

# DEPARTMENT OF THE ARMY PERMIT

Permittee: New York City Department of Environmental Protection  
Bureau of Water and Sewer Operations  
Staten Island Bluebelt Unit  
59-17 Junction Boulevard  
Flushing, New York 11373  
(718) 595-3000

Permit Number: NYDGP-25 [NAN-2019-00803]

Date Issued: FEB 27 2020

Issuing Office: U.S. Army Corps of Engineers, New York District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

## Project Description:

Authorization for the discharge of excavated or fill material into waters of the United States, including discharges associated with Best Management Practices (BMPs) for reducing stormwater flooding, including outlet stilling basins, extended detention basins, which include micropools, forebays, and weirs, as well as stream restoration and diversion, wetland enhancement and establishment, culvert repair and construction and outfall repair and construction (in accordance with the attached sheets). The specific activities that this general permit authorizes include:

### Extended Detention Wetland:

Construct extended detention wetlands featuring an outlet structure, typically a weir plate with a low flow orifice, to allow for controlled water-level fluctuation (typically one to four feet, depending on the site-specific design constraints), so that water can be stored temporarily and released at a reduced flow rate, as compared to the inflow (sheet 1 of 19). One or more stormwater outlets will be constructed into this BMP, with headwall structures and forebays at the outlet, to collect the majority of sediment near the edge of the wetland. Micropools will be located just upstream of the outlet structure to provide a second deep area for sediment to drop out of as velocities slow before reaching the outlet. In addition, a low flow channel will connect the outfalls and the outlet structure to provide a defined path for water flow, so that different depths of water in the permanent pool are maintained.

### Pocket Wetland:

Construct, mostly at outlet areas within existing wetlands and where space is relatively limited,

pocket wetlands. These wetlands will typically contain one storm sewer outlet and a forebay, which will provide additional space for sediment accumulation, as flow velocity decreases at the outlet (sheet 2 of 19).

**Outlet Stilling Basin:**

This BMP is to be constructed adjacent to existing ponds or stream corridors and will consist of a deep, stone-lined pool, often embedded in concrete, at a pipe outfall (sheet 3 of 19).

**Stream Restoration:**

Stream restoration techniques will be implemented by using rock toe plantings, live stakes, erosion control blankets, brush mattresses, imbricated riprap with boulder clusters, armored stream banks, log frame deflectors, rock cross vanes, in-stream weirs, and ground cover restoration of the floodplain (sheet 6 of 19).

**Ocean Outfall Construction:**

Twelve ocean outfall pipes will be constructed and/or extended (sheet 7 of 19).

All BMPs will have maintenance access corridors to allow access for general maintenance such as sediment removal. Tables 1 and 2 (sheets 10 through 14 of 19) list all facilities authorized by this general permit.

**Project-Specific Authorization - New Creek Bluebelt:**

BMPs NC-7 and NC-8 (Figure 8) will be constructed under this authorization. BMP NC-7 consists of the creation of a stormwater wetland with detention that includes the construction of a 20-foot-wide by 150-foot-long concrete weir chamber at Freeborn Street, as well as a new stream channel and 4.7 acres of wetland restoration through excavation to remove *Phragmites*.

BMP NC-8 consists of the removal of 14,000 cubic yards of sediment to facilitate the creation of a 0.7 acre restored wetland.

These two projects in total will convert approximately 5.4 acres of *Phragmites* to a wetland complex consisting of approximately 0.6 acres of open water, approximately 1.2 acres of shallow emergent wetlands, approximately 3.0 acres of transitional areas, and approximately 0.6 acres of uplands. A total of approximately 0.88 acres of wetlands will be permanently filled for the berms and structures at BMPs NC-7 and NC-8.

This project also includes the construction of the low flow channel for BMPs NC-9 and NC-17 (Figure 8 and 9), which connect BMPs NC-7 and NC-8 to the main channel of New Creek. The work involves removal of approximately 22,000 cubic yards of material to create a 1,500-foot-long stream channel and associated riparian corridor.

