

DRAFT
Floodplain Management & Wetland Protection Plan

Governor's Office of Storm Recovery
U.S. Department of Housing and Urban Development
Community Development Block Grant – Disaster Recovery

Bergen Point Wastewater Treatment Plant Outfall Replacement Project
Suffolk County, NY

Effective Date: August 13, 2015

**Executive Order 11988 – Floodplain Management
Executive Order 11990 – Protection of Wetlands**

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This Floodplain Management and Wetland Protection Plan meets the requirements of 24 CFR Part 55.20 and Executive Order 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands) for the Bergen Point Wastewater Treatment Plant Outfall Replacement Project (the Project) in Suffolk County, NY. This Floodplain Management and Wetland Protection Plan documents the eight-step decision making for the Project and pertains to activities within the Special Flood Hazard Area (SFHA) as defined by the Federal Emergency Management Agency (FEMA), or its successors, pursuant to the National Flood Insurance Program (NFIP), or a successor program, whether advisory, preliminary, or final, as well as within wetland areas.

Description of Proposed Program Activities

The U.S. Department of Housing and Urban Development (HUD) is responsible for administration of the CDBG-DR program pursuant to the Disaster Relief Appropriations Act of 2013. The CDBG-DR program is designed to address the needs of New York State (NYS) communities devastated by Superstorm Sandy. To date, this funding has been disbursed in three allocations. On Tuesday, March 5, 2013, HUD published Federal Register Notice 78 Fed. Reg. 14329, which established the requirements and processes for the first \$1.71 billion in federal CDBG-DR aid appropriated by the United States Congress and allocated to NYS for disaster relief. On November 18, 2013, HUD issued a second allocation of \$2.097 billion to NYS under Federal Register Notice 78 Fed. Reg. 69104. On October 16, 2014, HUD issued the third and final allocation of \$600 million to NYS under Federal Register Notice 79 Fed. Reg. 62194.

The Governor’s Office of Storm Recovery (GOSR) is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with HUD regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that Project activity in the floodplain and in wetland areas would have on the human environment.

Funding for the Project will be provided by the Clean Water State Revolving Fund Storm Mitigation Loan Program (SMLP) with support from the HUD CDBG-DR program.

The Bergen Point Wastewater Treatment Plant (WWTP), owned and operated by Suffolk County Department of Public Works, discharges treated effluent through an ocean outfall that passes beneath the Great South Bay and underneath the barrier island to the Atlantic Ocean. The 14,200- foot long segment of the outfall that extends from the WWTP to the barrier island, passing underneath Great South Bay, has been determined to be in a failing condition and needs

to be replaced. The selected replacement alternative proposes to replace the failing outfall segment with a 14,200-foot long tunnel constructed by means of a tunnel boring machine (TBM). Construction of the tunnel via TBM, as opposed to dredging and trenching, is the preferred alternative to be employed in the construction of the replacement outfall, as it is the alternative with the least impact to the Great South Bay and surrounding environment. The new section of the outfall will be connected to the existing ocean portion of the outfall near the existing sample chamber on the barrier island just north of Ocean Parkway using stainless steel piping. A bypass system with line stops will be installed to ensure that the operation of the tunnel outfall will not be interrupted during the connection process.

Above ground construction includes an access or working shaft at the Bergen Point WWTP site, and an exit or receiving shaft at Gilgo State Park on the barrier island within the existing easement north of Ocean Parkway. The access shafts will be constructed by using ground freezing techniques or secant piles, allowing the construction of the replacement outfall tunnel at a depth of approximately 60 to 80 feet below the existing surface. An estimated 90,000 cubic yards of muck is anticipated to be removed during the construction of the Proposed Action, including both tunnel excavation and shaft construction. It is estimated that the daily muck hauling truck trips to remove this material offsite should be 8 to 10 trucks. The new section of the outfall would be joined to the existing ocean portion of the outfall on the barrier island. Treated effluent would then continue to discharge through the outfall to the Atlantic Ocean as has been the case for over 30 years. No carrier pipes would be installed within the tunnel; the lined tunnel itself would be the replacement outfall.

The staging area at the barrier island would be approximately 2 to 2.5 acres and the staging area at the WWTP would be approximately 2.5 to 3 acres. Staging areas would be restored after completion. All disturbed area on the barrier island will be revegetated and restored. Most of the construction would take place well below Great South Bay via the TBM to minimize impacts to the environment.

Executive Orders 11988 and 11990 & 24 CFR Part 55

Under 24 CFR Part 55.20, an eight-step decision making process must be completed for proposed actions taking place in a floodplain or wetland. 24 CFR Part 55.20 implements Executive Order (EO) 11988 (Floodplain Management) and Executive Order 11990 (Protection of Wetlands).

EO 11988 requires federal agencies (or a state agency implementing a federal funding program) to reduce the loss of life and property caused by floods, minimize impacts of floods on human safety, health, and welfare, and preserve the natural and beneficial functions of floodplains. EO 11990 requires federal agencies (or a state agency implementing a federal funding program) to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. Under these orders, federal agencies should first look at avoiding all actions in or adversely affecting floodplains or wetlands unless no practicable alternatives exist. If no practicable alternatives exist, then federal agencies must evaluate the potential effects of the proposed action.

In addition, federal agencies are required to demonstrate that consideration of all practicable alternatives has resulted in the reduction or elimination of the long- and short-term adverse impacts associated with occupancy and modifications of the floodplain or wetlands. This eight-step process includes assessing all practicable alternatives and incorporating public review.

Projects located within the SFHA are subject to Executive Order 11988. Information on where SFHAs are located is available on Flood Insurance Rate Maps (FIRMs) published by FEMA. FEMA uses engineering studies to determine the delineation of these areas or zones subject to flooding. The relevant data source for the SFHA is the latest issued FEMA data or guidance, which includes advisory data, such as Advisory Base Flood Elevations (ABFEs) or preliminary and final FIRMs.

The SFHA is the area that would be inundated by a 100-year flood: an area that has a one percent or greater chance of experiencing a flood in any single year. SFHAs are shown on FIRMs as shaded areas labeled with the letter “A” or “V”.

