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STATEMENT OF FINDINGS FOR STATEN ISLAND BLUEBELT DRAINAGE PLANS FOR MID-ISLANDWATERSHEDS

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In accordance with New York City's Executive Order 91 of 1977 and its amendments establishing City Environmental Quality Review ("CEQR"), Article 8 of the Environmental Conservation Law establishing the State Environmental Quality Review Act ("SEQRA") and its implementing regulations (6 NYCRR Part 617), and the State Environmental Review Process ("SERP") as required by the State Revolving Loan Fund Program, the New York City Department of Environmental Protection ("DEP"), acting as lead agency, issued a Notice of Completion of the Final Generic Environmental Impact Statement ("FGEIS") for the proposed Staten Island Bluebelt Drainage Plans for Mid-Island Watersheds on November 4, 2013. In accordance with 6 NYCRR Section 617.4, this project is classified as a Type I Action.

The DEP issued a Notice of Positive Declaration and Draft Scope of Work on April 12, 2010 and held a public hearing on the Draft Scope of Work on May 16, 2010 in Staten Island. DEP issued a Final Scope of Work that responded to the public comments on September 30, 2010. The Draft Generic Environmental Impact Statement (DGEIS) for the proposed project was completed and distributed for public review by DEP on September 23, 2011. A public hearing was held at the offices of Community Board 2 on Staten Island on October 27, 2011. The public comment period closed on December 16, 2011. In addition, DEP hosted a workshop-style meeting for the public on February 27, 2013 at which time residents had an opportunity to discuss the proposed plans described in the DGEIS. The FGEIS issued on November 4, 2013 included a response to public comments on the environmental review.

Description of the Proposed Project

The New York City Department of Environmental Protection (DEP), on behalf of the City of New York, is proposing three amended drainage plans for the Mid-Island area on the East Shore of Staten Island (the "proposed project"). The proposed project area is generally bordered on the west by Great Kills Park (within the Gateway National Recreation Area [GNRA]) and the mapped but unbuilt Willowbrook Parkway right-of-way, and by the Staten Island Expressway to the east.

The northern boundary extends along a number of Staten Island Greenbelt parks including LaTourette Park, Richmond County Country Club, and Reeds Basket Willow Swamp. The southern boundary is the Lower Bay. Mid-Island includes the Oakwood Beach, New Creek, and South Beach watersheds, which cover approximately 5,000 acres. The Mid-Island watersheds are located within Staten Island Community Boards 2 and 3.

The three proposed amended drainage plans would address the chronic flooding of streets and properties in Mid-Island while preserving and enhancing existing wetlands under DEP's Bluebelt Program and using these properties for stormwater management. The proposed project would involve multi-phase capital projects with construction expected to begin in fiscal year 2014 and continue through 2043.

DEP designs its drainage plans based on established criteria for the collection, conveyance, and management of stormwater and sanitary wastewater. The current drainage plans for these three watersheds (which date from the 1960s) call for a full network of storm and sanitary sewers in all mapped streets. This proposal involves amending these drainage plans to manage stormwater through a combination of collection sewers with Best Management Practices (BMPs) that would restore wetlands while integrating them into the drainage plan design. Under the three proposed amended drainage plans, existing protected wetlands comprised of surface water features such as streams, ponds and other wetlands, would be preserved and enhanced to provide natural hydrologic functions along with the filtering of pollutants, groundwater recharge and flood control within the Bluebelt properties. Proposed BMPs, such as extended detention basins and outlet stilling basins, would be installed at each storm sewer outlet (gray infrastructure) into the Bluebelt wetlands (green infrastructure). These proposed BMPs would alleviate the impacts of urban stormwater discharges into receiving wetlands by reducing erosive runoff velocities, intercepting contaminants and providing runoff storage in extended detention wetlands, thereby reducing downstream flooding and erosion. Moreover, the proposed BMP designs incorporate the restoration of natural features that enhance wetland habitats and benefit wildlife. The three proposed amended drainage plans also call for completing and upgrading the sanitary sewer system where needed. All sewer construction would involve street reconstruction once the sewers are installed.

DEP has acquired numerous properties in these three watersheds as part of the Mid-Island Bluebelt Program, and would complete the full acquisition program through the City's Uniform Land Use Review Procedure (ULURP) process. The City Planning Commission (CPC) approved the New Creek land acquisitions between July 2003 and January 2005. The South Beach properties were approved for acquisition between October 2005 and March 2007. Finally, approval for Oakwood Beach acquisitions was obtained in March 2007. The acquisition properties are largely within Federal Emergency Management Agency (FEMA) mapped 100-year floodplains and also contain freshwater wetlands as mapped by the New York State Department

of Environmental Conservation (NYSDEC) and the National Wetland Inventory (NWI). The appropriate permits to develop the proposed BMPs would be obtained prior to implementation of the proposed project.

This FGEIS was prepared to evaluate the environmental impacts that could result from the construction and operation of the Staten Island Bluebelt Drainage Plans for Mid-Island Watersheds. The FGEIS thoroughly evaluated the various potential environmental impacts, and addressed all pertinent comments on the DGEIS. The FGEIS identified measures to avoid or mitigate potential significant and temporary adverse environmental impacts to the maximum extent practicable.

DEP, by its Commissioner, Carter H. Strickland, Jr., has considered the Staten Island Bluebelt Drainage Plans for Mid-Island Watersheds project and finds that all CEQR/SEQRA requirements have been met, and that the FGEIS addressed all pertinent comments on the DGEIS. DEP finds that consistent with social, economic, and all other essential considerations of State and City policy, from among all reasonable alternatives available, the proposed program is one that satisfies the needs of the project and minimizes or avoids potential significant adverse environmental impacts to the maximum extent practicable.