All work must be performed in accordance with the attached drawings, the attached New York State Department of Environmental Conservation (NYSDEC) issued Clean Water Act Section 401 Water Quality Certificates (WQCs) issued (NYSDEC Permit No. 2-6404-00939/00002, for Arden Heights Watershed, NYSDEC Permit No. 2-6499-00023/00001 for the Sweet Brook watershed,



NYSDEC Permit No. 2-6499-00035/00008 for the Lemon Creek/Sandy Hook watershed, NYSDEC Permit No. 2-6405-00464/00009 for the Mill Creek Watershed, NYSDEC Permit No. 2-6404-00394/00009 for Jack's Pond Watershed, NYSDEC Permit No. 2-6405-00463/00004 for the Clay Pit Ponds/Port Mobil Watershed, NYSDEC Permit No. 2-6404-01113/00010 for the New Creek Watershed, NYSDEC Permit No. 2-6404-01170/00014 for the South Beach Watershed, and NYSDEC Permit No. 2-6404-00940/00003 for the Wood Duck Pond Watershed), and in compliance with Special Conditions A-M, which are hereby made part of this authorization.

**Project Location:** Borough of Staten Island, Richmond County, New York: Southeast Shore of Staten Island including the watersheds of Richmond Creek, Lemon Creek, Sweet Brook, waters within Butler Manor, Mill Creek, Jack's Pond, Wood Duck Pond, waters within Arden Heights, waters within South Shore Golf Course, Clay Pit Ponds, New Creek; South Beach, and Oakwood Beach

**Permit Conditions:**

**General Conditions:**

1. The time limit for completing the work authorized ends on FEB 27 2025. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions:**

A. You shall ensure that all construction equipment working on emergent wetlands shall be supported on mats to the maximum extent possible. Any wetlands disturbed during construction shall be restored to either preproject conditions or according to project plans.

B. All wetland establishment and/or enhancement shall be monitored to ensure a minimum survival of 85 percent. If the eighty five (85) percent survival rate is not met at the end of the second growing season following each phase, You shall take all necessary measures to ensure the level of survival by the end of the next growing season, including replanting and regrading if necessary and removing invasive plant species to the maximum extent possible.

C. You shall ensure that construction/maintenance access corridors shall be constructed so as to avoid impacts to wetlands and other waters of the United States to the maximum extent practicable.

D. Construction plan drawings and project work description to the U.S. Army Corps of Engineers, New York District, Regulatory Branch, at least 60 days in advance of the initiation of construction for projects for consideration under this RGP which will result in the conversion of more than one acre of wetlands to open water or any disturbance of more than 0.5 acres of forested wetlands or the installation of new or expansion of any existing ocean outfall in Raritan Bay. You will be required to notify the U.S. Army Corps of Engineers of such a project by submitting to the Corps a brief narrative description of the project along with the full set of construction drawings. The submission will consist of legible drawings in both 8.5 inch by 11 inch sized paper and 11 inch by 17 inch sized paper. The submission should be sent to:

Chief, Eastern Permits Section, Regulatory Branch,  
USACE Operations/Regulatory 16-406  
c/o PSC Mail Center  
26 Federal Plaza  
New York, New York 10278

E. You shall ensure that all losses of forested wetlands resulting from the project shall be mitigated at a 1:1 replacement ratio. The mitigation site(s) can be located anywhere on Staten Island and must be reviewed by U.S. Army Corps of Engineers and USEPA with written approval by this office prior to the commencement of construction.

F. You must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause affects to any historic properties listed on, or determined to be



eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map including the location of the historic properties or the potential for the presence of historic properties.

G. You shall ensure that any archaeological artifacts discovered during the performance of work under the authorization of this general permit are adequately protected and their discovery promptly reported to the District Engineer.

H. You shall ensure that no activity authorized under this General Permit shall adversely affect any federally-listed threatened or endangered species, as identified under the Endangered Species Act of 1973, or result in the destruction or adverse modification of critical habitat of such species. If the activity may affect listed species or critical habitat, or is likely to jeopardize proposed species, or likely to result in the adverse modification of proposed critical habitat, the Corps shall initiate and complete a Section 7 consultation or conference, as appropriate, in accordance with the Endangered Species Act of 1973 prior to authorization of the activity under this General Permit.

I. Prior to commencing any work under this General Permit, You shall contact the various utility authorities and companies (i.e., electric, gas, water, sewage, etc.) in order to prevent personal injury and/or damage to property during construction of work.

J. You shall ensure that no discharge of excavated or fill material or structures may consist of unsuitable material or solid waste (e.g., trash, debris, car bodies, etc.) and all material discharged must be free from toxic pollutants in toxic amounts pursuant to Section 307 of the Clean Water Act.

