would be removed from the site. Topsoil would be stripped and stockpiled in areas as directed by the owner's representative. The contractor would not process excavated materials. The material would be reused on site.

The proposed improvements would benefit stormwater runoff by installing porous asphalt with new stone reservoirs under the roadway pavement, replacing catch basins at each stormwater outfall to capture debris and sediment prior to stormwater release to the bay, and installing two bioretention basins to increase stormwater quality prior to runoff release to the bay. These changes would result in a net decrease of impervious surfaces, totaling 0.11 acre; this decrease would allow for increased stormwater infiltration and an associated reduction in stormwater runoff.

Mill River Greenway Component

A net increase of impervious surfaces, totaling 0.13 acre would occur; this increase would not contribute to substantial new stormwater runoff.

7.1.3 Hazards and Nuisances (Including Site Safety and Noise)

7.1.3.1 Dam Safety and Flood Risk

No dams are located in the project components. The project components would not increase flood safety risk. See **Section 6.2.7** for an analysis of impacts to floodplains.

7.1.3.2 Site Safety

Impacts and mitigation relative to the location of the components in a Special Flood Hazard Area (floodplains) are identified in **Section 6.2.7**. No other known natural hazards, including earthquake fault zones, landslide zones, or hazardous terrain, occur at or near the component sites. Further, the components do not occur near any human-made hazard areas such as quarries, landfills, oil or gas wells, or near significant air pollution generators such as cement plants, incinerators, or power plants. Analysis of site safety considerations unique to each component are discussed below.

Smith Pond Rehabilitation Component

Invasive species removal and the installation of floodwalls and a floodgate would increase site safety at Smith Pond. Invasive plant species removal would open views to park features and limit overhang or

overgrowth on paths. The park would be open dawn to dusk, all year; park access would be controlled during off hours.

Lister Park Improvements Component

Improving the overlooks and creating crosswalks would increase safety in Lister Park component. Overlook improvements to replace old decking would better ensure pedestrian safety when the overlook is used. At each of the four new crosswalks, ADA-compliant curb ramps, detection warning surfaces, and crosswalk stripes would be installed. Additionally, pedestrian crossing signs would be placed along the roadway before each crosswalk.

East Rockaway High School Component

Similar to existing conditions, the school would be open during school and work hours and for after school programs. School access would be controlled during off hours. The school would be equipped with a generator to serve as an energy source for the school during a power outage.

Mill River Greenway Component

The proposed greenway improvements would improve pedestrian and cyclist safety and further separate pedestrian/vehicular traffic.

7.1.3.3 Noise

Construction activities associated with the components would temporarily increase noise levels; however, these impacts c would be mitigated by complying with local noise prohibitions. See **Section 6.2.9**. Operation of project components would not result in a substantial increase in vehicular trips, so no new nuisance noise is expected.

7.1.4 Energy Consumption

The ERHS component would be constructed with an emergency generator in an existing alcove area on the rear property of the school. The proposed 350-kilowatt generator would be equipped with a 1,024-gallon diesel fuel tank capable of providing power to the school building for 24 to 36 hours during emergencies.

Both the Smith Pond and Lister Park components would include low-level bollard lighting and pole-mounted lighting, which would not require substantial power to operate. No other project components would require energy consumption as part of their operations.

7.2 SOCIOECONOMICS

7.2.1 Employment and Income Patterns

According to the 2018 American Community Survey five-year estimates, the median household income in the Town of Hempstead is $107,095 compared to the median income in the State of New York of $65,323. The estimated median value of owner-occupied housing units from 2015 to 2018 is $436,500, compared to $302,200 for the State of New York (U.S. Census Bureau 2018a). Employment in the Town of Hempstead is distributed among several key industries and occupations. Approximately 23.5 percent of the population is employed in public administration, 20.8 percent in health care and social assistance services, 12.9 percent in retail trade, 9.6 percent in educational services, 7.4 percent in accommodation and food services, and 4.9 percent in construction and manufacturing (U.S. Census Bureau 2017).

Each of the project components would improve their respective project areas and help to mitigate flooding in surrounding residential communities. The Smith Pond component would improve aquatic life, pond infrastructure, recreational areas, and access to the park. The Lister Park component would improve flooding and erosion issues and recreational access to the park and fields. The ERHS component would mitigate flooding caused by heavy rainfall and tidal events along the sports field and parking lot, and the Boulevards component would mitigate flooding in the streets along the respective boulevards, while the Mill River Greenway component would increase community connectivity, recreational opportunities, and public safety along the Mill River Greenway. Because the five components would not result in any population changes, they would not alter employment or income patterns; however, they could create temporary construction jobs.

7.2.2 Demographic Character Changes, Displacement

According to 2018 U.S. Census American Community Survey five-year estimates, the population of the Town of Hempstead is 768,057. This represents a population increase of 1.9 percent since 2010. In 2018, approximately 66.7 percent of the population identified as Caucasian, 19.3 percent identified as Black or African American, 7.0 percent identified as Asian, 1.2 percent identified as American Indian or Alaskan Native, and 0.1 percent identified as Native Hawaiian and Other Pacific Islander. Approximately 20.5 percent of the population identified as Hispanic or Latino (of any race) (U.S. Census Bureau 2018b).

Each of LWTB Stormwater Project's five components would improve their respective project areas; none of them would result in physical barriers or create access difficulties that would isolate or concentrate any particular population group.

The proposed LWTB Stormwater Project components would enhance connections within their respective project areas and to adjacent communities.

The existing component sites are recreational, educational, or within the public right of way; therefore, no residents would be displaced.

7.3 COMMUNITY FACILITIES AND SERVICES

7.3.1 Educational and Cultural Facilities

Using the proposed CDBG-DR funding for repairs, improvements, and new construction for the proposed LWTB Stormwater Project components would not result in adverse effects on local schools in the Town of Hempstead. The Smith Pond component is an uninhabited area. The Lister Field and Mill River Greenway components are in both uninhabited areas and the public right-of-way. The Boulevard component is only in the public right-of-way. The ERHS component is located on the edge of the ERHS campus. Work would be located in the parking lot and on the periphery of the school's athletic fields. There would be no adverse effects on educational facilities and no population changes associated with repairs, improvements, and new construction of any of the LWTB project components.

During a major storm event where power has been lost, community members would be able to use ERHS as a temporary gathering space during area-wide power outages because the generator would continue to provide power to the building. Access to fields and parks post major storm events would be improved through the reduction in flooding from implementation of the proposed project.

7.3.2 Commercial Facilities

The proposed LWTB project components would not result in adverse effects on or significantly increase the demand for existing commercial establishments.

Visitor use of the park, fields, roadways, and the greenways would not substantially increase patronage of local businesses in the Town of Hempstead.

7.3.3 Health Care and Social Services

No population changes would be associated with any of the components of the LWTB Stormwater Project; therefore, there would not be a significant increase in demand for health care and social services. There would be no adverse effects on the nearby elderly care locations or existing social services. The LWTB Stormwater Project would not adversely affect area medical care providers.

7.3.4 Solid Waste Disposal and Recycling

Solid waste generation is expected from the Smith Pond component and may occur in the Lister Park, ERHS, and Boulevards components. No solid waste generation is expected from the Mill River Greenway component.

Smith Pond Rehabilitation Component

The proposed action for the Smith Pond component would produce approximately 3,790 cubic yards of solid waste in the first year. This solid waste would comprise plant material (invasive upland and native wetland plants) removed from the park. Solid waste would not be produced during normal site operations.

All excavated soil would be reused on site, unless otherwise detailed on plans, and all material identified for off-site disposal would be properly tested and classified for disposal to a licensed facility currently accepting the material.

Collection, transportation, and disposal of construction materials would comply with all applicable local, state, and federal policies and permitted facilities. Once construction is completed, the component would not result in substantial increases of solid waste. Litter and trash removal would continue pursuant to existing protocols.

Lister Park Improvements Component

The proposed improvements are not anticipated to generate solid waste. If waste were generated, it would be limited to minimal construction and debris waste generated for the duration of construction activities. Sediment collected by erosion control measures would be disposed of by spreading it on-site or hauling it off-site if determined to be unsuitable for fill.

East Rockaway High School Component

The activities associated with this component are not anticipated to generate solid waste; if any waste were generated, it would be limited to minimal construction and debris waste. The existing parking lot would be stripped and re-paved over several days, potentially producing a small amount of construction and demolition waste.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

The component is not anticipated to generate solid waste; if any waste were generated, it would be limited to minimal construction and debris waste. Installing the proposed improvements would require excavation, but all materials are anticipated to be reused on site.

7.3.5 Wastewater and Sanitary Sewers

The Nassau County Department of Public Works is responsible for wastewater treatment in Nassau County. Wastewater is processed at the Bay Park STP and is collected through a combination of sewers and treatment plants operated by county and local sewage districts. The project components would not contribute new or additional wastewater.

7.3.6 Water Supply

The Village of Rockville Centre supplies drinking water for the Smith Pond component site from 10 wells located throughout the community that are drilled to an average depth of 540 feet (Village of Rockville Centre 2020). Drinking water for Lister Park and ERHS component sites is provided by New York American Water – Lynbrook Operations. Its source of water is groundwater drawn from approximately 162 wells total, including small capacity ones in well field located in the aquifer system beneath the land surface (New York American Water 2019). The Boulevards and Mill River Greenway components would not consume water. The proposed components would not result in an increase for water demand.

The project components would improve the management of stormwater throughout the watershed. Proposed stormwater improvements and green infrastructure measures would clean stormwater and therefore improve the quality of groundwater. Because groundwater is used as water supply in Nassau County, the improved water quality in the watershed could have indirect benefits for Nassau County.

7.3.7 Public Safety (Police, Fire, and Emergency Medical)

The proposed project would not result in a substantial increase in demands on local police, fire, or emergency medical services. Police departments, fire departments, and medical facilities that serve the component areas are shown in **Figure 26**.