- “V” zones are coastal flood hazard zones subject to wave run-up in addition to storm surge.
- “A” zones include all other special flood hazard areas.
- “VE” zones, “AE” zones, “V” zones, or “A” zones followed by a number are areas with specific flood elevations, known as Base Flood Elevations (BFE).
- A zone with the letter “A” or “V” by itself is an appropriately studied flood hazard area without a specific flood elevation.
- Within an “AE” zone or a numbered “A” zone, there may be an area known as the “regulatory floodway,” which is the channel of a river and adjacent land areas which must be reserved to discharge a 100-year flood without causing a rise in flood elevations.

Projects located within, or otherwise modifying wetlands, are subject to EO 11990. As defined in 24 CFR 55.2 (b)(11), wetlands include those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

24 CFR Part 55.1 (c)

Under 24 CFR Part 55.1 (c), except with respect to actions listed in Part 55.12(c), no HUD financial assistance (including mortgage insurance) may be approved after May 23, 1994 with respect to:

- (1) Any action, other than a functionally dependent use, located in a floodway;
- (2) Any critical action located in a coastal high hazard area (V zone) (a “critical action” is an action such as storage of volatile materials, irreplaceable record storage, or construction of a hospital or nursing home); or
- (3) Any non-critical action located in a coastal high hazard area, unless the action is designed for location in a coastal high hazard area or is a functionally dependent use and complies with the construction standards outlined in HUD Regulations 24 CFR Part 55 (c)(3).

24 CFR Parts 55.11 & 55.20

Under 24 CFR Parts 55.11 (including Table 1) and 55.20, non-critical actions are allowed in A or V zones only if the actions are reviewed in accordance with the floodplain management eight-step decision making process (eight-step process) outlined in 24 CFR Part 55.20. The eight-step

process was conducted for the Bergen Point Wastewater Treatment Plant Outfall Replacement Project and is detailed below.

24 CFR Part 55.20 Eight-Step Process

Step One: Determine whether the proposed action is located in a 100-year floodplain (or a 500-year floodplain for a Critical Action) or results in new construction in a wetland.

The geographic scope for the Bergen Point Wastewater Treatment Plant Outfall Replacement Project is in the jurisdictional area of Suffolk County, covering approximately 4 to 6 acres between the WWTP and the barrier island staging locations.

The proposed Project location and activities are:

- Staging area and access shaft at Bergen Point WWTP.
- Staging area and access shaft in existing easement adjacent to the north side of Ocean Parkway on the barrier island.
- Tunnel under Great South Bay between WWTP and the barrier island.

The WWTP staging location is located partially within the FEMA “VE” flood zone and the barrier island is located within the FEMA “AE” flood zone. Portions of the tunnel pass beneath the “VE” and “AE” flood zones, but as that portion of the project is underground, it is not subject to flooding. See **EXHIBIT 1** for a map of the project location and FEMA floodplain.

Portions of the staging area on the barrier island are located within wetlands as determined by the National Wetlands Inventory (NWI) and the New York State Department of Environmental Conservation (NYSDEC) delineation of tidal and freshwater wetlands. The outfall line also passes beneath wetlands listed by both the NWI and NYSDEC, but as this work will be done entirely subsurface it will not affect the wetland areas. See **EXHIBIT 2** for a map of the project location and NWI wetland areas. See **EXHIBIT 3** for a map of the project location and NYSDEC tidal and freshwater wetlands.

Step Two: Notify the public at the earliest possible time of a proposal to consider an action in a floodplain (or in the 500-year floodplain for a Critical Action) or wetland, and involve the affected and interested public in the decision making process.

Because a portion of the Project activities would be located in the floodplain and would involve construction in or adjacent to a wetland, GOSR must publish an early notice that allows the public an opportunity to provide input into the decision to provide funding for the Project activities in this area.

Once the early public notice and comment period is complete, GOSR will assess, consider, and respond to the comments received individually and collectively for the project file, then proceed to Step Three.

A 15-day “Early Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain and Wetland” was published in The Babylon Beacon on April 23, 2015. The 15-day period expired on May 8, 2015. The notice targeted local residents, including those in the floodplain. The notice was also sent to the following state and federal agencies on April 23, 2015: U.S. Department of the Interior (DOI), U.S. Environmental Protection Agency (EPA), U.S. Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (FWS); National Park

Service (NPS); National Oceanic and Atmospheric Administration (NOAA); NOAA National Marine Fisheries Service (NMFS); U.S. Army Corps of Engineers (USACE); NYS Department Environmental Conservation; the NYS Office of Parks, Recreation and Historic Preservation; NYS Department of Transportation; and the NYS Division of Homeland Security and Emergency Services. The notice was also sent to the Town of Babylon, the Village of Babylon, the Village of Lindenhurst, the office of the Suffolk County Executive and the office of the Suffolk County Clerk (see **EXHIBIT 4** for the notice).

GOSR received 0 public comments on this notice.

Step Three: Identify and evaluate practicable alternatives to locating the proposed action in a floodplain (or the 500-year floodplain for a Critical Action) or wetland.

After a consideration of the following alternatives, the Suffolk County Department of Public Works and GOSR have determined the best practicable alternative is the Proposed Action. The alternative actions considered are as follows: No Action, Replace Outfall with Carrier Pipes Installed within a Tunnel, Replace Outfall with Tunnel, Construct Replacement Outfall by Open Cut, Construct New Outfall Discharging to Great South Bay, Line Existing Outfall (with Temporary Outfall Discharging to Great South Bay), and Replace Existing Outfall with Upland Recharge. Descriptions of each alternative considered are as follows:

No Action Alternative

Because of the potential consequences of existing outfall failure (e.g., release of treated effluent directly to Great South Bay), the no action alternative was not considered to be a viable option for the Suffolk County Department of Public Works.

Alternative 1 – Replace Outfall with Carrier Pipes Installed within a Tunnel

This alternative would replace the section of the existing outfall extending from the Bergen Point WWTP south beneath Great South Bay to the barrier island by tunneling. On the barrier island, the new outfall section beneath the Bay would be connected to the existing ocean outfall to convey treated effluent to discharge. Most of the construction associated with this alternative would take place underground to avoid impacts to Great South Bay and to the environment. Above ground construction includes an access or working shaft at the Bergen Point WWTP site, and an exit or receiving shaft on the barrier island within the existing easement north of Ocean Parkway.