K. You shall ensure that all work identified and authorized herein shall be consistent with the terms and conditions of this General Permit. The Corps may impose other special conditions on a project authorized pursuant to RGP-25 where it is determined necessary to minimize adverse environmental effects or based upon any other factor of the public interest. Any activities not specifically identified and authorized herein shall constitute a violation of the terms and conditions of this permit, in whole or in part, and may result in the institution of such legal proceedings as the United States Government may consider appropriate for those projects which require notification as per Special Condition D.

L. You shall ensure that you understand and agree that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, You will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

**M. By August 15 of each calendar year, throughout the life of this general permit, You shall submit a written report of the proposed activities to be undertaken in the upcoming year under the RGP. The report will present the contracts to be awarded, the construction start dates and the planned timeline for those projects. The report will also provide the status of ongoing construction projects and completed construction projects including project location; brief description of the project; volume of fill material removed/placed in wetlands or waters of the United States; structures constructed at each site with dimensions; acres of and type of wetlands created, enhanced or restored at each site and the status of the plant survival rate at any of the wetland enhancement or establishment sites authorized under this RGP: The report should be sent to:**

Chief, Eastern Permits Section, Regulatory Branch,  
USACE Operations/Regulatory 16-406  
c/o PSC Mail Center  
26 Federal Plaza  
New York, New York 10278

**Further Information:**

**1. Congressional Authorities:** You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S. Code 403).

(X) Section 404 of the Clean Water Act (33 U.S. Code 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

**2. Limits of this authorization:**

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

**3. Limits of Federal Liability:** In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.



**b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.**

**c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.**

**d. Design or construction deficiencies associated with the permitted work.**

**e. Damage claims associated with any future modification, suspension, or revocation of this permit.**

**4. Reliance on Applicant's Data:** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

**5. Reevaluation of Permit Decision:** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

**a. You fail to comply with the terms and conditions of this permit.**

**b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).**

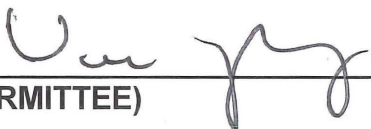
**c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.**

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

**6. Extensions:** General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

PERMITTEE: New York City Department of Environmental Protection  
PERMIT NO.: NYDGP-25 [NAN-2019-00803]

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
(PERMITTEE)

2/26/20  
(DATE)

Vincent Sapienza  
Commissioner  
New York City Department of Environmental Protection

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

  
(DISTRICT ENGINEER)

FEB 27 2020  
(DATE)

**For and in behalf of**

Thomas D. Asbery  
Colonel, U.S. Army  
District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below. A copy of the permit signed by the transferee should be sent to this office.

\_\_\_\_\_  
(TRANSFEE)

\_\_\_\_\_  
(DATE)