DEP, by its Commissioner, hereby approves the Findings Statement, thereby authorizing the implementation of the Staten Island Bluebelt Drainage Plans for Mid-Island Watersheds, including the mitigation measures set forth in the FGEIS. DEP finds that, consistent with social, economic, and other essential considerations of State and City policy, from among the reasonable alternatives available, the proposed project is one that minimizes or avoids potential significant adverse impacts to the maximum extent practicable. In addition, potential significant adverse environmental impacts disclosed in the FGEIS will be minimized or avoided by incorporating, as conditions to this decision, those mitigative measures that are identified as practicable.

I. The Staten Island Bluebelt Drainage Plans for Mid-Island Watersheds are the Most Effective Means to Provide a Comprehensive Stormwater Management Network to the Oakwood Beach, New Creek and South Beach watersheds.

The Oakwood Beach, New Creek and South Beach watersheds are largely developed with the exception of parklands and Bluebelt properties. To address flooding during storm events and high tides, DEP is proposing amended drainage plans comprised of a network of storm sewers, BMPs, and Bluebelt wetlands. The primary drainage plan objective is to provide City streets with storm sewers that flow via gravity to proposed BMPs and outfalls to the Lower Bay for discharge. Each of the Mid-Island watersheds is challenging for drainage planning because of extreme topographic conditions. For example, the lower watersheds are extremely flat with large wetlands dominated by common reed grasses. In contrast, the upper watersheds, particularly within the New Creek watershed, have hilly terrain and steep slopes

that result in high stream velocities and difficult conditions for stormwater conveyance and treatment.

About 80 percent of Mid-Island streets do not have storm sewers, where the primary drainage pattern under existing conditions is unmanaged runoff from streets and developed properties running directly into streams and other wetlands. Completing the remaining unbuilt storm sewer segments under the current drainage plan (Potter Plan), which dates back to 1961, is not feasible due to the extensive potential impacts on regulated wetlands and the mitigation that would be required. The Potter Plan, a conventional storm sewer plan with sewers that flow by gravity, proposes that all the streets be raised along with the surrounding land, thereby allowing the sewers to function by gravity. Wetland systems would be dewatered by the proposed storm sewers and filled in, as well, under that plan. The current drainage plan was predicated on the idea of elevating many streets so the sewers in the street beds could be pitched to provide positive drainage. However, private development proceeded along many streets in the watershed without a storm sewer system in place and implementation of the Potter Plan would leave much of this development below the street grade. Accordingly, an objective of the proposed amended drainage plans is to have street elevations remain as close to the existing street grade as possible.

The proposed amended drainage plans use gravity-flow sewers, to the greatest extent feasible, in accordance with DEP requirements. Replacing many trunk storm sewer lines, BMPs are proposed as outlets for the storm sewer network; the BMPs act as basins where floodwaters are stored while high tide prevents ultimate discharge of the stormwater into the ocean. BMPs typically utilize existing surface water features such as streams, ponds and wetlands to convey and attenuate stormwater discharges that can otherwise cause unstable stream channels and elevated pollutant loadings. Grading and ecological landscaping at each proposed BMP location are also significant components of the proposed project. An important objective of the Bluebelt planting program is to reinvigorate wetland functions at previously disturbed wetlands, thereby restoring native vegetation and creating a natural, integrated ecological system that is self-sustaining. In particular, the proposed project would remove vegetative non-native monocultures such as common reed that are prone to brushfires.

Thus, the proposed amended drainage plans would reduce flooding and preserve and enhance remaining open spaces and surface water features, while creating comparatively more diverse habitats. In addition, the proposed amended drainage plans are expected to be more cost-effective than the current drainage plan, which requires an extensive hard infrastructure sewer network and a larger capital investment to construct.

II. The Environmental Impact Statement Assesses all Potential Individual and Cumulative Impacts for Construction Activities under the Proposed Amended Drainage Plans.

The proposed project is a multi-year project for three large watersheds that cover approximately 5,000 acres of the Mid-Island area of Staten Island. The proposed project includes the following: 44 miles of new sewers, five proposed BMPs and one new outfall to Lower Bay in Oakwood Beach; about 57 miles of new sewers, 19 BMPs and one new outfall to Lower Bay in New Creek; and about 36 miles of sewers, three BMPs and one new outfall to the Lower Bay in South Beach. Given the magnitude of the infrastructure improvements under the proposed amended drainage plans, it is expected that the proposed project would be implemented through multiple capital projects that would continue through the year 2043, when full build out of the proposed amended drainage plans is projected to be complete.

Current project planning assumes that the first proposed capital projects would commence in fiscal year 2014 and would involve the relocation and improvement of the West Branch of the New Creek watershed, along with the related sewer work. DEP is in the process of developing a more detailed phasing program for each of the Mid-Island watersheds. This phasing and progression of construction is based on the underlying principle of beginning construction in the lower watershed first and moving to the upper watershed second, since the upper watershed cannot be built without a functioning lower watershed drainage system designed and built as per the proposed amended drainage plan. A phased construction program also allows the City to monitor construction activities and minimizes road closures and access restrictions.