Tunnel implementation would begin with construction of an approximately 35-foot diameter access or working shaft at the Bergen Point WWTP site, with ground freezing recommended to reduce impacts to the surrounding area. A TBM would be lowered into the approximately 70 foot deep shaft, and it would then advance southward towards the barrier island. A concrete liner system would be installed as the TBM was advanced. An exit or receiving shaft would be constructed within the existing easement north of Ocean Parkway on the barrier island, where the TBM would be retrieved from the tunnel. It is estimated that approximately three acres at the Bergen Point WWTP site would be disturbed for construction equipment and materials storage, shaft construction, and spoils storage. Up to three acres would also be disturbed within the existing easement on the barrier island for receiving/exit shaft construction, equipment storage, and connection to the existing outfall. After the tunnel is constructed, two 54-inch diameter steel carrier pipes would be installed within the tunnel. Five hundred and eighty 25-foot long pipe sections would be lowered into the tunnel. The pipes would be joined with lap joints, welded from the inside of the pipes, and the pipes would be grouted in place.

The new section of the outfall would be joined to the existing ocean portion of the outfall within the existing easement north of Ocean Parkway on the barrier island. Treated effluent would then continue to discharge through the outfall to the Atlantic Ocean.

When the construction is complete, the disturbed area at the Bergen Point WWTP would be restored and the disturbed area on the barrier island would be revegetated and restored. This alternative would also require work within the floodplain and wetland.

Alternative 2 – Construct Replacement Outfall by Open Cut

This alternative would replace the existing deteriorated section of the outfall crossing Great South Bay by excavating an approximately 16 foot deep trench approximately 75 feet to the west of the existing outfall, within the existing easement. For redundancy, two 54-inch diameter ductile iron pipes would be positioned within the trench, and mechanically joined underwater.

Hydraulic dredging would be used to excavate the trench for the replacement outfall pipes, causing the least disturbance to the work area and removing the sands and silts that exist within this alignment twice as quickly as with mechanical dredging. The fluidized materials removed by the hydraulic dredge would be pumped to hopper barges while the pipes are being installed. Due to the shallow nature of the Bay in the area, the barges could only be partially filled to avoid disturbing the bottom. Silt curtains would be required for sediment control.

The section of the outfall passing between Cedar Island, the State Boat Channel and the barrier island would be constructed using a mechanical excavator mounted on a jack-up barge or a low draft barge; steel sheeting would be installed to isolate the work area. Construction of the replacement outfall by open cut requires significant work within Great South Bay, and a much greater potential for environmental impact than the other tunnel alternatives. This alternative would also require work within the floodplain and wetland.

Alternative 3 – Construct New Outfall Discharging to Great South Bay

This alternative, construction of a new outfall discharging directly to Great South Bay, was determined to be infeasible from a regulatory perspective.

The existing Bergen Point WWTP outfall discharges to the Atlantic Ocean, which provides significant dilution of the constituents that are found in effluent from a wastewater treatment facility. In contrast, Great South Bay is a much smaller and shallower water body that would not be expected to assimilate the effluent without unacceptable water quality impacts. Consequently it is anticipated that the existing WWTP would have to be upgraded to provide a higher level of treatment, including seven additional aeration tanks and two additional final clarifiers, as well as denitrification filters or membranes. It would be a challenge to fit all of the additional tankage and processes onto the existing Bergen Point WWTP site.

Along the existing easement following the alignment of the existing outfall, the Bay is very shallow, primarily between one and five feet deep. Several approaches to discharging the treated effluent to the Bay were explored. One option would site a network of diffusers along the Bay bottom to the east of the easement where the water is somewhat deeper; another would carry the treated effluent to the State Boat Channel where additional dilution would be provided. Based on the preliminary dimensions of the diffusers required to discharge the treated effluent, approximately 30 acres of Bay bottom would be disturbed during construction.

In addition to the short term construction-related impacts associated with implementation of this alternative, the potential long-term impacts associated with implementation are significant. They include addition of a significant fresh water flow to the Bay (which would alter local salinity and the distribution of benthic organisms and finfish, and could significantly affect the local ecosystem), closure of shellfish beds and closure of parts of the Bay to recreational users. This alternative would also require work within the floodplain and wetland.

Alternative 4 – Line Existing Outfall Pipe (with Temporary Outfall Discharging to Great South Bay)

This alternative would slip line the existing outfall pipe crossing beneath the bottom of Great South Bay by assembling new pipe segments on land or on barges, and then either pushing or pulling the assembled liner pipe through the existing outfall pipe. The ends of the liner pipe would be joined with the existing pipeline using adapters, tested, and put into service. During installation of the slip liner, the existing outfall could not be utilized so treated effluent from the Bergen Point WWTP would need to be redirected for over two years while the slip-lining was being performed. Three slip liner materials (centrifugally cast fiberglass pipe, ductile iron pipe and steel) and four options for bypass of the outfall (on-site storage, removal from the site via tanker truck, temporary outfall discharging to the Atlantic Ocean and temporary outfall discharging to Great South Bay) were considered.

Several challenges associated with implementation of the slip-lining alternative were identified. The existing outfall pipe would need to be removed from service, dewatered and cleaned prior to installing the 68-inch diameter liner pipe. Based on the information available, it is not known whether the external water pressure would cause the existing outfall to collapse when it was dewatered. If the existing outfall were to collapse, it would have to be replaced by one of the other five alternatives and treated effluent would have to be discharged elsewhere for an extended design and construction period. Due to the limits in pulling or pushing a liner pipe, at least 15 sheeted access points would be required to access the outfall. This would require disturbance of the bottom of the Great South Bay.

Given the uncertainty concerning the condition of the existing outfall and the ability to safely dewater it for cleaning and lining, as well as the difficulties associated with temporarily disposing of the treated wastewater, this alternative would be challenging, if not impossible, to implement. This alternative would also require work within the floodplain and wetland.