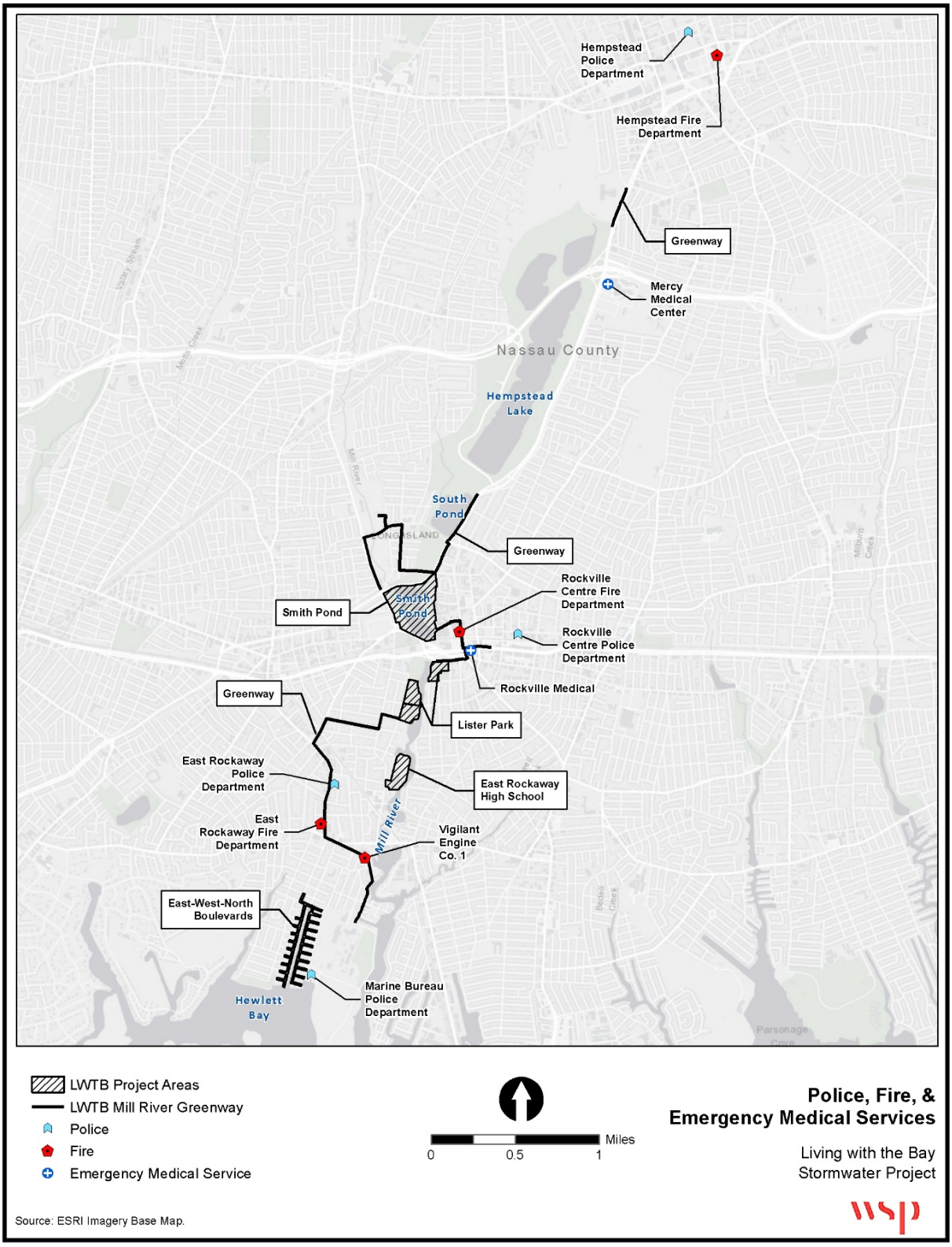

Figure 26: Police, Fire, and Emergency Medical Services

7.3.8 Parks, Open Space, and Recreation

Both the Smith Pond and Lister Park components are sited within designated parks and are under the jurisdiction of the Village of Rockville Centre. Both components would add new trails and ADA-accessible walkways. Overall, the Smith Pond and Lister Park components would improve the parks. Smith Pond would require staff time to provide invasive species maintenance. All other projects do not require additional maintenance from park staff. Overall, recreational access would be improved because there would be a reduction in flooding.

7.3.9 Transportation and Accessibility

7.3.9.1 Traffic

Principal vehicular access routes to LWTB Stormwater Project components include Peninsula Boulevard, Ocean Avenue, Sunrise Highway and other local roadways. The project components would not alter the layout or routing of existing roadways. The Mill River Greenway component and greenway elements in the Smith Pond and Lister Park components would replace some existing trails and create new sections of greenway. Improvements associated with LWTB Stormwater Project components would not attract an appreciable number of new visitors; therefore, no noticeable increase in auto-trips within the project area is expected. Improving and expanding hiking/biking trails throughout the project area would provide alternative access options for LWTB component users.

Operationally, the project components would add minimal traffic to area roads from construction activities in the Villages of Hempstead, Rockville Centre, Lynbrook, and East Rockaway, but this traffic would not be significant. Construction traffic would generally be limited to major roadways and existing truck routes on Long Island. Construction traffic on local roadways would only occur where necessary.

During construction activities, worker trips and trips for materials/vendors would increase. A detailed construction vehicle management plan would be developed for each project component and would be coordinated with local authorities. Construction trucks would access each site via their respective designated truck routes. A construction vehicle management plan for each project component would ensure that construction would not adversely affect traffic conditions.

7.3.9.2 Pedestrian

The LWTB Stormwater Project would increase pedestrian access to each of the component project areas (see **Appendix P**). The proposed LWTB Stormwater Project improvements to pedestrian accessibility and connectivity within the parks, fields, and greenways would likely increase pedestrian volumes compared to the future without the project components. However, this increase would be distributed over time throughout the entire project area. During construction, it is possible that contractors may limit or re-route pedestrians around construction activities to continue to provide access to open park features (those not under construction or rehabilitation).

7.3.9.3 Parking

Currently, existing parking facilities are located in the Smith Pond, Lister Park, and ERHS project areas (see **Appendix P**). As part of these components, additional flood mitigation measures would be implemented at parking lots, such as porous pavement, to improve access to parking post storm events, and ADA accessibility would be expanded.

The greenway and trail access component improvements would likely generate a small increase in auto trips compared to the future without the proposed project. Given the dispersed nature of these improvements, any increase in parking demand is anticipated to be accommodated by the existing public parking lots. There would be a temporary impact to parking during reconstruction and rehabilitation of the parking lots. At Smith Pond Park and Lister Park, parking during construction would be accommodated by existing, surrounding on street parking. The contractor would be required to notify the residences of temporary parking restrictions near the parks and the Villages would be required to note temporarily closed parks. At ERHS, construction of the parking would occur during non-school hours and incrementally so that parking spaces could continue to be available at a limited capacity.

7.4 NATURAL FEATURES

7.4.1 Unique Natural Features, Water Resources

The project component sites are not designated as NYSDEC Critical Environmental Areas. NYSDEC lists Jamaica Bay and its tributaries as the only Critical Environmental Area in Nassau County, and these resources are located outside the project area, approximately 2.07 miles west of the closest project component (Mill River Greenway). The LWTP Stormwater Project would have no impact on this Critical Environmental Area.

Per HUD's EA Factors Guidance, unique natural features on or adjacent to the project component sites are noted below. The component sites are previously developed locations, and the proposed activities would not preclude access to any such feature.

Smith Pond Improvements Component

Smith Pond is a small Nassau County pond that provides unique social, education, and aesthetic benefits to the surrounding communities. The improvements would increase the safety of, and accessibility to, this feature. Moreover, the activities associated with this component would improve habitat and water quality by removing overgrown upland and wetland invasive plant species.

Lister Park Improvements Component

Mill River originates in the Village of Hempstead. It travels south, picks up additional water from Schodack Brook and Pine Stream, flows through two more ponds, then widens into Hewlett Bay. The river provides unique recreational and aesthetic benefits to the surrounding communities. The improvements would increase the safety of, and accessibility to, this feature. Moreover, the installation of green infrastructure associated with this component would improve surface water quality.

East Rockaway High School Component

See Lister Park Improvements, above.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

Hewlett Bay is a coastal body of water adjacent to the Boulevards component. The bay provides unique recreational and aesthetic benefits to the surrounding area. The activities associated with this component would not hinder access to this resource, and moreover, would improve surface water quality through the installation of green infrastructure and stormwater management measures.

7.4.2 Vegetation, Wildlife

The components of LWTB Stormwater Project would occur in highly developed urban areas, and any adverse impacts on vegetation and wildlife are anticipated to be no more than minimal and temporary. Vegetation clearing would be kept to the minimum area required to meet the design objectives. All temporarily disturbed vegetated areas would be reseeded or replanted with appropriate native vegetation. Wildlife disturbed by construction noise and activity are expected to avoid the area and use similar nearby habitat until either they become accustomed to the construction activity or until the activity is complete.

BMPs, such as silt fencing, turbidity curtains, and cofferdams, would be employed to minimize the potential construction impacts. Additionally, specific mitigation measures may be implemented as identified during the permitting process by federal and state agencies. All vegetation planted or seeded as part of the project components would consist of native species.

Following completion of construction and associated habitat enhancements, there would be no adverse operational impacts on vegetation and wildlife. The LWTB Stormwater Project would improve water quality and existing wetland and aquatic habitat. Fish, benthic invertebrates, and waterfowl and waterbirds that use the project area and downstream habitat would benefit from invasive species removal and stormwater management intended to improve water quality and help restore aquatic habitats.

Specific impacts on vegetation and wildlife habitat associated with the individual components are discussed below.

Smith Pond Rehabilitation

Proposed invasive vegetation clearing would decrease cover of invasive species at the site and encourage the establishment of native wetland vegetation. Removal of upland and wetland invasive vegetation would occur along the north, east, and west shorelines of Smith Pond. Approximately 75 trees would be removed during construction of the weir access road, and invasive species would be removed annually. All work in these land areas would be performed by hand and would include additional herbicide treatment and cutting to deter future growth. Native vegetation would be replanted following completion of construction and invasive species removal. A total of 798 trees and shrubs would be planted as part of the forest enhancement and restoration and greenway plantings. Planting areas, species, and quantities are listed in **Appendix B**.

Within Smith Pond, 30 percent of lily pads would be removed by mechanical methods; no herbicide treatment would occur in the pond. Routine maintenance by the Village of Rockville Centre would be implemented to manage regrowth following construction. Approximately 5.73 acres of open water habitat for fish and waterfowl in the pond would be temporarily disturbed during mechanical removal. Removal of invasive plants species would improve the ecological health of the pond and its buffers and allow existing native plantings to thrive.

Weir enhancements and fish ladder installation at Smith Pond would result in temporary impacts on approximately 0.128 acre of open water habitat in the nontidal, concrete lined channel/basin, south of the existing weir. Construction of the weir enhancements and fish ladder installation would begin in November 2020 and be completed in January 2021, prior to spring fish migration. Temporary cofferdams would be installed downstream and upstream of the weir to prevent fish from entering the

basin, avoiding fish exposure to stressors during construction. The installation of a fish ladder would provide a route for migrating fish to swim upstream and downstream of the existing weir, supporting historical fish migration in the upper section of the Mill River.

BMPs to protect wetlands and wildlife include the use of a turbidity curtain around the overlook improvement work area in the pond, temporary coffer dams for weir improvement work, and installation of silt fencing to prevent sediment and debris from discharging into waters during land-based activities. The proposed flood protection measures would not impede wildlife movements.