Future construction phasing for the proposed project will be based on the recording of an amended drainage plan, availability of capital funds (e.g., a typical capital project is between $15 and $20 million), sequence and size of individual projects and coordination with the New York City Department of Transportation (DOT) (e.g., street reconstruction closures, etc.). Because the proposed project is currently in the planning phase and the subject of a GEIS, specific construction phasing details are not known at this time. However, generic information on general construction phasing, construction phasing for each watershed, typical construction activities (e.g., typical outfall and BMP construction) and probable impacts during construction is presented based on the current proposed BMP conceptual designs presented in this FGEIS and a reasonable worst case impact scenario for the proposed BMPs.

Implementation of the proposed project would require multiple capital projects that are expected to continue through 2043 at which time full build out of the proposed project would be complete. Each individual capital project is expected to include a BMP, associated in-street sewer construction, and a construction period of 1 to 2 years. Capital project construction would also move among various geographic areas in each of the watersheds during this 30-

year build out. Construction of each capital project would be temporary and short in duration in each project area.

There would be a number of environmental protection measures that would be implemented with each capital project. These include soil erosion and sediment control practices, wetlands and tree protections, a noise control plan, a traffic management plan, a Construction Health and Safety Program (CHASP) for hazardous materials, and air pollution control practices in accordance with local laws. For activities within City or state parklands, pre-construction agreements for work in open spaces or natural areas affected by the proposed project would be restored and enhanced as part of the proposed BMP design which would be coordinated with the New York City Department of Parks and Recreation (DPR) for those portions of the site that are within DPR lands. The proposed project would include a landscape and tree replacement plan for trees that would need to be cleared in constructing the proposed BMP. Protection measures would also be implemented to protect natural features, with post-construction restoration of areas affected by construction. With all of the above measures in place and given that the construction of individual capital projects would be temporary and of short duration, the proposed project would not result in potential significant adverse impacts due to construction

III. List of Discretionary Permits and Approvals.

Implementation of the proposed amended drainage plans requires discretionary actions, including approvals and agreements from the following Federal, State, and City agencies:

- United States Army Corps of Engineers (USACE) for actions within navigable waters (e.g., construction of structures or activities within freshwater or tidal wetlands) as per Title 33 Code of the Federal Register, Parts 320-330[1]. This approval will be in the form of a Regional General Permit (RGP) for regulated activities in the wetlands of the three watersheds.[2]
- NYSDEC permits for activities in tidal and freshwater wetlands and adjacent areas as per Article 24 6NYCRR Part 663 Freshwater Wetlands Permits and Article 25 6NYCRR Part 661 Tidal Wetlands;
- NYSDEC permits for activities within coastal erosion hazard area that is designated along the Lower Bay shoreline as per Article 34 6NYCRR Part 505 (variance under subsection 505.13);

[1] Pursuant to 33 CFR Section 320.3(e), coordination will be required with the U.S. Coast Guard for the proposed outfalls in tidal waters and National Oceanic and Atmospheric Administration-Fisheries Service (NOAA-FS) and National Marine Fisheries Service-Protected Resources Division (NMFS-PRD) may also require notification if the USACE determines that the proposed project may affect species or habitat under their purview.

[2] DEP is actively coordinating with the USACE and United States Environmental Protection Agency (USEPA) on the RGP.On March 15, 2013 USACE issued a public notice announcing their intention to authorize Bluebelt construction in regulated wetlands with a Regional General Permit.

- NYSDEC State Pollution Discharge Elimination System (SPDES) permits for surface water outlets and discharges in accordance with Article 17 6NYCRR Part 750-757;
- NYSDEC approval under the SPDES General Permit for Stormwater Discharges from Construction Activity;
- NYSDEC permits for use of herbicides in and around wetlands (to control invasive plant species, such as Japanese knotweed);
- NYSDEC incidental take permits for endangered and threatened species of fish and wildlife and species of special concern in accordance with Environmental Conservation Law 11-0535 Part 182 where impacts have been identified with respect to rare, threatened, or endangered wildlife that is protected under this law;
- Construction of any BMPs proposed on NYSDEC property (e.g., Richmond County Country Club) requires NYSDEC approval in accordance with all applicable regulations, including the granting of an easement by the State to the City for the use of State property for drainage purposes;
- Licenses and agreements between DEP and the New York State Department of Transportation (NYSDOT) for activities within the Willowbrook Parkway right-of-way;
- New York State Department of State (NYSDOS) coastal zone consistency review under the permit review process (all of the watersheds in their entirety are in the coastal zone).
- Licenses and agreements between DEP and the Metropolitan Transportation Authority (MTA) for activities under the Staten Island Rapid Transit (SIRT) tracks;
- Permits, licenses and agreements between DEP and DPR for activities in City parkland including tree clearing (e.g., Reeds Basket Willow Swamp Park, Last Chance Pond Park, and Willowbrook Parkway right-of-way, since it is managed by DPR), the need for any controls relative to Asian Long Horned Beetles (although not currently in the City's quarantine zone this area may be added at a future date), and the identification of trees to be cleared and a tree replacement plan consistent with the requirement of Local Law 3 of 2010;
- CPC authorizations for work in the Special South Richmond Development District (SSRDD) and the Staten Island Special Natural Area District (NA-1) as well as coastal zone consistency review (all watersheds are in the coastal zone);
- CPC and New York City Department of Health and Mental Hygiene approval of the proposed amended drainage plans;
- Review by Staten Island Community Boards 2 and 3, the Staten Island Borough President, CPC, and the City Council for future street de-mappings related to siting of BMPs proposed in street beds and acquisition of sewer easements as per the requirements of ULURP;
- DOT approval for any in-street work; and
- License agreements or other forms of approvals with private landowners for any temporary work on private lands and sewer easements for any permanent infrastructure that would be on private lands and also require maintenance access.