Alternative 5 – Replace Existing Outfall with Upland Recharge

This alternative would replace the existing ocean outfall in its entirety with a new upland effluent force main. Treated effluent would be pumped to discharge via a network of recharge basins and/or injection wells located throughout the Southwest Sewer District, to the north of the Bergen Point WWTP.

This alternative would require:

- Upgrade of the Bergen Point WWTP to provide the higher level of treatment required to achieve groundwater (drinking water) standards,
- Booster pump stations (in addition to the upgraded effluent pump station) to convey the treated wastewater to the distribution network,
- A piping/distribution network to convey the treated effluent to the recharge/injection locations,
- A network of recharge basins/injection wells to recharge the treated effluent to the groundwater system,

- Instrumentation and SCADA system to monitor water levels at the recharge facilities and turn the pumps on/off at specific locations, and
- Network of monitoring wells for routine testing of groundwater downgradient of the recharge locations.

The necessary upgrades to the Bergen Point WWTP would require significant additional tankage and process equipment, which would be a challenge to fit onto the existing Bergen Point WWTP site.

The final effluent pump station would be renovated for each of the alternatives. For this alternative, the new pumps in the renovated pump station would need to be sized for the head conditions associated with pumping the treated effluent to the higher elevations found upgradient of the plant. It is also anticipated that booster pump stations would be required at each recharge site, as well as dual force mains, located within the Long Island Expressway right-of-way, to convey wastewater between pump stations.

Based on the preliminary estimate of the number of leaching pools that would be required to recharge over 90 MGD, it was determined that the use of leaching pools would be eliminated from further consideration and recharge via open recharge basins and/or injection wells would be evaluated. A total of 10 parcels large enough to recharge a minimum of 1 MGD via recharge basins were identified, and approximately 79 parcels were identified as potential sites for injection wells.

The recharge piping network would be equipped with flow meters and flow control valves at key distribution points to distribute flow to the appropriate recharge facilities. In addition, it is anticipated that a minimum of one upgradient and one downgradient monitoring well would be required at each recharge location; these wells would be monitored on a quarterly basis.

This alternative would also require work within the floodplain and wetland.

These alternatives will be re-evaluated in light of any public comments received.

Step Four: Identify the potential direct and indirect impacts associated with the occupancy or modification of the floodplain (or 500-year floodplain for a Critical Action) or wetland.

GOSR has evaluated the alternatives to the proposed Project activities in the floodplain and wetland, and has determined that the proposed activities must take place in the floodplain and wetland.

Given that the proposed Project components located within the floodplain and wetland will be located entirely underground and are not susceptible to damage from flooding, there are no direct or indirect impacts anticipated as a result of the Project activities. The work proposed to take place in wetland areas has been specifically designed to avoid any long-term impacts to wetland areas.

Construction activities within the floodplain and wetlands will include site preparation, shaft construction, tunnel construction, and connection to existing outfall activities. However, a majority of the work will take place underground, inside the proposed tunnel where there will be minimal disturbance and work within the floodplain or wetland. Potential impacts from

construction activities would be temporary (approximately three years) and mitigated as appropriate (see Step Five).

The 2000-2005 New York State Breeding Bird Atlas documented 50 species of birds as confirmed or possibly/probably breeding in the census block in which the proposed staging area on the barrier island is located (Block 6349A). All but two (2) of these species are considered migratory birds and are protected under the Migratory Bird Treaty Act (MBTA). As such, clearing of the staging area during breeding periods could disrupt active nests or other direct impacts to the bird species. Any potential impacts to migratory bird species will be mitigated appropriately (see Step Five).

Work proposed as part of the Project will not disturb or modify the floodplain or wetland and appropriate state and federal permits will be obtained.

The proposed Project will have a beneficial outcome for the wetland areas in Great South Bay, as it averts the risk of environmental damage associated with catastrophic failure of the existing outfall pipe.

Step Five: Where practicable, design or modify the proposed action to minimize the potential adverse impacts within the floodplain (including the 500-year floodplain for a Critical Action) or wetland and to restore and preserve their natural and beneficial values.

As proposed, the Project activities within floodplain and wetland areas employ minimally invasive technologies, including use of a TBM and ground freezing, in order to minimize the potential adverse impacts to these areas.

Strict requirements for the disposal of waste material generated during construction will be in place to prevent, to the extent possible, negative impacts to floodplain and wetland areas. The handling and disposal of excavated soil, control of stormwater runoff, and mitigation of air quality and noise impacts resulting from Project work would be in accordance with all local and State regulations.

The Project would also implement and maintain erosion and sedimentation control measures to prevent deposition of sediment and eroded soil in on-site and off-site wetlands and waters. Soil compaction would be controlled by minimizing activities in vegetated areas, including lawns. Best management practices (BMPs), such as silt fence and erosion prevention, may be implemented if required by permits or agency discretion. Work in soil areas with high wind erosion potential may have to occur only during calm weather conditions or include additional watering and other dust suppression mitigation measures. Thorough planning, engineering review, and design, through the local permitting process, would minimize soil erosion and damage to the floodplain that could result from Project construction activities.

Clearing of the staging area on the barrier island would be conducted between October 31 and February 1 in order to eliminate the potential to impact active migratory bird nests or other direct impacts to the species under the MBTA. Following construction activity, the staging area would be restored and the composition of the breeding bird community within and adjacent to the site would be expected to return to its current state.

Step Six: Reevaluate the proposed action to determine: (1) Whether it is still practicable in light of its exposure to flood hazards in the floodplain or wetlands, the extent to which it

will aggravate the current hazards to other floodplains or wetlands, and its potential to disrupt floodplain or wetland values; and (2) Whether alternatives preliminarily rejected at Step Three are practicable in light of the information gained in Steps Four and Five.

GOSR has reevaluated the proposed action and determined that the Bergen Point Wastewater Treatment Plant Outfall Replacement Project is still practicable in light of its exposure to floodplain hazards and its small potential disturbance to wetlands. The proposed Project is not expected to have a significant adverse impact on floodplain or wetland functions, as described above.