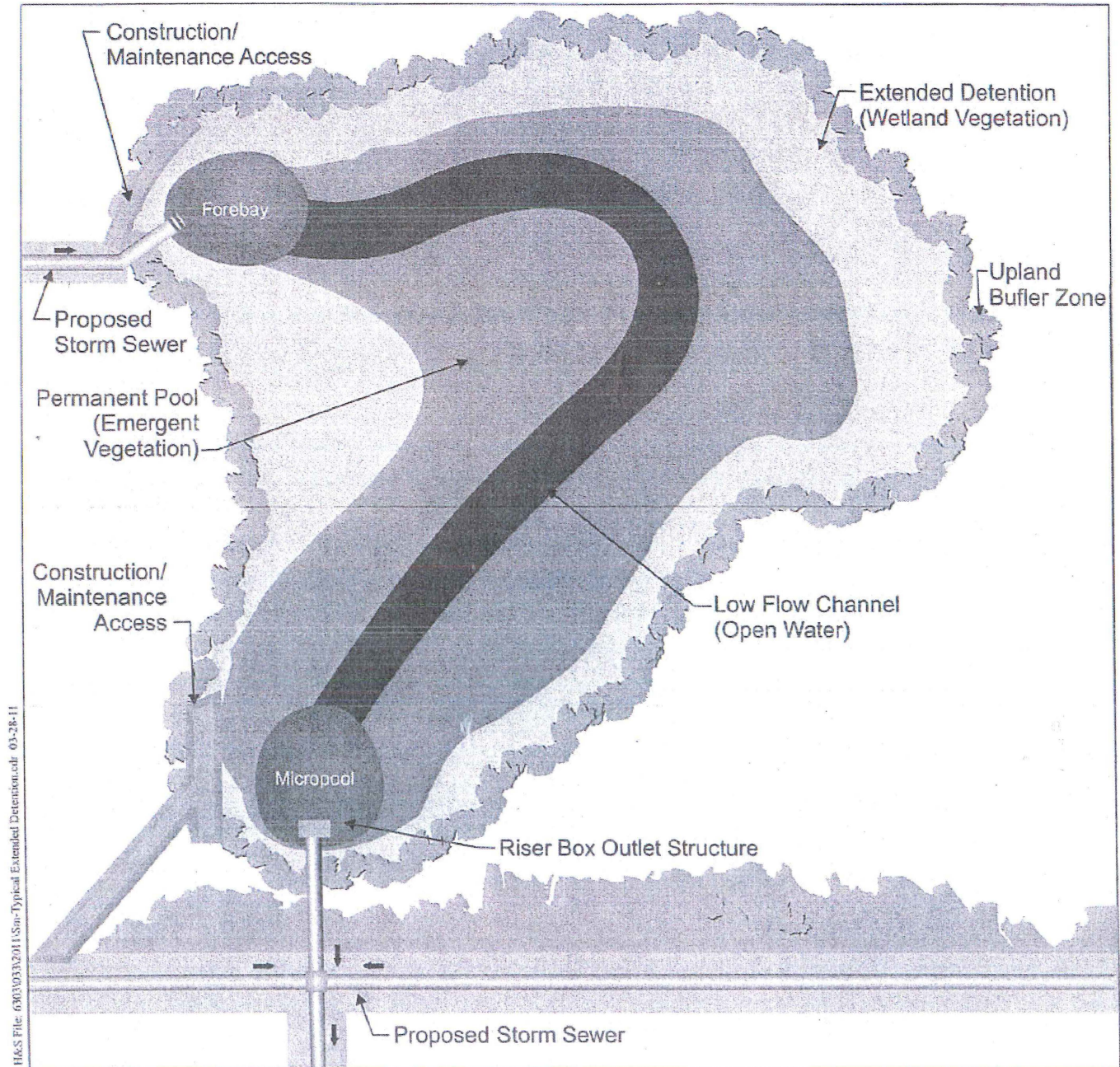


Figure 1  
Typical Extended Detention  