IV. Facts and Conclusions Relied Upon to Support the Decision.

Based on the *CEQR Technical Manual*, DEP's previous reviews of existing Bluebelt projects (i.e., South Richmond) and the nature of the proposed project, a screening level of analysis was completed for a number of environmental impact technical areas since no significant environmental impacts are expected. These include: socioeconomic conditions, community facilities, shadows, solid waste and sanitation services, energy, air quality, greenhouse gases, noise, public health, and neighborhood character. Provided below is a summary of the impact analyses for the other technical areas.

The proposed project is not anticipated to have significant adverse impacts in the areas of: Land Use, Zoning, and Public Policy, Open Space, Urban Design and Visual Character, Historic and Archeological Resources, certain Natural Resources elements (i.e., Hydrology, Groundwater, Water Quality, and Wildlife), Hazardous Materials, Water and Sewer Infrastructure, Transportation, and Growth Inducement.

Land Use, Zoning, and Public Policy

The proposed amended drainage plans would not conflict with existing land uses or zoning. Rather, the proposed project would maximize the preservation and restoration of existing natural areas, wetlands and Bluebelt properties while providing stormwater conveyance, flood control and water quality improvements. Segments of mapped but unbuilt streets would need to be demapped in each watershed to accommodate the proposed BMPs. This demapping would support the permanent protection of wetlands and the BMPs. DEP would meet all ULURP requirements for the proposed demappings, which would also not conflict with local land uses. The zoning map would also be amended to reflect the changes in the City map. Any necessary zoning approvals such as the Special Natural Area District (SNAD), or the Special South Richmond Development District (SSRDD) would also be obtained prior to construction. The proposed project would advance several policies of the City's Waterfront Revitalization Program (WRP) and would be consistent with the City's Comprehensive Waterfront Plan (2011). Therefore, the proposed project would not result in potential significant adverse impacts to land use, zoning and public policy.

Open Space

The proposed project requires the construction of BMPs within a number of City and State parklands. Therefore, clearing and grading would be necessary within these parks and all affected areas would be restored as part of the proposed BMP designs. The proposed BMPs would also require approvals from DPR and NYSDEC, thus the designs of the proposed BMPs would be coordinated with these agencies for sites located within their respective jurisdictions. DEP would also coordinate with DPR on mitigation plans for all necessary tree

removals that would be developed based on final BMP designs, tree surveys and the extent of clearing. DEP would obtain the necessary permits from DPR and NYSDEC for all construction and operational activities within their respective properties.

The proposed project would also install several new and expanded outfalls to the Lower Bay, which would be below grade until the shoreline edge. Because they are underground for most of the width of the beach, these outfalls wound not impact public access or public swimming beaches. Installation of the outfalls would require crossing the sandy beach and recreational facilities such as the boardwalk in the FDR Boardwalk and Beach Park. Similar to the proposed BMPs, outfalls across parkland would require a permit from DPR prior to construction and DEP would also need to restore all affected DPR facilities and lands. Therefore, the proposed project would not result in potential significant adverse impacts to open space.

Urban Design and Visual Character

The proposed BMPs would transform existing views of large common reed monocultures into more visually diverse landscaped settings that would combine open water features with new ecologically valuable landscapes. Views from adjacent streets and private homes would potentially be opened up at street ends where common reed currently obscures views into these sites. To protect existing trees and woodland stands, final BMP designs would include detailed tree surveys to minimize tree impacts, particularly at those BMP sites where wooded borders are part of the local visual landscape or could potentially screen the BMP site during the early years after initial planting. Most structures at the BMPs would be at or below grade and not be visible.

The proposed sewers would be below grade with the exception of the outfall headwalls that would be visible only at the shoreline and into the Lower Bay. Thus, the proposed outfalls would not significantly impact views along the public beach.

The proposed modified street grades would not impact view corridors or streetscapes along the affected streets. In addition, the final design of the street cross-sections would be based on site-specific topographic information that would minimize transitions between adjacent private properties and the public street. Therefore, the proposed project would not result in potential significant adverse impacts to urban design and visual resources.

Historic and Archeological Resources

A Phase IA archaeology study was conducted for each watershed to determine if the proposed project would potentially impact any archaeological resources. Based on a review by the Landmarks Preservation Commission (LPC), portions of several proposed BMPs (OB-2, NC-4 NC-6, and SBE-2C) contain discrete areas of precontact archaeological sensitivity. Therefore, Phase IB archaeological testing would be performed at these sites and

the Phase 1B report would be submitted to LPC for review and approval. Recommendations from the Phase IB report would be incorporated into the proposed final BMP designs, as necessary, and implemented as part of project construction. Therefore, the proposed project would not result in potential significant adverse impacts to archaeological resources.

With respect to historic architectural resources, the proposed BMPs would not have any adverse impacts. DEP would coordinate with DPR in the design of the proposed expanded outfalls across the site of the Cedar Grove Beach Club to avoid any impacts on any potential historic features at this location. Therefore, the proposed project would not result in potential significant adverse impacts to historic and cultural resources.

Natural Resources

Construction of the proposed project would not result in significant adverse impacts to surface and groundwater hydrology, water quality, or wildlife.