The project team will take the following steps to mitigate the effects of the Project on the floodplain and wetlands and to preserve their natural and beneficial properties:

- 1) Excavation and installation of the replacement outfall tunnel by TBM;
- 2) Use of ground freezing technology or secant piles for shaft excavation;
- 3) Implementation of site-specific hazard mitigation measures, including BMPs to reduce erosion and sedimentation, and proper disposal of excavated soil and construction waste; and
- 4) Restrict clearing of the staging area on the barrier island to the months between October 31 and February 1.

GOSR has also reconsidered the alternatives discussed in Step Three and determined the best practicable alternative is the proposed Project. The alternatives considered are as follows: No Action, Replace Outfall with Carrier Pipes Installed within a Tunnel, Replace Outfall with Tunnel, Construct Replacement Outfall by Open Cut, Construct New Outfall Discharging to Great South Bay, Line Existing Outfall (with Temporary Outfall Discharging to Great South Bay), and Replace Existing Outfall with Upland Recharge. Though some of these alternatives would meet the project goal of eliminating the risk of failure of the existing outfall pipe, they do not all meet the objectives of doing so with minimal environmental impacts and cost. Furthermore, all evaluated alternatives also require work in the floodplain and in wetland areas; therefore there is no practicable alternative to locating the proposed action in the floodplain or wetland.

Step Seven: If the reevaluation results in a determination that there is no practicable alternative to locating the proposal in the floodplain (or the 500-year floodplain for a Critical Action) or wetland, publish a final notice.

It is GOSR's determination that the preferred alternative is the proposed Bergen Point Wastewater Treatment Plant Outfall Replacement Project. The benefits of the Project would be to reduce the potential for failure of the existing outfall pipe, improving the resiliency of wastewater treatment in Suffolk County and eliminating a significant environmental risk to Great South Bay.

A 7-day "Final Notice and Public Explanation of a Proposed Activity in a 100-Year Floodplain and Wetland" was published in The Babylon Beacon on August 6, 2015. The 7-day period expires on August 13, 2015. The notice targeted local residents, including those in the floodplain. The notice was also sent to the following state and federal agencies on May 25, 2015: U.S. Department of the Interior (DOI), U.S. Environmental Protection Agency (EPA), U.S. Department of Homeland Security (DHS), U.S. Fish and Wildlife Service (FWS); National Park Service (NPS); National Oceanic and Atmospheric Administration (NOAA); NOAA National Marine Fisheries Service (NMFS); U.S. Army Corps of Engineers (USACE); NYS Department

Environmental Conservation; the NYS Office of Parks, Recreation and Historic Preservation; NYS Department of Transportation; and the NYS Division of Homeland Security and Emergency Services. The notice was also sent to the Town of Babylon, the Village of Babylon, the Village of Lindenhurst, the office of the Suffolk County Executive and the office of the Suffolk County Clerk (see **EXHIBIT 5** for the notice).

GOSR received **#** public comments on this notice.

Step Eight: Implement the Action

Step eight is implementation of the proposed action. GOSR will ensure that construction and project activities adhere to all mitigation measures prescribed in the steps above. Also, prior to project implementation, GOSR will conduct a National Environmental Policy Act (NEPA) review in accordance with 24 CFR Part 58 and a New York State Environmental Quality Review Act (SEQR) review in accordance with 6 NYCRR Part 617.

EXHIBIT 1 Project Location Floodplain Map

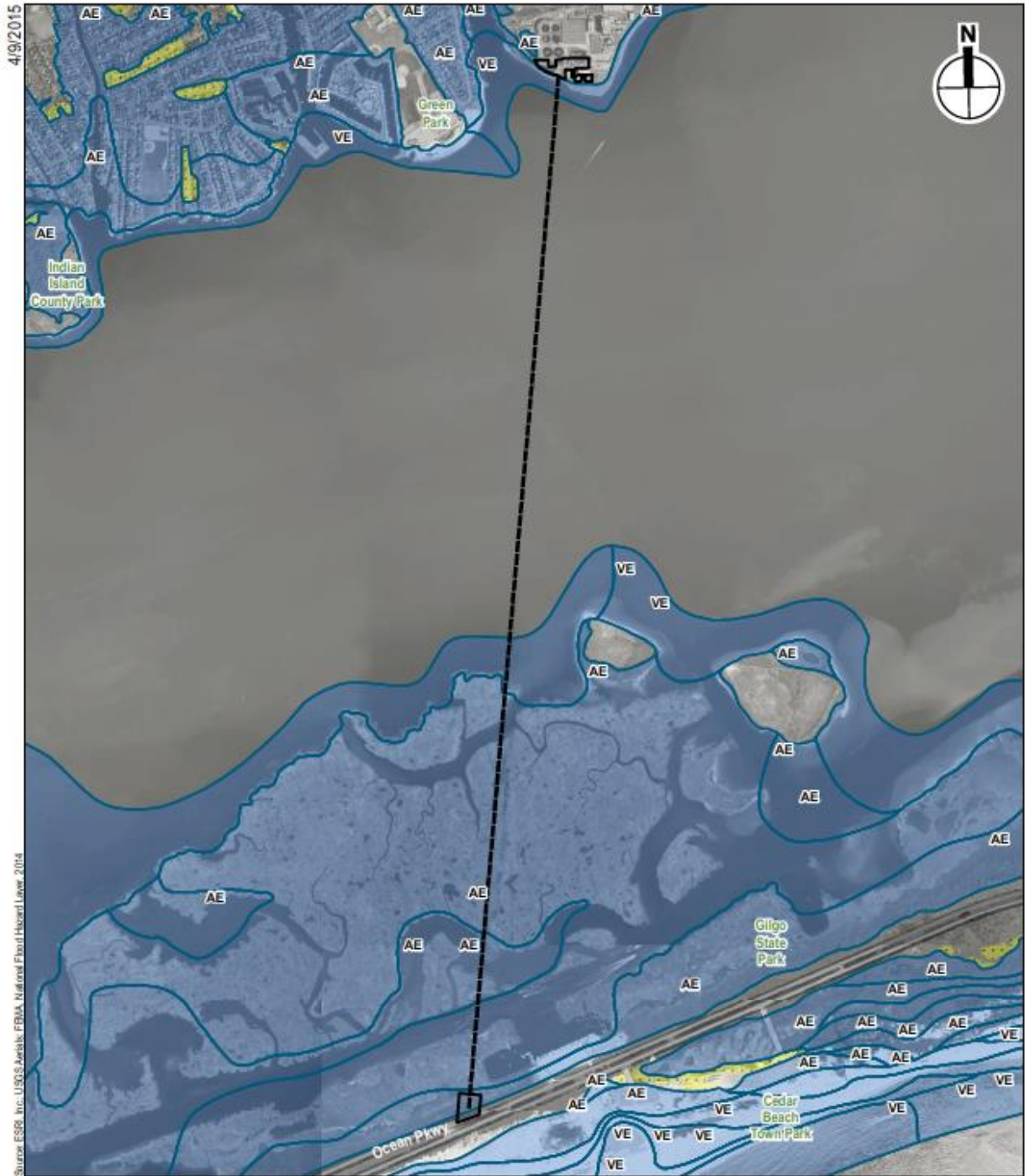
EXHIBIT 2 Project Location National Wetlands Inventory Map