Lister Park Improvements

Ninety-one trees would be removed during construction of the living shoreline, and 56 trees would be stabilized. Following construction, 103 trees and shrubs, plus herbs/grasses, landscape plugs, and seed mix would be planted throughout the living shoreline and adjacent area. Planting species and quantities depicted on the design plans for Lister Park are included in **Appendix B**.

Installation of the living shoreline and replacement of the overlooks at Lister Park would result in approximately 0.141 acre of temporary disturbance on open water habitat during installation of the coir logs and turbidity barriers. Approximately 0.310 acre of open waters would be converted to intertidal wetland as a result of living shoreline installation. Installation of the living shoreline would also result in approximately 0.369 acre of temporary impacts on intertidal wetland habitat, including wetland enhancement activities (native plantings). Approximately 0.051 acre of unvegetated intertidal habitat would be permanently affected by the placement of rock sills and lining for the living shoreline. The rock sill would introduce stable hard bottom habitat that provides substrate for colonization of macroalgae and epibiota. Overall, the installation of the living shoreline would result in a net increase of 0.310 acre of vegetated intertidal habitat.

Turbidity increases during construction would be temporary and localized, and activity would be conducted at low tide to minimize disturbance to open water habitat. Impacts from disturbance to sediments and benthic infauna prey organisms from installation and removal of the turbidity barriers would be temporary and considered negligible. The activity would not result in substantial adverse effect on EFH-designated species or habitat, or forage species. Installation of the living shoreline would mitigate shoreline erosion and enhance habitat quality along the Mill River, providing numerous benefits, including nutrient pollution remediation, EFH structure, and buffering of shorelines from waves and storms.

East Rockaway High School Component

Approximately 68 trees would be removed for bulkhead and shoreline improvements. Vegetated areas temporarily disturbed during construction would be restored with topsoil and native grass seed.

East, West, and North Boulevards – Stormwater Drainage Improvements Component

Construction would occur within existing street rights-of-way, and two trees would be removed to implement stormwater drainage improvements. Vegetated areas temporarily disturbed during construction would be restored with topsoil and native grass seed.

Mill River Greenway

Four trees would be removed along the greenway to prevent further sidewalk damage. Overhanging vegetation would be trimmed back from the improved sidewalks where necessary. Vegetated areas temporarily disturbed during construction would be restored with topsoil and native grass seed.

8 ADDITIONAL STUDIES PERFORMED:

The design team prepared several additional studies in analysis and existing conditions.

8.1 FIELD INSPECTION (DATE AND COMPLETED BY)

The design team and the GOSR environmental review team performed several site visits and inspections, beginning in the latter half of 2018 and continuing to the present.

8.2 LIST OF SOURCES, AGENCIES AND PERSONS CONSULTED [40 CFR § 1508.9(B)]

Cowardin, L. M., V. Carter, F.C. Golet, and E.T. LaRoe

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GOSR (New York Governor's Office of Storm Recovery)

2019a Smith Pond Rehabilitation Project (Project L). Project Narrative – 60% Submission. Prepared by WSP. September 6, 2019.

2019b Living with the Bay – Mill River Greenway, Town of Hempstead, NY. 75% Plans – Not for Construction. Prepared by MJ Engineering and Land Surveying, P.C. November. 67 pp.

2020a Village of Rockville Centre. Smith Pond Rehabilitation Project (Project L). 60% Resubmission Draft – Not for Construction. Prepared by WSP. January 3, 2020. 87 pp.

2020b Phase IA Archaeological Sensitivity Assessment, Smith Pond, Living with the Bay: Rebuild by Design. Prepared by Louis Berger. April 16, 2020.

2020c Phase IB Archaeological Survey. Living with the Bay: Rebuild by Design. July 14, 2020.

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NOAA (National Oceanic and Atmospheric Administration)

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New York American Water

2019 2019 Water Quality Report, Lynbrook Operations District. Available at: http://www.amwater.com/ccr/lynbrook.pdf. Accessed May 21, 2020.

NYSDEC (New York State Department of Environmental Conservation)

2008 Breeding Bird Atlas dataset for Google Maps and Google Earth. The Second Atlas of Breeding Birds in New York State, edited by Kevin J. McGowan and Kimberley Corwin, December 2008. Available at https://www.dec.ny.gov/pubs/103459.html. Accessed February 12, 2020.

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2018a East Rockaway High School, Waterview Road Improvements. Final 60% Design – Not for Construction. December 28, 2018. 11 pp.

2018b Living with the Bay, East Rockaway High School/Lister Park. 60% Design Report. December 28, 2018. 33 pp.

2019 Lister Park Improvements. 60% Design. February 14, 2020. 57 pp.

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2020 Contract Drawings for Stormwater Drainage Improvements. East Boulevard and West Boulevards Bay Park, New York. January. Draft 90% Submission. 34 pp.

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2018a ACS Economic Characteristics (Table DP03) 2018 ACS 5-year Estimate.

2018b U.S. Census Bureau. ACS Demographic and Housing Estimates (Table DP05) 2018 ACS 5-year Estimate.

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Village of Rockaway Centre

2020 2019 Drinking Water Quality Report. Available at http://rvcny.us/waterreport.pdf. Accessed May 21, 2020.

8.3 LIST OF PERMITS OBTAINED OR REQUIRED

The five components can each be separately permitted, such that a single project component can advance independently of the others. Applicable permits, approvals, and consultations include:

NYSDEC

- Article 15 of Protection of Waters Permit
- Article 24 Freshwater Wetlands Permit
- Article 25 Tidal Wetlands Permit
- Part 661 Tidal Wetlands
- 401 Water Quality Certification
- SPDES General Permit (GP-0-15-002)

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

- National Historic Preservation Act, section 106 Consultation
- New York State Historic Preservation Act of 1980, section 14.09 Consultation

USFWS

- Endangered Species Act, section 7 Consultation
- Migratory Bird Treaty Act Consultation

USACE

- Clean Water Act, section 404 Permit
- Nationwide Permits 3 (Maintenance) and 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)
- Section 10 of Rivers and Harbors Act Individual Permit
- Floodplain Development Permits - Village of East Rockaway (Village Code section 151-11) and Village of Rockville Centre (Village Code section 188-12)

8.4 PUBLIC OUTREACH [24 CFR §§ 58.43]

GOSR published and distributed an Early Notice of a Proposed Activity in a 100-Year Floodplain and Wetland (Executive Orders 11988 and 11990) on May 21-22, 2020. The Early Notice was published on GOSR's website; distributed to local, state, and federal agencies; and published in four multi-language local newspapers (*Sing Tao*, *Noticia*, *Russkaya Reklama*, and *Newsday*). The Early Notice solicited comments on the project to be submitted to GOSR by June 22, 2020. A copy of the Early Notice is included in **Appendix K**.

9 CUMULATIVE IMPACT ANALYSIS [24 CFR § 58.32]

The Mill River Watershed is the general geographic area considered in the cumulative impact analysis. The areas around the project components are generally residential, commercial, or recreational in nature; activities in these locations would generally involve rehabilitation or minor expansion of these existing uses.

As indicated in **Section 2**, the LWTB Project and Resiliency Strategy identifies and prioritizes projects and project types with program-specific timeframes and costs for planning, design, permitting, procurement, construction, and project closeout. Since completion of the Resiliency Strategy, GOSR and the local communities have decided to proceed with the following projects: Hempstead Lake State Park, the LWTB Stormwater Project, and the Long Beach WPCP Consolidation Project. The Hempstead Lake State Park Project is the northernmost and farthest upstream of all the projects. Moving downstream is the LWTP Stormwater Project followed by the Long Beach WPCP Consolidation Project. See **Figure 27**. These cumulative projects are further described below.

Additional projects that share similar study areas and development timelines are being undertaken in the immediate vicinity of the LWTB Stormwater Project. Therefore, these projects are also considered in the cumulative impact analysis. **Figure 27** illustrates all the projects that have been considered in the cumulative impact analysis. Cumulative impacts associated with the Hempstead Lake State Park Project and the Long Beach WPCP Consolidation Project are described first, followed by the additional cumulative projects that fall outside the LWTB Project and Resiliency Strategy.