The proposed project is expected to reduce local stream flooding that currently adversely impacts local streets and properties. Based on hydrologic and hydraulic mathematical modeling of storm events, the proposed project would not adversely impact the 100-year floodplain, nor would it have any adverse impacts on local surface drainage due to the proposed berms or modified street grades. The proposed project would also not result in any erosive stream velocities downstream of the BMPs. While the proposed project is not expected to adversely impact local groundwater flows or the local water table, additional groundwater data would be collected to inform the design of the lower watershed BMPs. Therefore, the proposed project would not result in potential significant adverse impacts on surface or groundwater hydrology.

The proposed project would not result in potential significant adverse water quality impacts, but instead improve water quality as it would provide pollutant removal through the proposed BMPs by allowing for settling of sediment with some associated reduction in phosphorous loadings from runoff. Reductions in stream velocity and uncontrolled runoff attributable to the proposed BMPs would reduce erosion and sedimentation in local water bodies. Therefore, the proposed project would not result in potential significant adverse impacts to surface water quality of the three watersheds or the Lower Bay.

The proposed project is expected to have beneficial impacts for wildlife including avian and water-dependent species through the expanded wetlands and improved habitats of the BMPs. Regarding any protected wildlife or plant species that have been identified at the BMP sites, the proposed project would include a number of mitigation measures to avoid impacts to protected species. Design modifications such as the inclusion of basking logs for turtles or bird boxes for avian species are possible mitigation measures. Other measures could include construction controls or other protective features such as fencing.

The proposed project would widen and improve the overall hydrologic functions of the streams in each watershed and would also improve water quality and aquatic habitats because of increased stormwater inputs that would be filtered by the proposed BMPs. The proposed project would also provide a greater variety of aquatic habitats, including lengthened shorelines and deep pools that would support fish that have been reported in Mid-Island. This would in turn support foraging wading birds. Therefore, the proposed project would provide multiple benefits for aquatic resources in the Mid-Island watersheds by converting degraded wetlands and highly stressed streams into enhanced habitats for aquatic resources. In addition, to avoid any potential impacts on fishery resources, the proposed project would incorporate design features that allow for fish passage and movement along the channels of the lower watershed.

In the absence of the proposed project, hydrology and water quality conditions in the Mid-Island watersheds would be expected to further decline due to uncontrolled runoff and the absence of habitat restoration.

By providing open water, removing common reed and installing maintenance access ways, the proposed project would also reduce potential for brush fires and provide firebreaks against the spread of brushfires that effect wildlife habitat.

Potential significant adverse impacts to natural resources were reduced to the greatest extent possible as part of the development of the proposed BMP amended drainage plan designs. Moreover, as multiple capital projects are initiated to implement the Mid-Island Bluebelt Program, the pre-design protocol would ensure the mitigation identified in this FGEIS minimizes potential significant adverse impacts to the greatest extent feasible and eliminates any potential significant unavoidable adverse impacts to these natural resources.

Hazardous Materials

The proposed project would involve disturbing soil and groundwater at sites where prior uses or testing have indicated the potential presence of hazardous materials. At all of these sites, the proposed project would implement additional site testing as needed along with a CHASP and Remedial Action Plan (RAP). In addition, all excavated soil would need to be handled, managed and disposed of in accordance with all City, state, and federal regulations. If any dewatering is necessary during construction and discharge to sanitary sewers is proposed, the residual water would need to meet DEP standards for discharge to a City sanitary line and pretreatment would need to be performed as necessary. If residual water is proposed to be discharged to a stream or waterway, it would need to meet NYSDEC SPDES standards for such discharges. Therefore, the proposed project would not result in potential significant adverse impacts with respect to hazardous materials.

Water and Sewer Infrastructure

With the proposed project, all sanitary wastewater generated in the three watersheds would be conveyed to the Oakwood Beach Wastewater Treatment Plant (WWTP) for treatment prior to discharge. This added flow would not adversely impact the WWTP. In order to avoid impacts to sanitary sewers, the proposed project would relocate two segments of sanitary sewers that currently extend across the site of the proposed BMP SBE-1A.With this relocation, the sanitary sewer system would not be adversely impacted by the proposed stormwater detention at the proposed BMP SBE-1A.

The proposed project would not introduce any new development or impervious surface coverage that would generate runoff. Rather, it would improve local stormwater management through the installation of stormwater collection sewers, BMPs and new or enlarged outfalls. The proposed BMPs would be designed to handle the City's design storm for stormwater management, and would be important elements of the City's drainage system in conjunction with the storm sewers. Therefore, the proposed project would not result in potential significant adverse impacts to storm sewer infrastructure.

Transportation

The proposed project would not impact traffic conditions. With the proposed street demappings, site access would be maintained to all privately held properties. The proposed BMPs would not eliminate the potential completion of any major east and west collector streets should that need arise in the future, but would affect only limited segments of local collector streets that would no longer be necessary since the adjoining lands would be preserved under the Bluebelt Program. Thus, the proposed project would not adversely impact any through or local traffic circulation, but would preserve the lightly traveled local streets that characterize the lower watershed. Therefore, the proposed project would not result in potential significant adverse impacts to traffic.

The proposed project would not modify any local parking regulations, nor would it eliminate any existing on-street parking or generate new added parking demand. The proposed project would not place any added demands on transit facilities in the proposed project area as it would not generate any transit trips. It would also not result in any long term (operational) impacts on transit facilities, as the proposed project would not permanently impact any local streets served by these facilities. The proposed project would not affect any pedestrian facilities such as sidewalks or crosswalks. Therefore, the proposed project would not result in potential significant adverse impacts to parking, transit and pedestrians.