Wetland



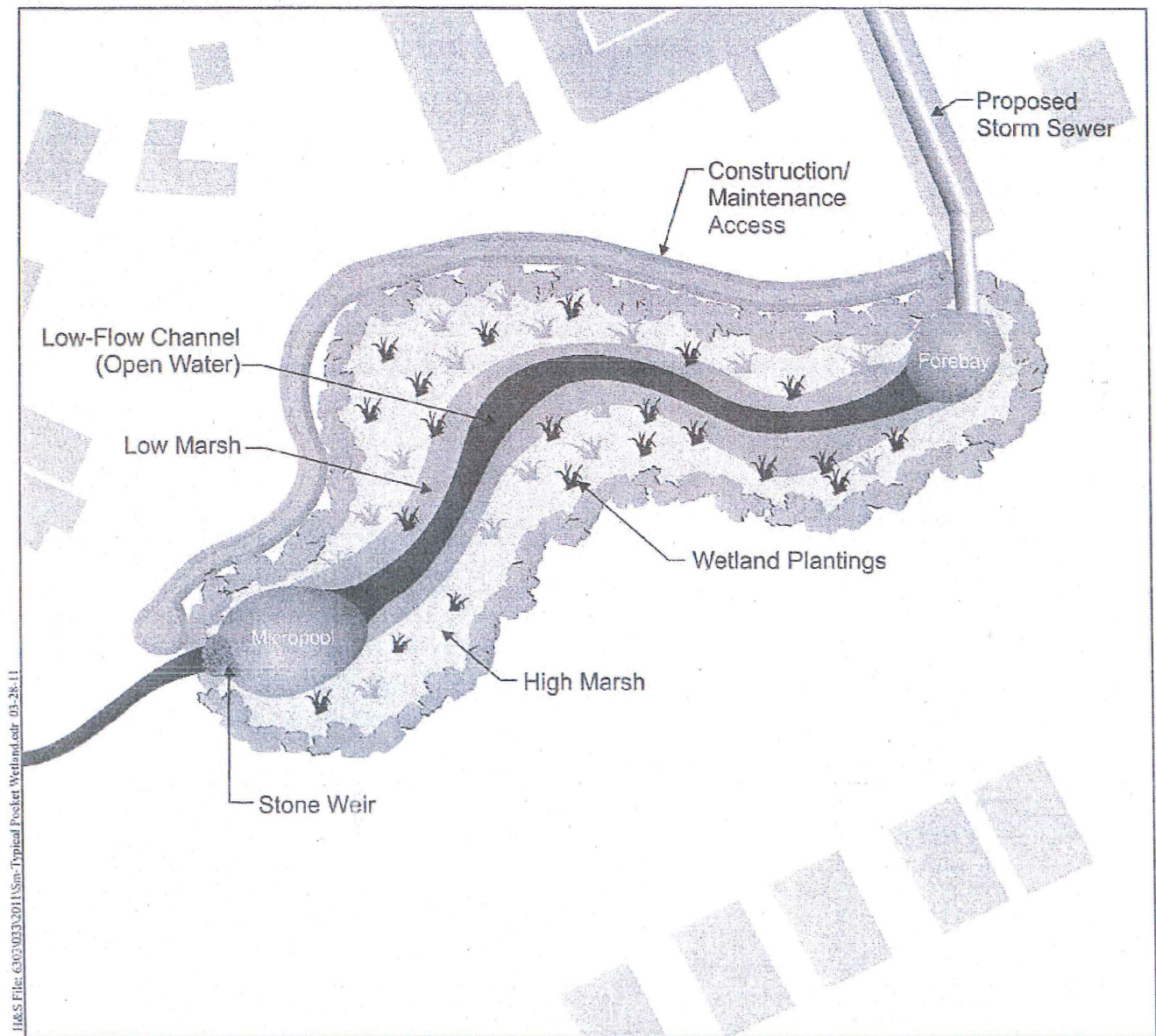