EXHIBIT 3 Project Location NYSDEC Tidal and Freshwater Wetlands Map

EXHIBIT 4 Copy of Notice Transmitting Notice of Early Public Review and Proof of Publication

EXHIBIT 5 Copy of Notice Transmitting Notice of Final Public Review and Proof of Publication

EXHIBIT 1 Project Location Floodplain Map



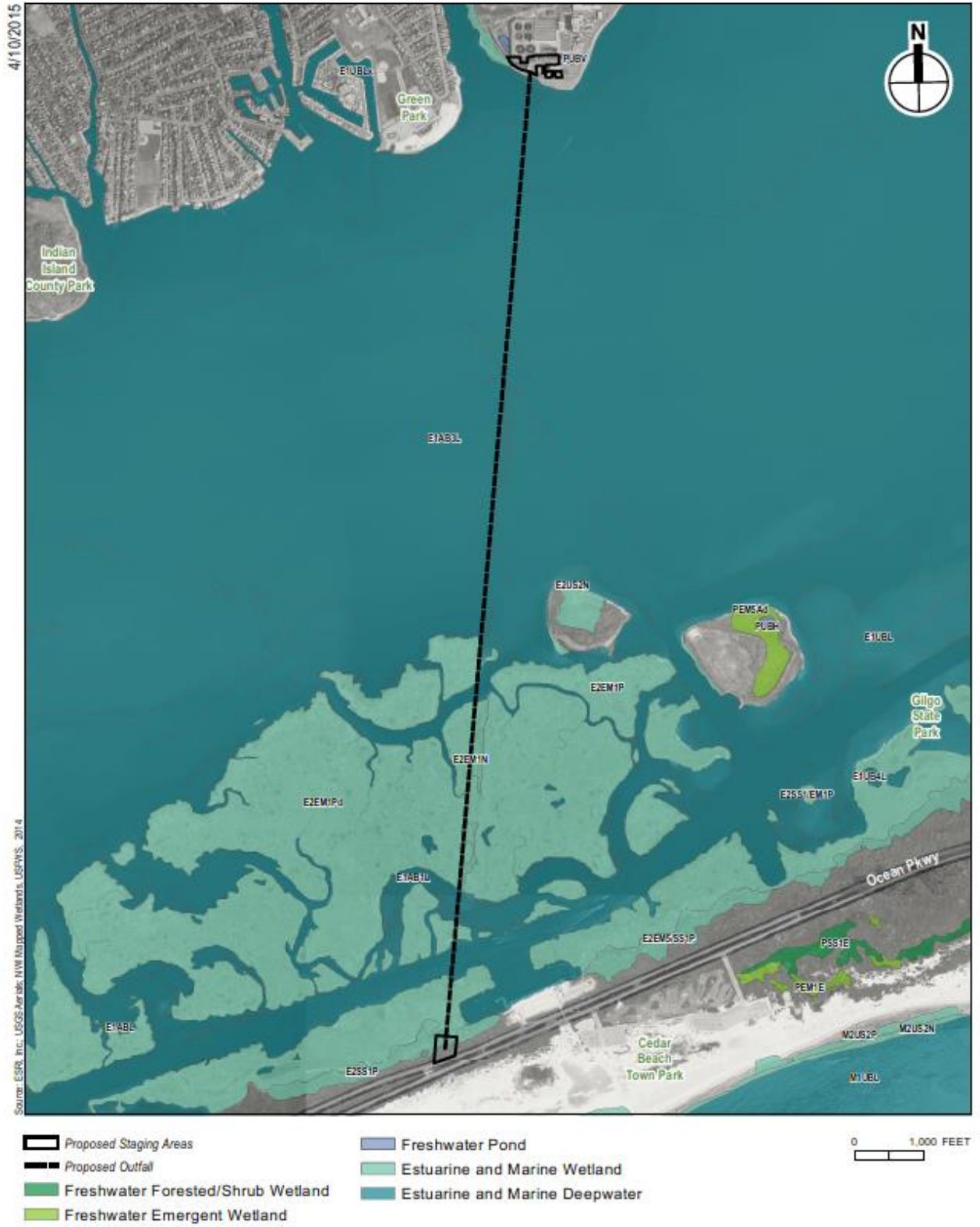
-  Proposed Staging Areas
-  Proposed Outfall
-  100-Year Floodplain
-  500-Year Floodplain