Growth Inducement

The three watersheds are, for the most part, fully developed with very little vacant land; thus, no significant additional growth is projected in the future without the proposed project. Moreover, the potential for future development is constrained due to limitations on vacant

land and the presence of wetlands. Therefore, the proposed project would not result in any potential significant adverse impacts related to growth inducing impacts.

V. Potential Significant Adverse Impacts.

Pursuant to the requirements of CEQR and SEQRA, the environmental review process must identify any potential significant adverse impacts, and those impacts must be minimized or avoided to the greatest extent practicable. As discussed in the FGEIS, there would be potential significant adverse impacts in three natural resources areas: vegetation and trees, rare, threatened, and endangered species, and tidal wetlands. Given the prolonged (approximately 30-year) construction period for the drainage plans, current field data may not completely address potential impacts at the time of construction. Therefore, DEP has incorporated several mitigation measures into a pre-design protocol that would be implemented with the proposed project. The objective of the protocol is to obtain timely, meaningful and relevant data about existing natural resources conditions prior to final designs. This section discusses identified mitigation measures and their effectiveness in minimizing or avoiding the impacts they would address.

Vegetation and Trees

Under the proposed amended drainage plans, BMPs are designed to preserve upland wooded forested areas as well as higher quality wetland habitats (i.e., wetlands predominantly comprised of contiguous stands of native vegetation) to the extent possible. However, for certain BMPs, despite design modifications and other measures to preserve and enhance natural resources, significant tree removal is expected, particularly at proposed BMP NC-6: Boundary Avenue and proposed BMP NC-11: Last Chance Pond (about 239 trees with four inch caliper or greater at NC-6 and 617 such trees at NC-11). In addition, other BMP sites in City parkland would require tree clearing, but to a much lesser extent. To mitigate this potential impact, a detailed tree survey would be conducted for each BMP to determine the actual number of trees to be removed and the area of affected habitat. Survey results would then be reviewed along with other collected natural resources data for the purposes of identifying opportunities to further avoid large trees, dense stands, and important wooded and wetland habitats.

Proposed final BMP designs at all sites would also maintain perimeter trees and include tree plantings to recreate and preserve wooded habitat and woodlands to the extent feasible. Detailed surveys and designs would be developed for each BMP. All final BMP designs and tree replacement plans would also be coordinated with DPR for BMPs in parklands. The Bluebelt Program also includes monitoring to ensure tree and plant establishment and growth. In addition, several measures would be implemented during construction to protect existing trees.

Endangered, Threatened, and Special Concern Species and Communities

Based on published information, database searches and site investigations, endangered, threatened or special concern plant and wildlife species may be present at a number of proposed BMP sites. To mitigate the potential for impacts, pre-construction investigations would be completed at each proposed BMP site where these species may be present. These pre-design investigations would be performed during the appropriate season or time of year and specific to the nesting, foraging or breeding characteristics of the species of concern. The investigations would then be used to inform BMP designs. If protected species are observed, design modifications, construction-period limitations and other protective measures would be implemented to avoid and minimize impacts. In addition, DEP would coordinate with NYSDEC as necessary to obtain necessary incidental take permits for endangered and threatened wildlife species in accordance with Environmental Conservation Law 11-0535 Part 182. For vegetation, avoidance of habitat or plant salvage would be performed.

Tidal Wetland Restoration

The added and expanded outfalls of the proposed amended drainage plans would partially extend out into tidal wetlands. A preliminary analysis of a reasonable worst case scenario indicates that approximately 1.22 acres of tidal wetland creation is necessary to compensate for the tidal wetland area that would be permanently occupied by the proposed outfall structure. DEP intends to minimize structural impacts as much as possible during the final design, such that some outfall expansions currently planned may not be necessary. In addition, Crescent Beach Park, which is City parkland under the jurisdiction of DPR, provides an opportunity for cumulative wetland restoration. Preliminary coordination between DEP and DPR has identified areas for potential tidal wetland creation at this site that would support the restoration necessary for the proposed project as well as a DPR-proposed restoration. A preliminary conceptual design involves re-grading the tidal edge and stabilizing it with the planting of Spartina alterniflora. With this restoration proposal, DEP would maximize the natural resources benefits associated with wetland creation by restoring one larger tidal wetland where greater compensatory ecological benefits could be realized rather than addressing restoration at each drainage plan outfall as it is constructed. Another potential tidal wetland mitigation site is at the outlet of the Oakwood Beach creek system at the confluence of the east and west branches. This land is under the jurisdiction of the NPS (as part of the GNRA). As in the case of Crescent Beach, this work would have to be coordinated with any shoreline protection measures proposed by the USACE.

Forested Wetland Restoration

DEP has been coordinating with USACE and USEPA on a Regional General Permit (RGP) that would authorize a number of Bluebelt projects on Staten Island. A requirement of that permit is a wetland mitigation plan that ensures there would be no net loss of forested wetlands within Richmond County due to activities authorized by the permit. The proposed project involves the conversion of a total of 5.46 acres of forested wetlands into other

wetland types (open water). All these impacts are located in the New Creek watershed. Based on discussions with USACE and USEPA, the proposed mitigation for this wetland loss can be located anywhere on Staten Island, does not need to be on DEP property, and can be provided at the ratio of one acre of new wetland to one acre of lost wetland.