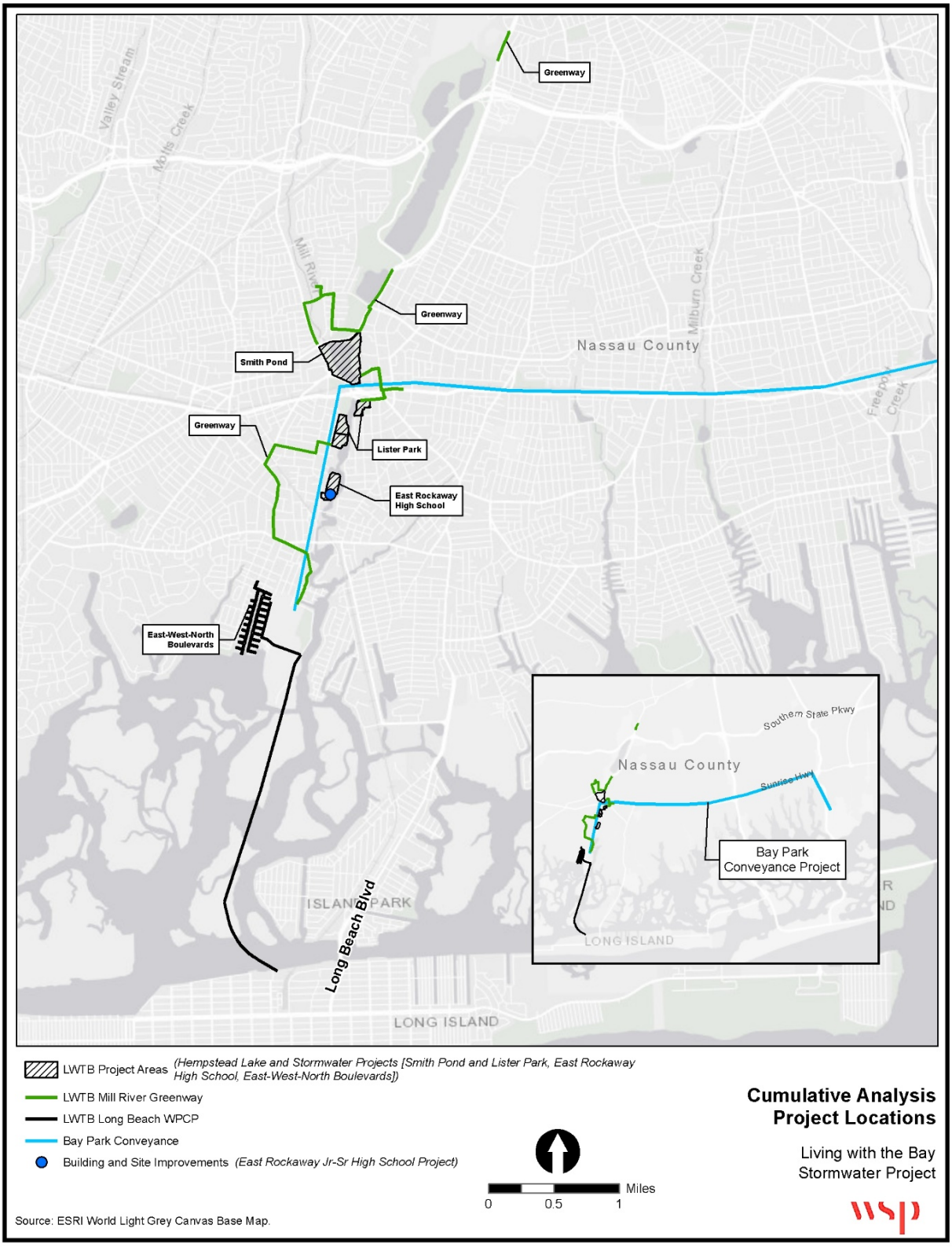

Figure 27: Living with the Bay Projects Considered in the Cumulative Analysis

9.1 LWTB PROJECTS CONSIDERED IN CUMULATIVE IMPACT ANALYSIS

The LWTB Project and Resiliency Strategy are configured such that projects can advance independently. Although, the LWTB Stormwater Project is the subject of this EA, the other two projects proposed by the LWTB Project and Resiliency Strategy are described below and are considered as part of this cumulative impact analysis. The cumulative impact analysis presented in this EA evaluates these projects based on currently available information. Upon submittal of formal funding applications to GOSR for each of these remaining projects, environmental review—inclusive of a cumulative impact analysis that considers LWTB Stormwater Project and other past, present, and reasonably foreseeable projects—will be undertaken.

9.1.1 Hempstead Lake State Park

Hempstead Lake State Park is a 521-acre, multiuse park located in the Town of Hempstead, New York. The park falls within the upper portion of the Mill River Watershed and includes the largest body of fresh water in Nassau County, namely Hempstead Lake, as well as several smaller ponds. Improvements to the resilience of the park and its infrastructure are necessitated by the increased development of the watershed since its original establishment as a water reservoir and as exacerbated during major storm events, which are expected to increase in severity and frequency over time. The objectives of the project are to improve flood management, enhance natural ecosystems, provide connectivity between diverse populations, enhance safety, provide emergency response facilities, promote environmental education, and increase park usage.

The project encompasses several elements in and around the park, as shown in **Figure 28**. As summarized below, project elements include dams, gatehouses, ponds, bridges, an education and resiliency center, and greenway waterfront improvements.

- The dams element would make the flow control structures operable, include dam improvements to meet current regulatory standards, and implement gatehouse renovations.
- The ponds element would install floatables catchers and sediment basins at pond inlets, create stormwater filtering wetlands, and clear the ponds to remove debris and improve water quality.
- The stormwater wetland element would reestablish flow patterns through the ponds and wetlands that have been impacted by the floatables debris and sediments that have blocked the flow patterns.
- Trails through new wetland areas and along paths near the sediment basin and floatables collection would offer the opportunity to provide additional educational messages about the interrelationship between the runoff from downtown Hempstead and the tidal bays to the south. The project would also involve installation of an improved greenway and trail system throughout the park and provide new bridge connections to allow pedestrian, and bicyclist access and connectivity.
- The new education and resiliency center would focus on environmental stewardship and climate change adaptation resiliency.
- The project would improve emergency response, vehicle access, and coordination of incident command.

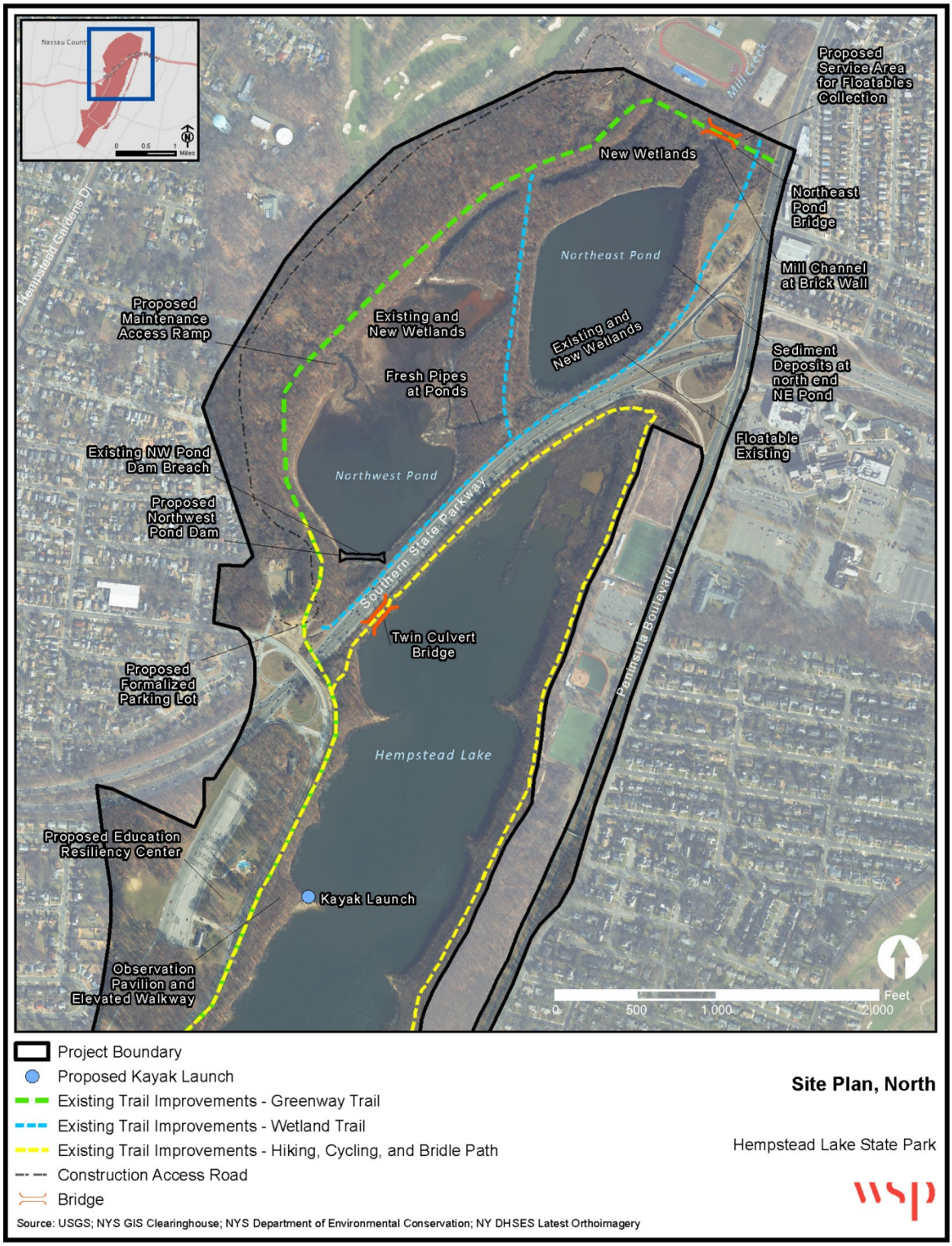

Figure 28a: Hempstead Lake State Park Project - Site Plan, North

Figure 28b: Hempstead Lake State Park Project - Site Plan, South

9.1.2 Long Beach Water Pollution Control Plant Consolidation

The Long Beach WPCP Consolidation Project would consolidate wastewater treatment by diverting flow from the antiquated Long Beach WPCP to the Bay Park STP, a state-of-the-art facility with superior treatment technologies. Wastewater from the Long Beach barrier island would be conveyed via a new storm-resilient pumping facility to the newly upgraded and storm-hardened Bay Park STP located in the Hamlet of Bay Park, adjacent to the mouth of Mill River. This project is intended to improve water quality, enhance the natural resiliency functions of marshlands, and improve the quality of life in the residential communities surrounding the Western Bay. The following elements are included in the project:

- Conversion of the Long Beach WPCP's headworks and influent pump to a resilient, diversion pump station
- Installation of a 24-inch force main, within a 30-inch-diameter steel casing from the diversion pump station to the Bay Park STP (see **Figure 29**)
- Connection from the force main to the existing sewer main located west of the Bay Park STP[8]

A temporary bypass pumping station would be used during construction of the diversion pump station and installation the force main pipe from the existing influent pumping area at the Long Beach WPCP to the sewer main west of the Bay Park STP. The force main would be installed beneath Hempstead Bay, primarily within the existing easement for the Bay Park STP outfall using horizontal directional drilling.

Due to recent and ongoing improvements, including nitrogen-reducing and deammonification projects, the Bay Park STP is equipped with sustainable, state-of-art wastewater treatment technologies. According to a desktop assessment, the nitrogen-reducing and deammonification projects are expected to reduce influent nitrogen by 85 percent at the Bay Park STP. As such, the project would reduce nitrogen loadings to Hewlett Bay. In addition, the Long Beach WPCP Consolidation Project is one aspect of the Western Bays Resiliency Initiative. Another aspect of the initiative is the Bay Park STP Conveyance Project, which includes diverting treated effluent from the Bay Park STP to the Cedar Creek WPCP, where it would be discharged into the Atlantic Ocean via an existing outfall structure. The completion of the Bay Park STP Conveyance Project, expected in 2025, is expected to significantly improve the water quality in Western Bays of Long Island.

[8] The proposed force main would intercept the existing 66-inch reinforced concrete sanitary sewer pipe located west of the STP, and the existing pipe would then carry the flow into the STP for treatment.