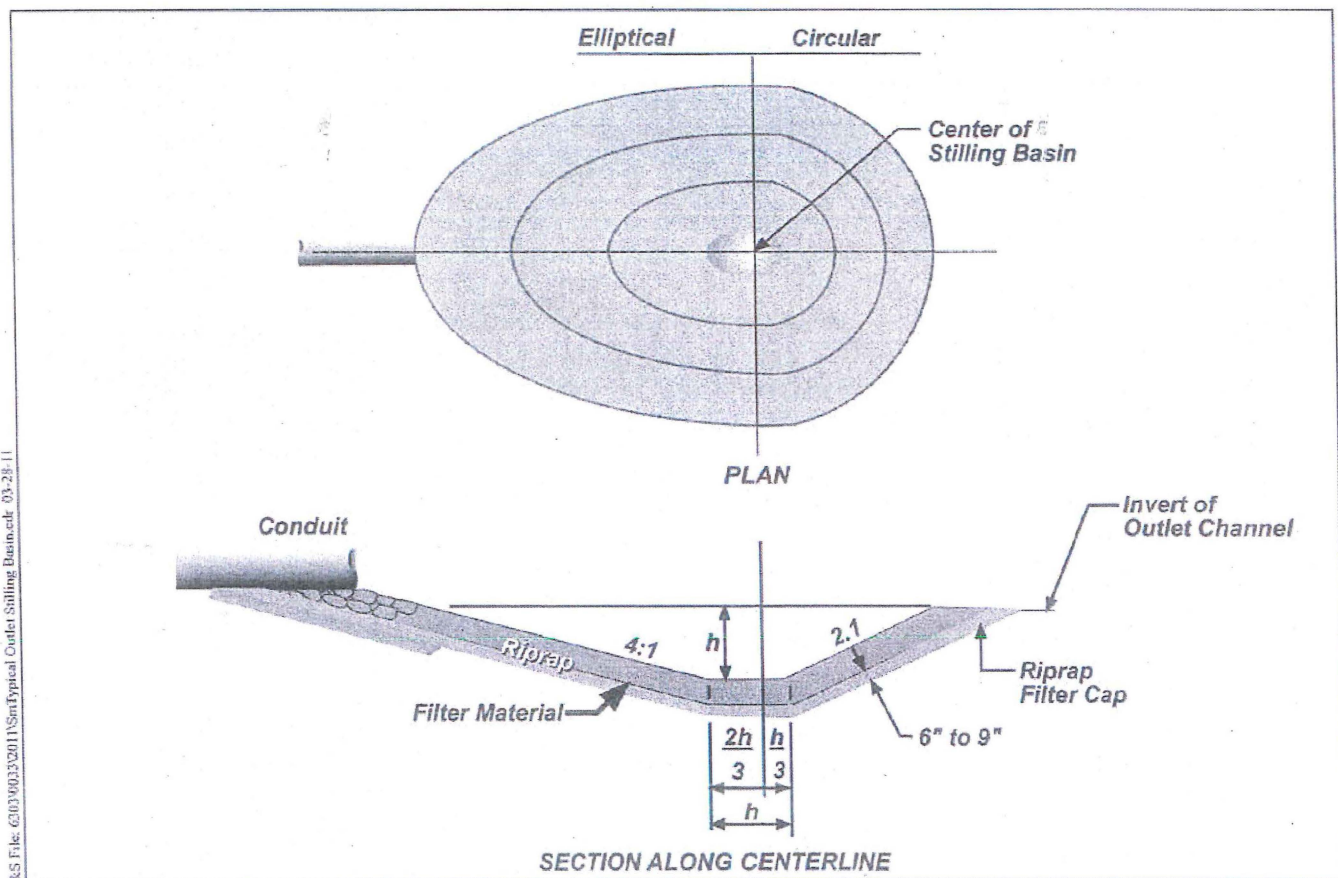
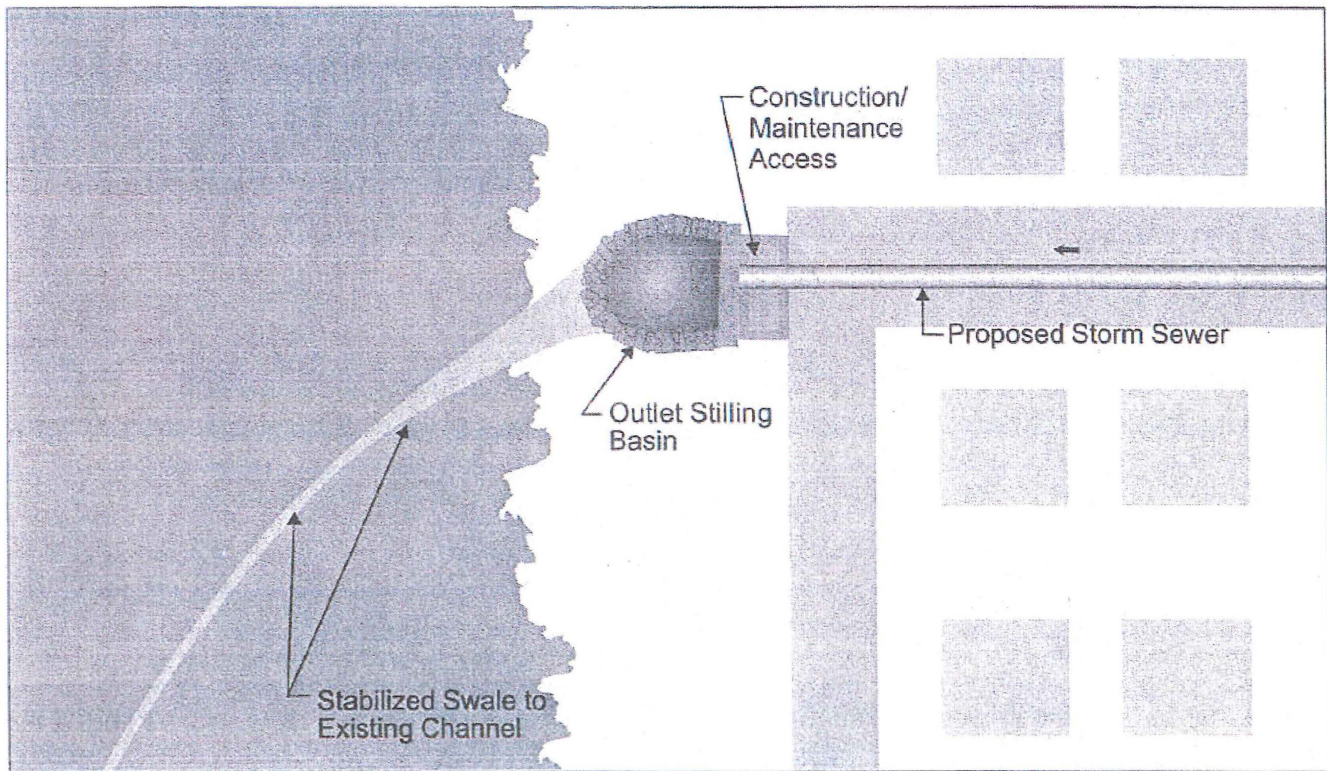