In coordination with USACE and USEPA, DEP has developed a forested wetland mitigation plan for the proposed project which identifies a number of potential mitigation sites in the Mid-Island Bluebelt. This includes, for example, Bluebelt property situated between BMPs NC-15 and NC-16 and the proposed islands in the South Beach SBE-1A, -1B, -1C complex. Another potential site is on Bluebelt property in the Mill Creek Watershed near BMP MC-1 where DEP has already done some forested wetland creation as mitigation for project impacts. Another possible mitigation site could be Long Pond Park in South Richmond where City streets were graded, but never paved, in what was once a large, continuous forested wetland. A mitigation project here could remove some of the filling and reconnect the wetland fragments.

DEP will continue to work with USACE and USEPA on this forested wetland mitigation plan. DEP will also coordinate with other government agencies such as DPR, NYSDEC, and the New York State Office of Parks, Recreation and Historic Preservation in identifying natural areas where this mitigation would provide the greatest benefit.

The proposed project may potentially result in impacts to natural resources such as vegetation and trees, plants and animals that may be endangered, threatened, or species of concern, and tidal wetlands. Therefore, DEP has incorporated several mitigation measures into a pre-design protocol that would be implemented with the proposed project. The objective of the protocol is to obtain timely, meaningful and relevant data about existing natural resources conditions prior to final designs. This FGEIS (see Table S-6) summarizes the pre-design protocol and Appendix E provides the data inventory that has been performed for the first Mid-Island capital project: restoration of the West Branch in the New Creek Bluebelt.

VI. Project Alternatives.

The FGEIS evaluated five alternatives: a No Action Alternative, which assumes none of the Mid-Island proposed amended drainage plans move forward; a Conventional Piped Sewer System Alternative, which assumes full implementation of the current drainage plan (the Potter Plan); an amended drainage plan alternative that eliminates upstream extended detention at BMPs NC-6 and NC-11; an amended drainage plan alternative that assumes green infrastructure techniques are used to reduce the size of the proposed BMPs; and alternative designs that reduce flow to Last Chance Pond. After careful analysis, no feasible alternatives were identified that would meet the needs and objectives of the proposed project

while reducing or eliminating potential significant adverse impacts related to the proposed project.

No Action Alternative

Under the No Action Alternative, there would be no land use changes at the proposed BMP locations and the City's WRP goals for improving watershed water quality and reducing flooding and erosion would not be advanced. Under this alternative, there would also be no wetland restoration on Bluebelt properties. Without the proposed BMPs and maintenance program, common reed would continue to dominate the habitat of the lower watersheds and brush fires would remain a concern. The removal of dense common reed that currently limits public views from local streets and views of wetlands would also not be provided. The proposed project requires raising some local street grades which would not be necessary under this No Action Alternative. However, neither scenario results in significant adverse impacts on urban design or visual character.

Under the proposed amended drainage plans, BMPs, storm sewers and outfalls would be installed to provide a comprehensive stormwater management system that reduces flooding and manages runoff. Under the No Action Alternative, there would be no such improvements in Mid-Island. Rather, flooding would continue unabated, street runoff would remain uncontrolled and stream banks would continue to erode. Thus, the hydrology and water quality benefits of the proposed project would be foregone under this alternative.

The clearing of vegetation and mitigation would not be necessary under this alternative. However, under the No Action Alternative, habitat restoration and maintenance would not be provided since no construction would occur. Thus, none of the habitat benefits of the proposed project would be provided including the removal of fill and landscaping of existing freshwater wetlands. The No Action Alternative would not include new outfalls to the Lower Bay that would impact tidal wetlands. However, the proposed project includes a tidal restoration plan to mitigate this impact.

Conventional Piped Storm Sewer System (The Potter Plan Alternative)

Under this alternative, the widespread construction of streets and sewers through natural features would substantially alter the visual character of Mid-Island. The Potter Plan also calls for many streets to be substantially raised above the current street grade, some by as much as seven feet, which would leave many houses and yards at elevations well below streets. Thus, this alternative would have a potential significant adverse impact on visual character and urban design—specifically streetscapes and views. Widespread street raisings under this alternative would also create localized flooding of private properties that would be below the street grade with this alternative. In contrast, the proposed plan would improve visual character by transforming existing views of large common reed monocultures into more visually diverse landscaped settings that would combine open water features with new

ecologically valuable landscapes. Additionally, the BMPs under the proposed plan would alleviate, rather than exacerbate, localized flooding.

Additionally, building out the storm sewer system under the Potter Plan would not relieve flooding when the high tide coincides with a rain event preventing stormwater from draining into the ocean. At such times, the stormwater would back up into the storm sewer system, surcharging into the streets. Under the proposed plan, extended detention is provided where stormwater is stored in BMPs during high tide, thereby preventing street flooding.

Under this alternative, there would be significant adverse natural resources impacts on wetlands, aquatic wildlife and woodlands. Moreover, surface water flows would be directed away from those wetlands not directly impacted under the Potter Plan. In contrast, the proposed project protects, enhances, and expands freshwater wetlands.

Alternative Drainage Plan Design: Elimination of Upstream Detention at BMPs NC-6: Boundary Avenue and NC-11: Last Chance Pond

Under this alternative, extended detention would not be provided at these two proposed BMPs, thereby increasing the downstream peak stage water surface elevations by 12-20 percent along with the potential for street and property flooding. As a result, downstream berm heights and lengths would need to be increased under this alternative in order to protect adjacent properties. In addition, without extended detention provided upstream, storm flows would reach Midland Avenue and Hylan Boulevard much more rapidly.