0 1,000 FEET

FEMA Floodplain

BERGEN POINT WWTW OUTFALL REPLACEMENT PROJECT

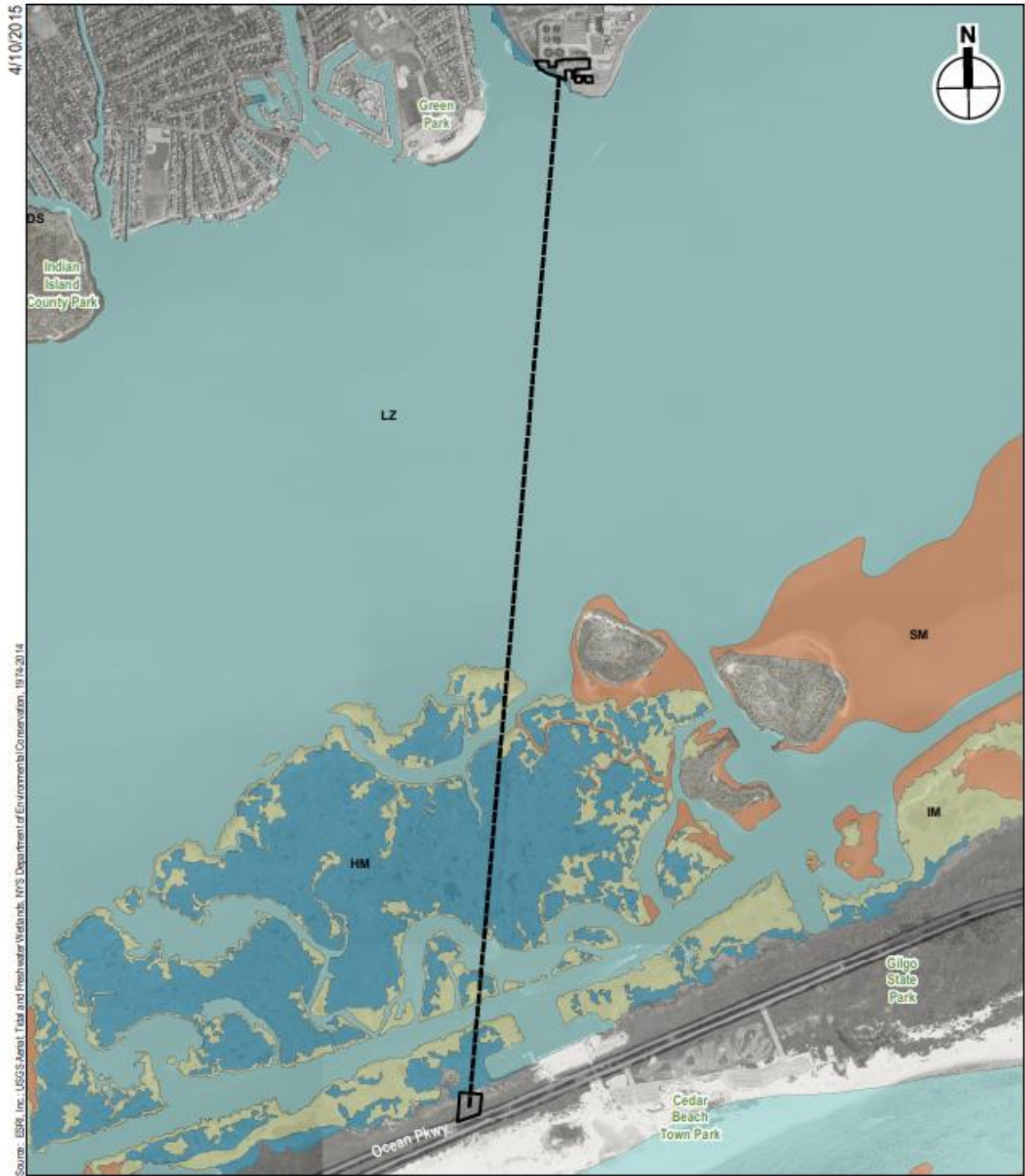
EXHIBIT 2 Project Location National Wetlands Inventory Map



BERGEN POINT WWTW OUTFALL REPLACEMENT PROJECT

NWI Wetlands

EXHIBIT 3 Project Location NYSDEC Tidal and Freshwater Wetlands Map



- Proposed Staging Areas
- Proposed Outfall
- Fresh Marsh
- High Marsh
- Intertidal Marsh
- Littoral Zone
- Coastal Shoals, Bars and Mudflats
- Dredged Spoil
- Formerly Connected Wetlands

0 1,000 FEET

NYSDEC Tidal and Freshwater Wetlands

BERGEN POINT WWTP OUTFALL REPLACEMENT PROJECT

**EXHIBIT 4 Copy of Notice Transmitting Notice of Early Public Review
and Proof of Publication**

**EARLY NOTICE AND PUBLIC EXPLANATION OF
A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN and WETLAND**

**BERGEN POINT WASTEWATER TREATMENT PLANT OUTFALL REPLACEMENT
PROJECT
SUFFOLK COUNTY, NY**

Thomas King, Assistant General Counsel and Certifying Officer
Governor's Office of Storm Recovery
99 Washington Avenue, Suite 1224
Albany, NY 12260

NOTIFICATION OF ACTIVITY IN A FLOODPLAIN

To: All interested Agencies, Groups, and Individuals

This is to give notice that the Governor's Office of Storm Recovery (GOSR) is conducting an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that its activity in the floodplain and wetland would have on the human environment.

The Bergen Point Wastewater Treatment Plant (WWTP) discharges treated effluent to the Atlantic Ocean through an outfall passing under Great South Bay and the barrier island. The section of the existing outfall that runs from the WWTP to the barrier island is in a failing condition. Detailed engineering studies have determined that the operating pressure on the outfall pipe must be minimized to reduce the potential for pipe failure and an alternative means of discharging wastewater must be implemented. High operating pressures, such as those experienced during Superstorm Sandy, further threaten the condition of the outfall pipe.

The proposed project would replace the existing section of outfall between the WWTP and the barrier island with a 10 foot diameter tunnel to convey treated wastewater, which would run 14,200 feet parallel to the existing outfall pipeline and be connected to the existing ocean outfall beneath the barrier island prior to discharge. In order to construct the tunnel by tunnel boring machine, 30 foot diameter access shafts would be excavated at the WWTP and on the barrier island. After construction is complete, treated effluent will continue to flow from the Bergen Point WWTP to ocean discharge and the access shaft areas will be restored.

Funding for the project will be provided by the Clean Water State Revolving Fund Storm Mitigation Loan Program (SMLP) with support from the HUD Community Development Block Grant – Disaster Recovery (CDBG-DR) program for storm recovery activities in New York State.