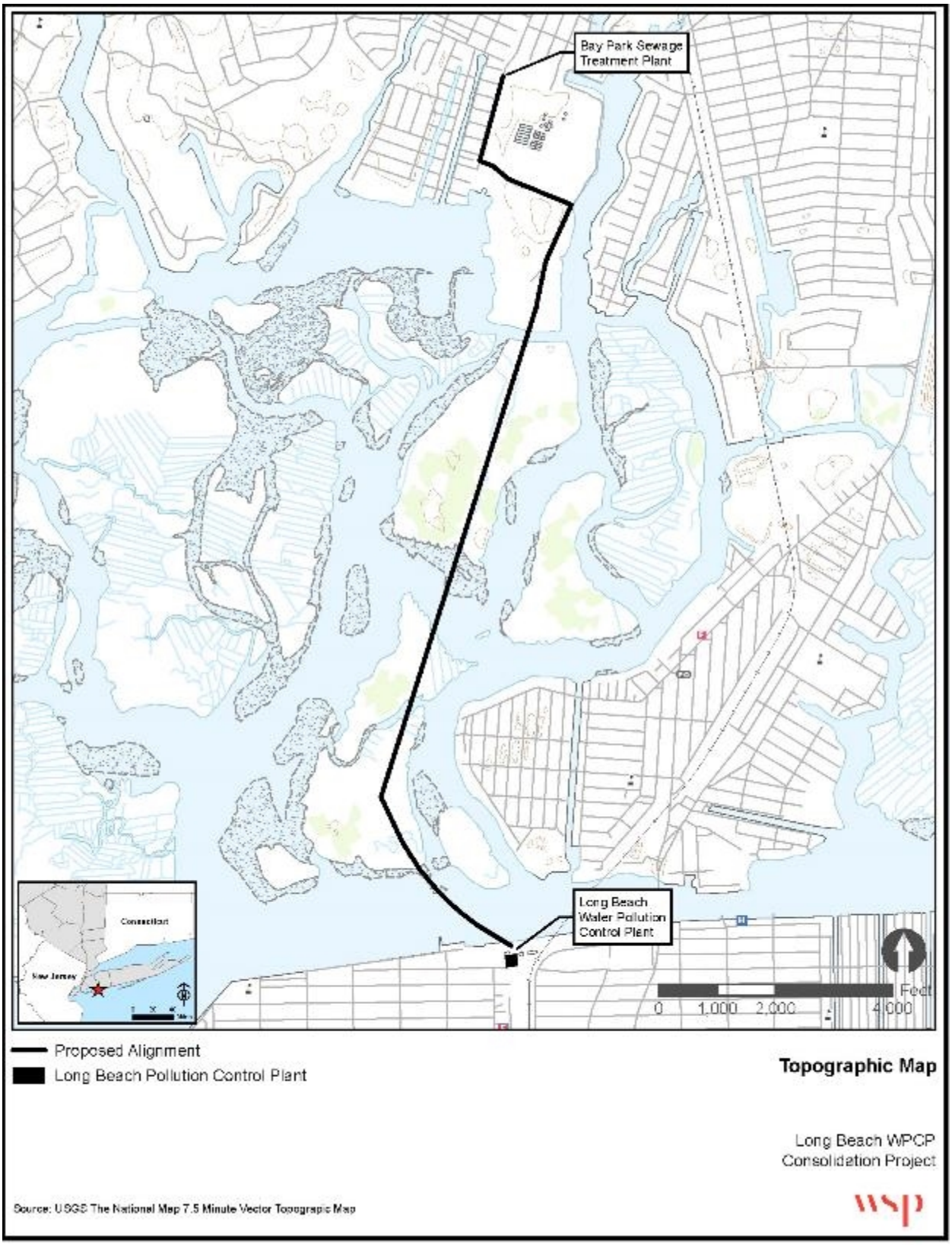

Figure 29: Long Beach Water Pollution Control Plant Consolidation Project Alignment

9.2 ADDITIONAL CUMULATIVE PROJECTS OUTSIDE THE LWTB PROGRAM

As discussed below, the cumulative impact assessment also considers two projects in the immediate vicinity of the project area—the Bay Park STP Conveyance Project and the Proposed Building and Site Improvements at the East Rockaway Junior-Senior High School (also known as ERHS) Project.

9.2.1 The Bay Park STP Conveyance Project

The Nassau County Department of Public Works is undertaking the Bay Park STP Conveyance Project to divert effluent treated at the Bay Park STP from the current discharge point in Reynolds Channel to the existing ocean outfall at the Cedar Creek WPCP (see **Figure 30**). The innovative project entails constructing a dedicated pump station at the Bay Park STP, a new force main between the Bay Park STP and the Cedar Creek WPCP, a receiving connection at the Cedar Creek WPCP effluent pump station, and all related control systems and appurtenances. Effluent would be conveyed via the construction of a 2-mile-long force main from the Bay Park STP through the ERHS and Lister Park components, to an existing aqueduct under the Sunrise Highway. The project would also rehabilitate an 8-mile stretch of the aqueduct and construct a 2-mile long force main to connect the rehabilitated aqueduct to the existing Cedar Creek WPCP outfall, which diffuses treated water 3 miles offshore in the Atlantic Ocean.

The diversion of treated water from Bay Park STP to Cedar Creek WPCP would remove between 74 to 90 percent of the nitrogen currently discharged into the Western Bays. The project is estimated to take two years to complete using design-build, with construction start anticipated in fall 2020.

The Bay Park STP Conveyance Project, which is also part of Western Bays Resiliency Imitative, would help jump-start the rejuvenation of vital marshlands and grasses that protect communities from wave action and coastal surge. In addition to increasing the resiliency of areas along the Western Bays to coastal flooding, this project would give the local ecosystem a chance to regenerate, bringing back cleaner, healthier bays for wildlife, shellfish, fish, visitors, and residents.

After completing the Bay Park STP Conveyance Project, the existing Bay Park STP outfall to Reynolds Channel would remain in place and may continue to be used periodically (e.g., during large wet-weather events or required maintenance, or to discharge any surplus volume of treated flow that would exceed the capacity of the Cedar Creek WPCP).

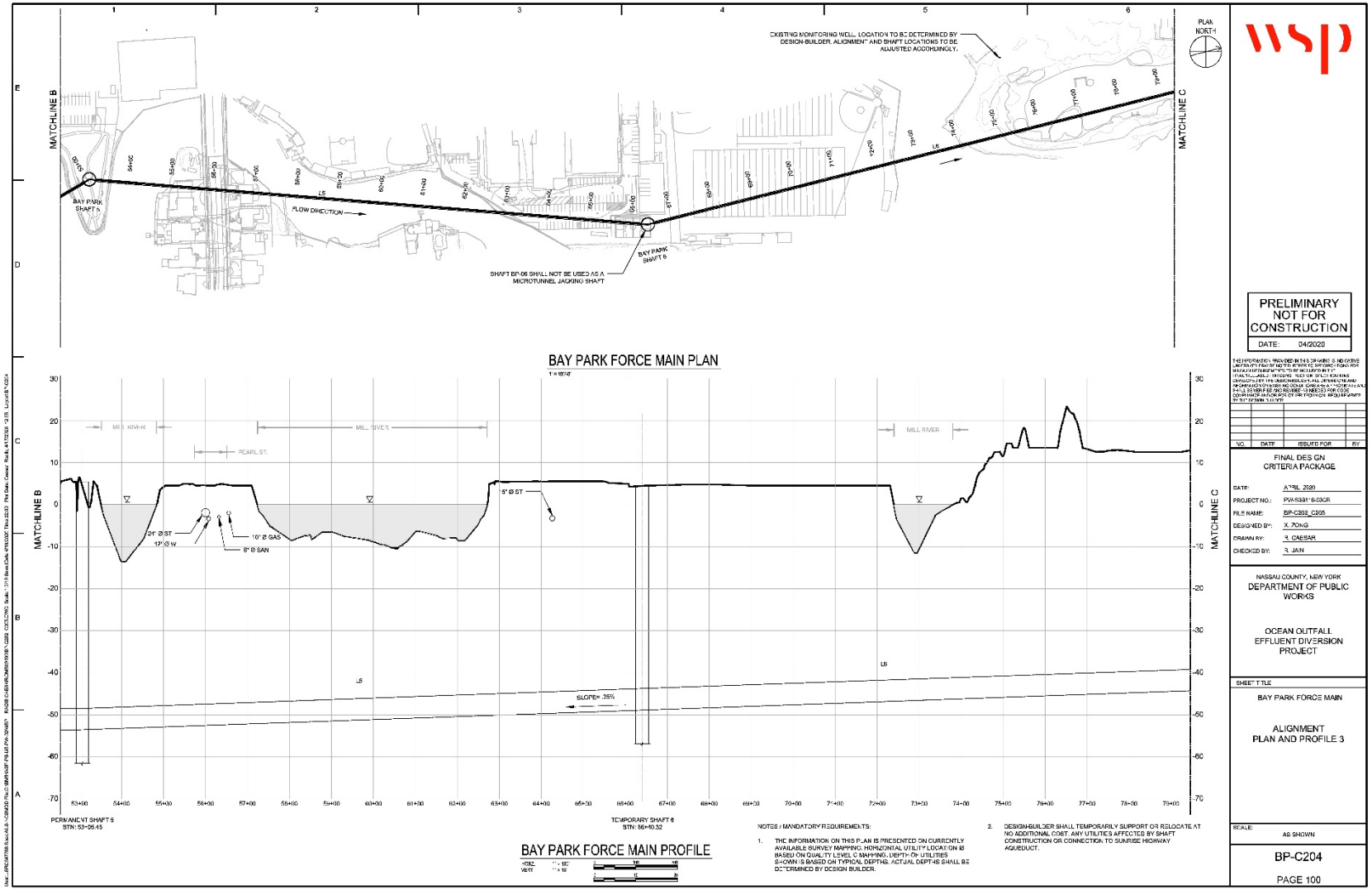

Figure 30a: Bay Park STP Conveyance Project Force Main Under the Lister Park Component