Increased sediment loads downstream of BMPs NC-6 and NC-11 would also cause water quality degradation along the West Branch and Main Channel, respectively. Outlets to the lower watershed BMPs could also remain submerged for a longer duration, thereby inhibiting pipe capacity and increasing potential for street flooding. To restore this lost capacity, pipes and streets would need to be raised to greater elevations than currently planned under the proposed project.

Under this alternative, the wetland expansion at BMP NC-6 would be limited to the channelized streams from the proposed stormwater outlets across the Boundary Avenue site, yielding a much smaller increase in wetland acreage as compared with the proposed project. Under this alternative, there would be wetland disturbance at Last Chance Pond, though the area of disturbance would be reduced compared to the proposed project. Thus, the extent of vegetation and tree clearing would be less under this alternative. However, in both this alternative and in the proposed project, tree clearing and changes to existing habitats would be necessary as would an appropriate mitigation plan for all tree removals.

Expanded Green Infrastructure Alternative

This alternative examines the potential to incorporate elements of the *NYC Green Infrastructure Plan* into the Mid-Island proposed amended drainage plan designs. The objective of this alternative is to determine if this approach could reduce the limits of clearing and the size of BMPs, such as the proposed BMPs NC-6 and BMP NC-11.

DEP is currently implementing green infrastructure in combined sewer areas primarily to achieve combined sewer overflow (CSO) reductions in New York City waterways. Green infrastructure can store and slow the runoff contribution to the combined sewer, thereby freeing up capacity in the system during rain events. Under the City's plan, green infrastructure has been utilized as a CSO reduction tool and thus would not be suitable for Staten Island, which is largely separately sewered. Additionally, Bluebelt BMPs would achieve similar benefits as the BMPs installed under the Green Infrastructure Plan while also reducing flooding and erosive velocities, and improving water quality. Furthermore, green infrastructure would not be a suitable replacement for Bluebelt BMPs because green infrastructure practices are not large enough to store the volume of water necessary to prevent downstream flooding. Therefore, incorporating elements of New York City's Green Infrastructure Plan would not be a viable alternative to the proposed project.

BMP NC-11: Last Chance Pond Flow Diversion Alternatives

Two flow diversion alternatives were examined for the drainage area of BMP NC-11: Last Chance Pond. Both alternatives were designed with the assumption that the proposed drainage plan could potentially be modified to divert some storm flow away from the proposed BMP, thereby achieving a smaller BMP footprint and reducing wetland disturbance. The first alternative assumes a flow splitter is installed at the intersection of Zoe Street and Stobe Avenue that redirects flow towards Naughton Avenue and also eliminates the outfall at Cletus Street and Naughton Avenue. The second alternative would divert the majority of the BMP NC-11 Stobe Avenue outfall flow to the East Branch of the New Creek Watershed via the proposed BMP NC-18: Patterson Avenue.

Hydrologic mathematical modeling predicted that with the first alternative there would only be a minor (2-inch) reduction in the peak surface water elevation at BMP NC-11. With such a small decrease, the footprint of BMP NC-11 would not be reduced, but would remain nearly identical to the proposed BMP. Thus, the natural resource impacts would be the same under this alternative as with the proposed project.

For the second alternative, the hydrologic model disclosed the peak vertical surface water surface elevation at BMP NC-11 would be reduced by approximately one foot. This alterative would, therefore, reduce the BMP footprint by approximately one acre from the proposed 8.8 acre design. While this would potentially reduce habitat impacts, it would still require clearing and grading of 7.8 acres including the important wetlands that are in the

middle of the Last Chance Pond site. Moreover, the flow diversion under this alternative would require the installation of over 4,600 linear feet of double-barrel 8-foot by 6-foot box sewer along Dongan Hills Avenue, a siphon under an existing water main in Hylan Boulevard, and the excavation of approximately two additional acres at BMP NC-18, all of which would add significant costs. Additionally, there would be significant construction challenges as Dongan Hills Avenue is a narrow street, which may preclude installation of a large double-barrel storm sewer.

VII. Conclusions and Findings.

This Final Generic Environmental Impact Statement evaluated the environmental impacts of construction of the Staten Island Bluebelt Drainage Plans for Mid-Island Watersheds. Having considered the FGEIS, and the information and analysis contained therein, the Commissioner, on behalf of DEP, concurs with the findings of the FGEIS and certifies that:

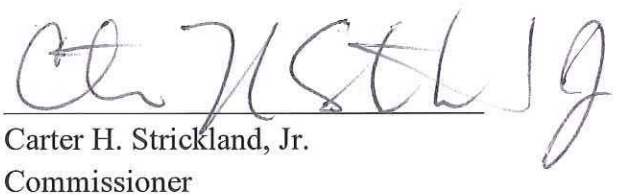
- The requirements of Part 617 of Title 6 of the New York Code of Rules and Regulations ("the SEQRA regulations") have been met.

- Consistent with social, economic, and other essential considerations, from among the reasonable alternatives thereto, the actions to be approved are ones that would minimize or avoid adverse environmental impacts to the maximum extent practicable.

- Consistent with social, economic, and other essential considerations, the adverse environmental impacts revealed in the FGEIS will be minimized or avoided to the maximum extent practicable by incorporating as conditions to the approval, those mitigative measures that were identified as feasible and practicable.

The FGEIS and the Notice of Completion of the FGEIS constitute the written statement of facts and analysis of the environmental, social, economic and other factors and standards that form the basis of this decision, pursuant to Section 617.11(d) of the SEQRA regulations.

Dated: February 26, 2014
Flushing, NY



Carter H. Strickland, Jr.
Commissioner
New York City Department of Environmental Protection