A floodplains map based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and New York State Department of Environmental Conservation

(NYSDEC) data have been prepared for this project and are available for review at <http://www.stormrecovery.ny.gov/environmental-docs>

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains or wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances Federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk.

PUBLIC COMMENTS

Any individual, group, or agency may submit written comments on the proposed action or a request for further information to Thomas King, Assistant General Counsel and Certifying Officer, Governor's Office of Storm Recovery, 99 Washington Avenue, Suite 1224, Albany, NY 12260; email: NYSCDBG_DR_ER@nyshcr.org. All comments received by **May 8, 2015** will be considered.

Thomas King, Assistant General Counsel and Certifying Officer

April 23, 2015

**EXHIBIT 5 Copy of Notice Transmitting Notice of Final Public Review
and Proof of Publication**

**FINAL NOTICE AND PUBLIC EXPLANATION OF
A PROPOSED ACTIVITY IN A 100-YEAR FLOODPLAIN AND WETLAND**

**BERGEN POINT WASTEWATER TREATMENT PLANT
OUTFALL REPLACEMENT PROJECT
SUFFOLK COUNTY, NY**

Thomas King, Assistant General Counsel and Certifying Officer
Governor's Office of Storm Recovery
99 Washington Avenue, Suite 1224
Albany, NY 12260

NOTIFICATION OF ACTIVITY IN A FLOODPLAIN AND WETLAND

To: All interested Agencies, Groups, and Individuals

This is to give notice that the Governor's Office of Storm Recovery (GOSR) has conducted an evaluation as required by Executive Order 11988 and Executive Order 11990 in accordance with U.S. Department of Housing and Urban Renewal (HUD) regulations under 24 CFR 55.20 Subpart C - Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential effects that its activity in the floodplain would have on the human environment.

Pursuant to the CDBG-DR Program and Federal Register Notices 78 Fed. Reg. 14329, 78 Fed. Reg. 69104, and 79 Fed. Reg. 62194 (Notices), published March 5, 2013, November 18, 2013, and October 16, 2014, respectively, NYS has been allocated approximately \$4.4 billion of CDBG-DR funds for storm recovery activities. Funding for the Bergen Point Wastewater Treatment Plant Outfall Replacement Project (the Project) will be provided by the Clean Water State Revolving Fund Storm Mitigation Loan Program (SMLP) with support from the CDBG-DR program.

The Bergen Point Wastewater Treatment Plant (WWTP), owned and operated by Suffolk County Department of Public Works, discharges treated effluent through an ocean outfall that passes beneath the Great South Bay and underneath the barrier island to the Atlantic Ocean. The 14,200-foot long segment of the outfall that extends from the WWTP to the barrier island, passing underneath Great South Bay, has been determined to be in a failing condition and needs to be replaced. The selected replacement alternative proposes to replace the failing outfall segment with a 14,200-foot long tunnel constructed by means of a tunnel boring machine (TBM). Construction of the tunnel via TBM, as opposed to dredging and trenching, is the preferred alternative to be employed in the construction of the replacement outfall, as it is the alternative with the least impact to the Great South Bay and surrounding environment. The new section of the outfall will be connected to the existing ocean portion of the outfall near the existing sample chamber on the barrier island just north of Ocean Parkway using stainless steel piping. A bypass system with line stops will be installed to ensure that the operation of the tunnel outfall will not be interrupted during the connection process.

Above ground construction includes an access or working shaft at the Bergen Point WWTP site, and an exit or receiving shaft at Gilgo State Park on the barrier island within the existing Floodplain Management and Wetland Protection Plan
Bergen Point Wastewater Treatment Plant Outfall Replacement Project
Suffolk County, NY

easement north of Ocean Parkway. The access shafts will be constructed by using ground freezing techniques or secant piles, allowing the construction of the replacement outfall tunnel at a depth of approximately 60 to 80 feet below the existing surface. An estimated 90,000 cubic yards of muck is anticipated to be removed during the construction of the Proposed Action, including both tunnel excavation and shaft construction. It is estimated that the daily muck hauling truck trips to remove this material offsite should be 8 to 10 trucks. The new section of the outfall would be joined to the existing ocean portion of the outfall on the barrier island. Treated effluent would then continue to discharge through the outfall to the Atlantic Ocean as has been the case for over 30 years. No carrier pipes would be installed within the tunnel; the lined tunnel itself would be the replacement outfall.

The staging area at the barrier island would be approximately 2-2.5 acres and the staging area at the WWTP would be approximately 2.5-3 acres. Staging areas would be restored after completion. All disturbed area on the barrier island will be revegetated and restored. Most of the construction would take place well below Great South Bay via the TBM to minimize impacts to the environment.

This Notice pertains to the portion of the Project that is located within the Federal Emergency Management Agency (FEMA) flood hazard area and mapped wetlands. A floodplains map based on the FEMA Base Flood Elevation Maps and wetlands maps based on the National Wetland Inventory and NYSDEC data have been prepared for this project and are available for review at: <http://www.stormrecovery.ny.gov/environmental-docs>

There are three primary purposes for this notice. First, people who may be affected by activities in floodplains or wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, adequate public notice is an important public education tool. The dissemination of information about floodplains and wetlands facilitates and enhances Federal efforts to reduce the risks associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking place in floodplains or wetlands, it must inform those who may be put at greater or continued risk.

FLOODPLAIN MANAGEMENT PLAN

GOSR has reevaluated the alternatives to Project activities in the floodplain and wetlands and has determined that there is no practicable alternative. A full copy of the Floodplain Management Plan (8-step process) documenting compliance with Executive Order 11988 and Executive Order 11990 can be viewed online at <http://www.stormrecovery.ny.gov/environmental-docs>.

PUBLIC COMMENTS

Any individual, group, or agency may submit written comments on the proposed action or a request for further information to Thomas King, Assistant General Counsel and Certifying Officer, Governor's Office of Storm Recovery, 99 Washington Avenue, Suite 1224, Albany, NY 12260; email: NYSCDBG_DR_ER@nyshcr.org. All comments received by **August 13, 2015** will be considered.

Thomas King, Assistant General Counsel and Certifying Officer

August 6, 2015