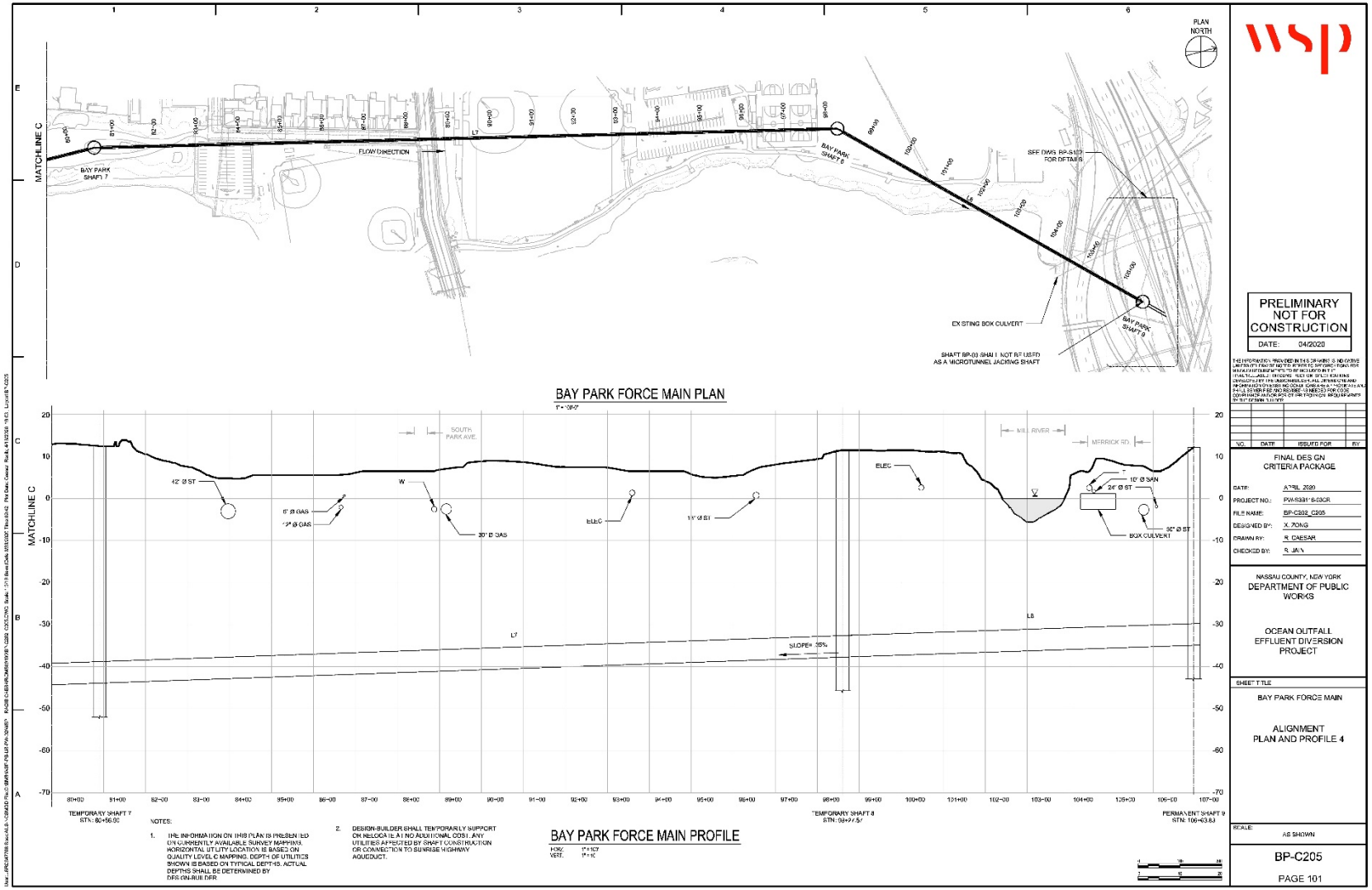

Figure 30b: Bay Park STP Conveyance Project Force Main Under the East Rockway High School Component

9.2.2 Building and Site Improvements at the East Rockaway Junior-Senior High School Project

The Board of Education of the East Rockaway Union Free School District is considering a building and site improvement project at the East Rockaway Junior-Senior High School located at 443 Ocean Avenue in East Rockaway. The proposed project would renovate and reconfigure select interior spaces, upgrade mechanical and electrical systems, and add air conditioning. Specifically, the proposed project would include:

- Renovations to the science labs in Rooms 213 and 215, including demolition, asbestos abatement, new ceilings and lighting, HVAC upgrades, electrical and plumbing upgrades, and manufactured casework and finishes. The proposed work would also reconfigure the spaces.
- Renovations to the Current Family & Consumer Science Rooms 109 and 110, including demolition, asbestos abatement, HVAC and electrical upgrades, new casework, and new appliances and finishes. The proposed work would also reconfigure the spaces to create a better working environment.
- Reconstruction of the existing art room, including adjacent kiln room. The proposed work would include demolition, HVAC upgrades, electrical and technology upgrades, and the replacement of existing manufactured casework.
- Renovations to the Technology Education Building, including HVAC and toilet reconstruction for four single-use bathrooms.
- Replacement of the existing incoming electrical service and the upgrade/replacement of the pad-mounted transformer and exterior switch gear to handle the new building loads.
- Replacement of the existing steam heating system and upgrade to a new hot water system. The District is also considering a contingency project (if funds are available) to renovate the existing nurse's office. Such work would include refiguring the existing nursing office space, creating an accessible bathroom, and improving plumbing, carpentry, ventilation and exhaust in the space.

As part of proposed site improvements, the project would import fill to elevate the athletic field area by an average of 2 feet to bring the grade elevation to 8 feet above mean sea level. The Board of Education is also considering reconstructing the athletic field area once the field elevation project is finished to include a new synthetic turf field, new running track, and other related athletic improvements. Specifically, the following site improvement projects are being considered:

- Demolition and removal of fencing, backstops, dugouts, and related appurtenances.
- Addition of clean fill to raise the athletic field area by approximately 24-inches (average based on current elevations) to 8.0 feet above mean sea level where elevations currently range from 5.0 to 6.5 feet above mean sea level.
- Installation of a new synthetic turf field with running track and drainage system.
- Installation of an approximately 24-inch high stone retaining wall to stabilize the elevated field, where necessary.
- Installation of an ADA-compliant ramp and an ambulance ramp;
- Installation of new concrete block dugouts, backstops, and fencing for the baseball and softball fields.

- Installation of new bleachers and press box.
- Installation of decorative fencing at the south elevation and new perimeter chain link fencing.
- Installation of upper netting/ball catcher system at the proposed turf field and perimeter safety netting around track.
- Installation of sports field lighting.

The subject property is approximately 11.4 acres. The preliminary site plan design for the project would result in a total land disturbance of approximately 5 acres for the proposed field elevation project with associated field improvements (e.g., new synthetic turf, sports lighting, dugouts, fencing, and related appurtenances for the athletic field area). The project would increase the impervious surface area from 4.8 acres to 6.0 acres as a result of the proposed running track, related field event areas (e.g., high jump and long jump) and bleachers. The area of lawn/landscaped areas (including the athletic fields) would decrease from 6.3 acres to 5.1 acres, and the naturally vegetated/wooded and wetland areas would remain the same at 0.1 acre and 0.2 acre, respectively.

9.3 CUMULATIVE IMPACTS

The Villages of Hempstead, Rockville Centre, Malverne, Lynbrook, and East Rockaway, and the Town of Hempstead regularly undertake roadway maintenance and improvement projects. As of spring 2020, no such projects were located near the LWTB Stormwater Project components that they would combine with the project components to result in cumulative impacts. The neighborhoods surrounding the component areas are developed and primarily residential and commercial; projects in these locations would generally involve rehabilitation or minor expansion of these existing uses. Because of the distance of these uses from the project component construction activities, projects in these locations would not combine with the LWTB Stormwater Project to result in cumulative effects.

The remainder of the analysis, below, evaluates the impacts of the LWTB Stormwater Project in combination with the Hempstead Lake State Park Project, the Long Beach WPCP Consolidation Project, the Bay Park Conveyance Project, and Building and Site Improvements at EHRS.

9.3.1 Land Development

9.3.1.1 Conformance with Plans/Compatible Land Use and Zoning/Scale and Urban Design

The LWTB Stormwater Project, in combination with cumulative projects, would not result in inconsistencies with the Nassau County Master Plan or other local plans and policies. The cumulative projects predominantly involve flood protection, water quality enhancement, and stormwater management improvements. As part of the Long Beach WPCP Consolidation Project, for example, the new diversion pump station would be consistent with existing zoning and land use controls, and improvements would be designed to be compatible with the existing topography and built character of the Mill River and Hewlett Bay system.

9.3.1.2 Soil Suitability/Slope/Erosion/Drainage/Stormwater Runoff

The LWTB Stormwater Project, in combination with cumulative projects, could increase erosion during construction. However, the potential for cumulative impacts would be minimized through adherence to construction BMPs. As noted above, the LWTB Stormwater Project and cumulative projects would entail minimal construction of new structures. The impacts of the proposed project on the floodplain are analyzed in **Section 6.2.7**. Hempstead Lake State Park is not within the 100-year floodplain, and the Long

Beach WPCP project would only result in negligible impacts from new aboveground vents within the floodplain.

The only cumulative projects that would result in floodplain encroachment are the site improvements at Smith Pond, Lister Park, and ERHS. These projects would permanently impact an estimated 7,606 square feet (0.175 acre) of land located in the 100-year floodplain. Detailed hydrologic and hydraulic evaluations of proposed improvements at Smith Pond showed changes in flooding as a result of project implementation are not expected to be more than 0.03 feet and would be completely contained within the limits of Morgan Days Park. A hydraulic model study (see **Appendix L**) demonstrated that construction of the Lister Park and ERHS components, in combination with the raising of the ERHS athletic field by 2 feet as proposed by the East Rockaway School District, would have very small and localized effects on the flood water elevations in the project area. Comparison of the pre- and post-water surface profile shows no discernable changes in the flood levels, and detailed examination of water surface elevations in the vicinity of the proposed improvements show very small changes in flood levels. As such, cumulative impacts on the floodplain would not be adverse.

The cumulative projects are predominantly focused on stormwater or sewer management improvements, recreation enhancement, and water quality improvements. No new buildings would be constructed in areas with steep slopes. Slopes would be designed to conform to engineering standards.

The Hempstead Lake State Park Project would benefit downstream locations of the Mill River. This benefit would complement the benefits from stormwater retention and treatment features in the Lister Park, ERHS, and Boulevards components of the LWTB Stormwater Project. As a net cumulative benefit, overall flows to the Mill River would be slowed and reduced, and flows would have less sediment and other pollutants, resulting in decreased erosion and improved water quality in the Mill River and Hewlett Bay. Further, the reduction in nitrogen loadings resulting from the Long Beach WPCP Consolidation Project and ultimately from the Bay Park STP Conveyance Project would substantially reduce nitrogen loadings in the Western Bays, further improving water quality.

9.3.1.3 Hazards and Nuisances Including Site Safety and Noise

FEMA interactive flood maps for the watershed area indicate that the Mill River is a special flood hazard area subject to inundation by the 100-year storm event from Smith Pond southward to Hewlett Bay. The inundation area covers the water, vegetated areas, and nearby public and private properties along the river, southward to approximately Atlantic Avenue. South of Atlantic Avenue, the inundation area expands eastward and westward, encompassing most of the project area for the LWTB Stormwater Project and cumulative project sites.

The Hempstead Lake Dam (an element of the Hempstead Lake Project) would be able to accommodate stormwater flows from a 100-year storm, and removal of trees on the dams would allow for safety inspection in accordance with NYSDEC requirements. The Smith Pond, Lister Park, ERHS, and Boulevards components would reconstruct portions of bulkhead to provide base flood protection, and cumulatively would improve storm surge protection downstream of their location.

Under the permitting process for each project, NYSDEC would review and approve all excavation activities, and all activities would be conducted in accordance with the NYSDEC Technical & Operational Guidance Series. BMPs to be employed would focus on the construction method for removal of sediments and soils.

9.3.1.4 Energy Consumption

Construction of the LWTB Stormwater Project components, in combination with cumulative projects, would result in typical consumption of fuels and electrical energy. Operation of the generator at ERHS and the new light fixtures would require fuel or electrical energy. The cumulative increase in energy consumption would be negligible in the context of the energy demands of the communities surrounding the project area.

9.3.2 Socioeconomic

9.3.2.1 Employment and Income Patterns

Construction of the LWTB Stormwater Project, in conjunction with cumulative projects, would result in temporary increases in construction-related employment. Impacts on employment and income patterns would be beneficial and temporary. Upon completion of construction, there would be no cumulative changes in employment, population, or income patterns.

9.3.2.2 Demographic Character Changes, Displacement

The LWTB Stormwater Project, in combination with cumulative projects, would not create physical barriers or access difficulties that would isolate or concentrate any particular population group. The proposed greenway improvements in the Smith Pond, Lister Park, and Mill River Greenway components of the LWTB Stormwater Project would enhance connections along the Mill River Watershed and among adjacent communities. These improvements would enhance the greenway improvements in the Hempstead Lake Project to create a more interconnected community throughout the Mill River corridor. No residents would be displaced.

9.3.3 Community Facilities and Services

9.3.3.1 Educational and Cultural Facilities

The LWTB Stormwater Project, in combination with cumulative projects, would not result in cumulative impacts on educational or cultural facilities. No population changes would occur. All cumulative projects would provide cumulative educational benefits related to infrastructure, stormwater quality and quantity, biological resources, and recreation.

9.3.3.2 Commercial Facilities

The LWTB Stormwater Project, in combination with cumulative projects, would not result in adverse impacts on or significantly increase the demand for existing commercial establishments. No new commercial facilities would be provided.

9.3.3.3 Health Care and Social Services

No population changes would be associated with the LWTB Stormwater Project or the cumulative projects discussed in this EA; therefore, there would not be a significant increase in demand for health care and social services.

9.3.3.4 Solid Waste Disposal/Recycling

The LWTB Stormwater Project, in combination with cumulative projects, would generate some construction and demolition debris. Debris would be disposed in accordance with existing regulations. Once each project is completed, the increase in solid waste would be negligible.

9.3.3.5 Wastewater/Sanitary Sewers

The LWTB Stormwater Project, in combination with cumulative projects, would not generate substantial new wastewater. The Long Beach WPCP Consolidation Project and the Bay Park Conveyance Project would divert wastewater from Long Beach to existing treatment plants with more advanced treatment technologies.

9.3.3.6 Water Supply

The LWTB Stormwater Project, in combination with cumulative projects, would have a negligible increase in water demand. Collectively, the projects would increase stormwater infiltration, which would contribute to the groundwater supply. There would be no cumulative changes in water supply.

9.3.3.7 Public Safety - Police, Fire, and Emergency Medical

The LWTB Stormwater Project, in combination with cumulative projects, would not result in increased population or substantial increase in employment. The greenway elements could attract recreational visitors due to improved water quality and local ecosystems. However, this increase in the number of visitors to the Mill River corridor would not impede or overwhelm local public safety services.

9.3.3.8 Parks, Open Space, and Recreation

The LWTB Stormwater Project, in combination with cumulative projects, would result in beneficial effects to parks, open space, and recreation. The Hempstead Lake Project and LWTB Stormwater Project would construct portions of a greenway along the river, improve overall access to the Mill River, and improve water quality and ecosystems within the Mill River corridor. These two projects would also provide additional opportunities for use of alternative transportation modes, such as cycling and walking.

9.3.3.9 Transportation and Accessibility

The LWTB Stormwater Project, in combination with cumulative projects, would not result in new population or substantial new employment, and as such would not generate substantial new traffic, or demand for public transportation or parking. There would be no cumulative impacts.

9.3.4 Natural Features

9.3.4.1 Unique Natural Features, Water Resources

The LWTB Stormwater Project would result in a net gain of approximately 0.3 acre of wetland. The Long Beach WPCP would result in a minimal net loss of approximately 0.005 acre of intertidal wetland and the Hempstead Lake State Park Project would result in 2.76 acres of net wetland loss, including 1.00 acre of open water, 0.76 acre of emergent wetland, and 1.00 acre of scrub shrub wetland. Therefore, the LWTB Stormwater Project, in combination with cumulative projects, would result in the net loss of approximately 2.4 acres of wetland in the Mill River Watershed and Western Bays. Proposed compensatory mitigation would offset this net loss. Mitigation at Long WPCP would result in enhancement to 3.27 acre of intertidal marsh. Mitigation for the Hempstead Lake State Park Project would result in a gain in acreage of higher functioning emergent wetlands, and the enhancement of 31.0 acres of existing wetlands and 23.7 acres of open waters.

The LWTB Stormwater Project, in combination with cumulative projects, would improve water quality in the Mill River Watershed and the Western Bays. As a net cumulative benefit, overall flows to the Mill

River would be slowed and reduced, and flows would have less sediment and other pollutants, resulting in improved water quality. In addition, the Bay Park STP Conveyance Project and Long Beach WPCP Consolidation Project would combine to eliminate nitrogen deposition in the Western Bays.

9.3.4.2 Vegetation, Wildlife

The LWTB Stormwater Project, in combination with cumulative projects, would result in beneficial cumulative impacts on vegetation and wildlife in the Mill River Watershed. Freshwater wetlands and coastal marshes would be rehabilitated, and the associated habitat values would be improved. Water quality would be improved through the wetland and marsh enhancements and from reductions in nitrogen loadings through improved wastewater treatment, which would further improve habitat. Wetland enhancement would also remove invasive species and increase biological connectivity along the river, which would benefit native vegetation and wildlife populations. Construction of the LWTB Stormwater Project, as well as the cumulative projects would result in temporary adverse effects, which would be mitigated through implementation of BMPs.

10 ALTERNATIVES [24 CFR § 58.40(E); 40 CFR § 1508.9]

Alternative courses of action were evaluated for the LWTB Stormwater Project.

Guidance provided in 40 CFR 1502.14 regarding the National Environmental Policy Act provision of an alternative analysis states that an agency must rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives that were eliminated from detailed study, briefly discuss the reasons for their elimination. Additionally, a No Action Alternative must be included. This section discusses the No Action Alternative and the feasible alternative that would provide for the purpose and need of the proposed project.

10.1 NO ACTION ALTERNATIVE [24 CFR § 58.40(E)]

Under the No Action Alternative, no changes would occur to the existing conditions, and impacts would continue to occur. At Smith Pond, the lake and park paths would continue to be inaccessible as a result of overgrown aquatic and upland vegetation; erosion of the riverbank and flooding of park parking lots would continue to occur at Lister Park; the athletic field and faculty parking lot at the ERHS would remain unusable during heavy rain events due to flooding; and storm surge and flood events would continue to affect the residential area in the Boulevards component. Additionally, no consideration of community connectivity would occur, and the greenway would remain disconnected through the communities of Nassau County. The water quality, resiliency, and long-term ecological benefits associated with the LWTB Stormwater Project would not be realized under the No Action Alternative. The Mill River water quality would continue to be deteriorated by pollutants from parking lots, the shoreline habitat would remain degraded and susceptible to erosion, flood risks would not be reduced, and shoreline and recreational access during and after storm events would remain impeded.

10.2 SUMMARY OF FINDINGS AND CONCLUSIONS

The LWTB Stormwater Project would permanently impact a total of approximately 0.370 acre of wetland habitat and temporarily affect wetlands, vegetation, and wildlife habitat; these impacts would be mitigated through compliance with state and federal permitting agency requirements. With implementation of identified mitigation measures and adherence to regulatory requirements and permit conditions, the LWTB Stormwater Project would not have a significant impact on the quality of

the human environment or result in other direct, indirect, or cumulative impacts. The proposed project complies with all relevant regulations listed in 24 CFR Part 58.

The LWTB Stormwater Project would result in benefits to Smith Pond, Mill River, Hewlett Harbor, and the surrounding communities. Actions such as the creation of bioretention basins, construction of bulkheads, installation of porous pavement and drainage systems, and repair of backflow preventers would build community resiliency by mitigating local risks from flooding, while incorporating environmental benefits such as water quality improvements, ecological restoration, erosion control, and recreational opportunities. The project would protect the community from storm surges, improve coastal habitat, ease public access to recreational areas, and educate the public on stormwater and environmental management.

11 MITIGATION MEASURES AND CONDITIONS [40 CFR § 1505.2(C)]

11.1 CLEAN AIR ACT

All project activities would comply with applicable federal, state, and local laws and regulations regarding construction emissions, including but not limited to NYCRR, NYSDEC Air Quality Management Plan, and the New York State Implementation Plan. All necessary measures would be used to minimize fugitive dust emissions. The preferred method for dust suppression is water sprinkling. To demonstrate compliance, the following specifications would be incorporated into the contract documents:

Idling Restriction. On-site vehicle idle time would be restricted to 5 minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

Utilization of Newer Equipment. The U.S. Environmental Protection Agency's Tier 1 through 4 standards for nonroad engines regulate the emission of criteria pollutants from new engines, including particulate matter, carbon monoxide, nitrogen oxides and hydrocarbons. All nonroad construction equipment with a power rating of 50 horsepower or greater would meet at least the Tier 2 emissions standard to the extent practicable.

Best Available Tailpipe Reduction Technologies. Nonroad diesel engines with a power rating of 50 horsepower or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the project) including but not limited to concrete mixing and pumping trucks would use the best available tailpipe technology for reducing diesel particulate matter emissions. Diesel particulate filters have been identified as being the tailpipe technology currently proven to have the highest reduction capability. Construction contracts would specify that all diesel nonroad engines rated at 50 horsepower or greater would use these filters, either installed by the original equipment manufacturer or retrofitted. The U.S. Environmental Protection Agency must verify retrofitted diesel particulate filters. Active diesel particulate filters or other technologies proven to achieve an equivalent reduction may also be used.

11.2 CONTAMINATION AND TOXIC SUBSTANCES

To ensure no adverse effects on human health and the environment from excavation activities occur for the Smith Pond, Lister Park, and ERHS components, GOSR would request a permit from NYSDEC in accordance with a NYSDEC Use and Protection of Waters Permit (6 NYCRR Part 608.2(a)); Freshwater Wetlands Permit (6 NYCRR Part 663); SPDES Permit (6 NYCRR Part 751.3(a)(6)); and Clean Water Act § 401 Water Quality Certification.

Under the permitting process, NYSDEC would review and approve all excavation activities, and all activities would be conducted in accordance with the NYSDEC Technical & Operational Guidance Series. BMPs to be employed would focus on the construction method for removal of sediments and soils, the handling and movement of sediments and soils to a temporary dewatering location in the project area to be determined during the permitting process, and methods to minimize transport of sediments and soils during excavation beyond the excavation area (i.e., turbidity curtains). Should temporary dewatering be necessary to conduct the excavation, the dewatered area would be minimized to the extent practicable and would not be expected to substantially interrupt streamflow. Excavation will also consider potential seasonal restrictions on in-water work to avoid or minimize impacts on life cycle periods of aquatic organisms. The use of BMPs would minimize the potential for contaminants in the sediments to migrate during dredging and once the dredge materials are stored on-site in an appropriate containment location prior to transport to an off-site permitted disposal facility.

The East-West Boulevard Component would occur entirely within existing roadways, and the Greenway component would entail only grading. Any excavated soil generated by the construction of project components would be screened as necessary to remove materials unsuitable for reuse. Unsuitable excavated materials would be disposed off-site in accordance with disposal requirements.

11.3 Conformance with NYS Department of Environmental Conservation State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity GP-0-15-002

A Stormwater Pollution Prevention Plan and notice of intent would be prepared for components larger than 1 acre. Activities would adhere to the conditions in the Stormwater Pollution Prevention Plan. BMPs such as silt fences and erosion prevention would be implemented as required by permits or agency direction.

11.3.1 Wetlands Protection (Executive Order 11990, Particularly sections 2 and 5)

For the Smith Pond component, GOSR or the local jurisdiction would obtain an Article 24 Freshwater Wetlands Permit, Article 15 Protection of Waters Permit, and Water Quality Certificate from NYSDEC and a section 404 Nationwide Permit from USACE for the placement of fill and other construction activities affecting wetland and open waters.

For the Lister Park component, GOSR or the local jurisdiction would obtain an Article 25 Tidal Wetlands Permit, Article 15 Protection of Waters Permit, and Water Quality Certificate from NYSDEC and a section 404 Individual Permit from USACE for the placement of fill and other construction activities affecting wetland and open waters.

For the ERHS component, an Article 25 Tidal Wetlands Permit would be obtained from NYSDEC for permanent impacts on the tidal wetland adjacent area and a section 404 Nationwide Permit from USACE for the placement of fill and other construction activities affecting wetland and open waters.

BMPs to protect wetlands include the use of a turbidity curtains for in-water work and installation of silt fencing to prevent sediment and debris from discharging into waters and wetlands during land-based activities. Adherence to the permit conditions would limit construction impacts.

11.3.2 Drainage/Erosion/Runoff

Sediment control fences, inlet protectors, and inlet filters would be used as the construction activities associated with the components are implemented. Silt fencing would be installed to prevent sediment and debris from discharging off-site in stormwater runoff. Inlet filters and protectors would be installed in existing catch basins to prevent construction sediment and debris from entering the existing stormwater system and discharging into waterbodies during construction. Additionally, specific mitigation measures identified during the permitting process by federal and state agencies would be implemented. Activities would adhere to the conditions of applicable Stormwater Pollution Prevention Plans.

11.4 ENDANGERED SPECIES ACT AND MIGRATORY BIRD TREATY ACT

To avoid impacts on northern long-eared bat, tree removal activities for the Smith Pond component would occur during November 1 to March 31, outside the active season, to avoid accidental take. The November 1 to March 31 tree-clearing window would also avoid the migratory bird breeding season, which occurs between April 1 and August 31. Although the other four components do not provide suitable northern long-eared bat habitat, tree removal would not occur during the pup season (June 1–July 31). If tree removal were required at Smith Pond during the active season or during the pup season at the other four components, a qualified biologist would survey trees for northern long-eared bats and migratory bird nests prior to tree removal activities. Additionally, tree removal would be minimized to the greatest extent practicable, and trees to be protected from cutting would be clearly marked to prevent unnecessary clearing.

11.5 VEGETATION AND WILDLIFE

Adverse impacts on vegetation and wildlife would be mitigated during the final design. Construction fencing or flagging would be used to demarcate the limit of disturbance to avoid unnecessary clearing. Opportunistic non-native invasive plant species could spread or become established following ground disturbances associated with construction. To prevent the spread of such species, construction equipment would be thoroughly cleaned prior to leaving a work location where disturbance to vegetation has occurred. The area would be re-landscaped with native species following construction. Conducting in-water work in tidal waters during low tide would avoid disturbance to aquatic life and minimize impact to EFH.

11.6 NOISE

Construction noise mitigation measures would be implemented, including outfitting equipment with mufflers and complying with Town of Hempstead, Village of East Rockaway, and Village of Rockville Centre noise ordinances (e.g., time-of-day work limitations, continuous noise level limitations).

12 COMPLIANCE WITH 24 CFR §§ 58.5 AND 58.6 LAWS AND AUTHORITIES

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR § 58.5 and § 58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §§ 50.4 and 58.6		
Airport Hazards 24 CFR § 51, Subpart D	Yes ☐ No ☒	In compliance with 58.6(d), the proposed project is not located in an Airport Runway Clear Zone. Refer to Section 6.1.1 analysis of Airport Hazards.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 United States Code (USC) 3501]	Yes ☐ No ☒	In compliance with 58.6(c), the proposed project is not in located in the Coastal Barrier Zone. Refer to Section 6.1.2 for analysis of Coastal Barrier Resources.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001–4128 and 42 USC 5154a]	Yes ☒ No ☐	To comply with 58.6(a) and (b), flood insurance under the National Flood Insurance Program will be provided for the applicable portions of proposed project. Refer to Section 6.1.3 for analysis of impacts.
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §§ 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR §§ 6, 51, 93	Yes ☒ No ☐	To comply with 58.5(g), specifications will be incorporated into the proposed project's contract documents. Refer to Section 6.2.1 and Appendix H for analysis of impacts. See Section 11.1 for mitigation measures.
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☒ No ☐	As demonstrated in the coastal zone management consistency assessment included in Appendix J, the proposed project complies with 58.5(c). Refer to Section 6.2.2 for analysis of impacts.
Contamination and Toxic Substances 24 CFR §§ 50.3(i) & 58.5(i)(2)	Yes ☒ No ☐	The project complies with 58.5(i), as demonstrated in Section 6.2.3 for analysis of impacts. See Section 11.2 for mitigation measures.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR § 58.5 and § 58.6	Are formal compliance steps or mitigation required?	Compliance determinations
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR § 402	Yes ☒ No ☐	The proposed project will incorporate a variety of mitigation measures to comply with 58.5(e). Refer to Section 6.2.4 for analysis of impacts. See Section 11.4 for mitigation measures.
Explosive and Flammable Hazards 24 CFR § 51, Subpart C	Yes ☐ No ☒	The proposed project complies with 58.5(i). Refer to Section 6.2.5 for analysis of Explosive and Flammable Hazards.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR § 658	Yes ☐ No ☒	In compliance with 58.5(h), the project area is not located in an agricultural district and does not contain prime farmland soils. Refer to Section 6.2.6 for analysis of Farmlands Protection.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR § 55	Yes ☐ No ☒	As demonstrated by the 8-Step Floodplain Process (see Appendix L), the proposed project complies with 58.5(b). Refer to Section 6.2.7 for analysis of Floodplain Management.
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR § 800; Tribal notification for new ground disturbance.	Yes ☒ No ☐	Compliance with 58.5(a) is demonstrated by SHPO's concurrence with the determination that no archaeological and/or historic resources would be affected by the proposed project (see Appendix M). Refer to Section 6.2.8 for analysis of impacts.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR § 51, Subpart B	Yes ☒ No ☐	The proposed project will incorporate construction noise mitigation measures to comply with 58.5(i). Refer to Section 6.2.9 for analysis of impacts. See Section 11.6 for mitigation measures.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR § 58.5 and § 58.6	Are formal compliance steps or mitigation required?	Compliance determinations
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR § 149	Yes ☒ No ☐	As demonstrated by the SSA Initial Screen/Preliminary Review included in Appendix O, the project complies with 58.5(d). Refer to Section 6.2.10 for analysis of impacts.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☒ No ☐	As demonstrated by the 8-Step Wetland Process (see Appendix L), the proposed project will incorporate mitigation to comply with 58.5(b). Refer to Section 6.2.11 for analysis of impacts.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	In compliance with 58.5(f), no designated wild, scenic, or recreational rivers or scenic areas of statewide significance are located within or proximate to the project area. Refer to Section 6.2.12 for analysis of Wild and Scenic Rivers.
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	The proposed project complies with 58.5(j). Refer to Section 6.2.13 for analysis of Environmental Justice.

13 ENVIRONMENTAL ASSESSMENT FACTORS [24 CFR § 58.40; REF. 40 CFR §§ 1508.8 &1508.27]

Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

1. Minor beneficial impact
2. No impact anticipated
3. Minor Adverse Impact – May require mitigation
4. Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	Refer to Section 7.1.1 for analysis of impacts.
Soil Suitability/ Slope/ Erosion/ Drainage/ Stormwater Runoff	2	Refer to Section 7.1.2 for analysis of impacts.
Hazards and Nuisances including Site Safety and Noise	1	Refer to Section 7.1.3 for analysis of impacts.
Energy Consumption	2	Refer to Section 7.1.4 for analysis of impacts.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	2	Refer to Section 7.2.1 for analysis of impacts.
Demographic Character Changes, Displacement	2	Refer to Section 7.2.2 for analysis of impacts.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	1	Refer to Section 7.3.1 for analysis of impacts.
Commercial Facilities	2	Refer to Section 7.3.2 for analysis of impacts.
Health Care and Social Services	2	Refer to Section 7.3.3 for analysis of impacts.
Solid Waste Disposal / Recycling	2	Refer to Section 7.3.4 for analysis of impacts.
Waste Water / Sanitary Sewers	2	Refer to Section 7.3.5 for analysis of impacts.
Water Supply	2	Refer to Section 7.3.6 for analysis of impacts.
Public Safety - Police, Fire and Emergency Medical	1	Refer to Section 7.3.7 for analysis of impacts.
Parks, Open Space and Recreation	1	Refer to Section 7.3.8 for analysis of impacts.
Transportation and Accessibility	1	Refer to Section 7.3.9 for analysis of impacts.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	1	Refer to Section 7.4.1 for analysis of impacts.
Vegetation, Wildlife	1	Refer to Section 7.4.2 for analysis of impacts. See Section 11.5 for mitigation measures.
Other Factors		The project would not affect other factors.

Determination:

☒ **Finding of No Significant Impact** [24 CFR § 58.40(g)(1); 40 CFR § 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR § 58.40(g)(2); 40 CFR § 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Date: 09/02/2020

Name/Title/Organization: Jonathan Carey, Supervising Planner, WSP Solutions, Inc.

Certifying Officer Signature: Date: 09/02/2020

Name/Title: Matt Accardi, GOSR, Assistant General Counsel

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record for the activity/project (ref: 24 CFR § 58.38) and in accordance with recordkeeping requirements for the HUD program(s).