Figure 2

**Typical Pocket Wetland**





Typical Outlet Stilling Basin



# Watersheds to be Permitted



## Staten Island Bluebelt Watersheds

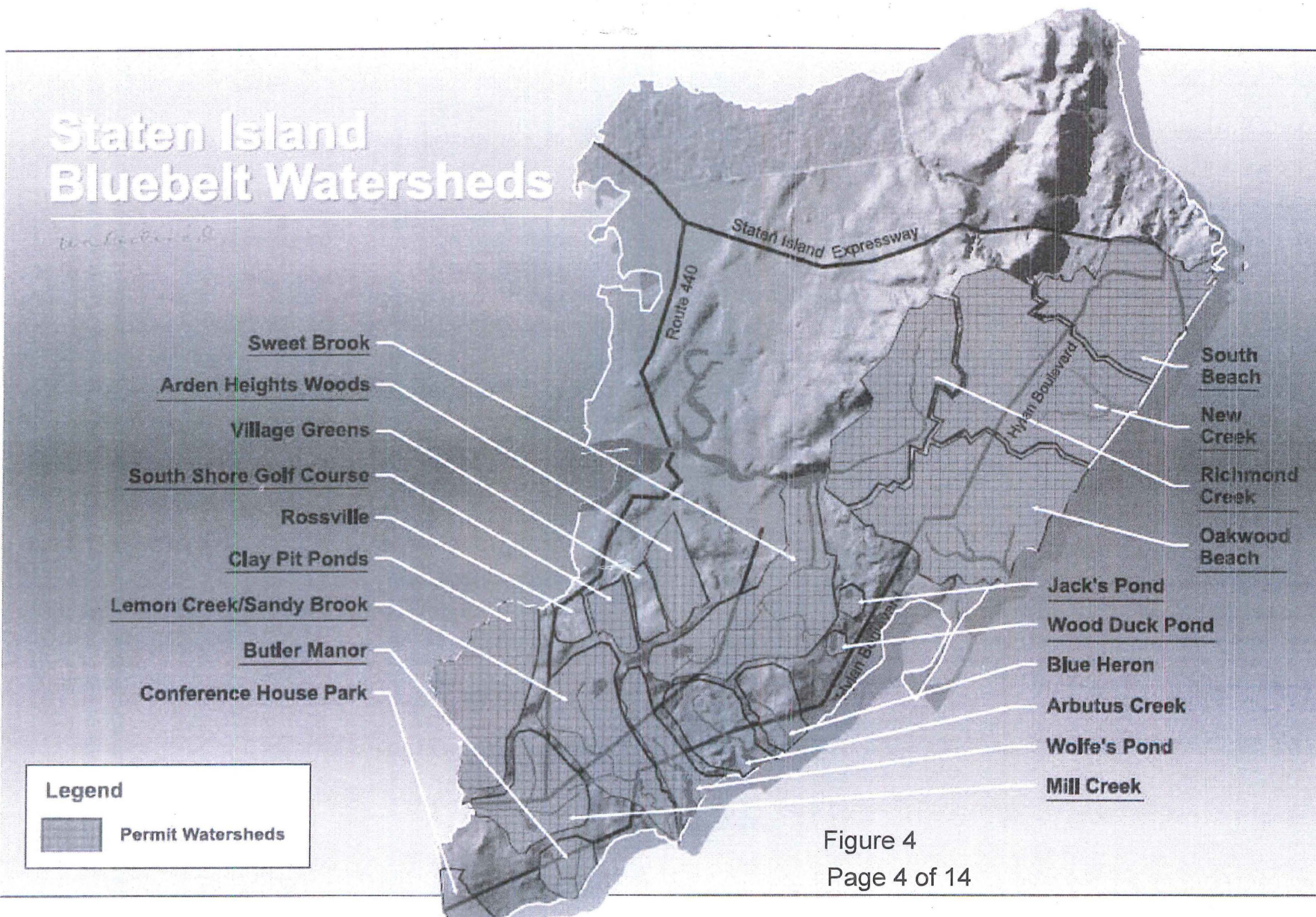
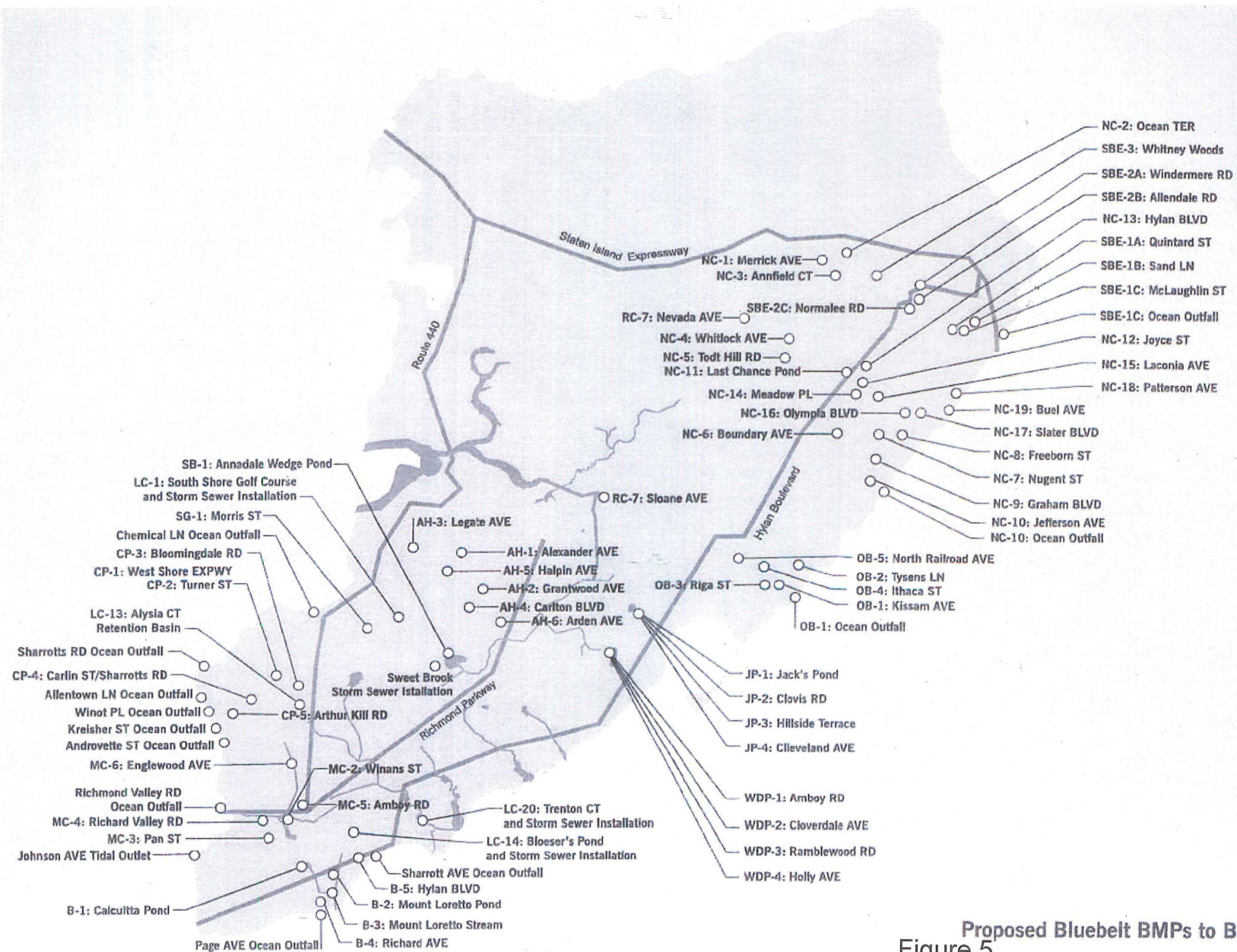


Figure 4





Proposed Bluebelt BMPs to Be Authorized  
 Figure 5  
 Page 5 of 14

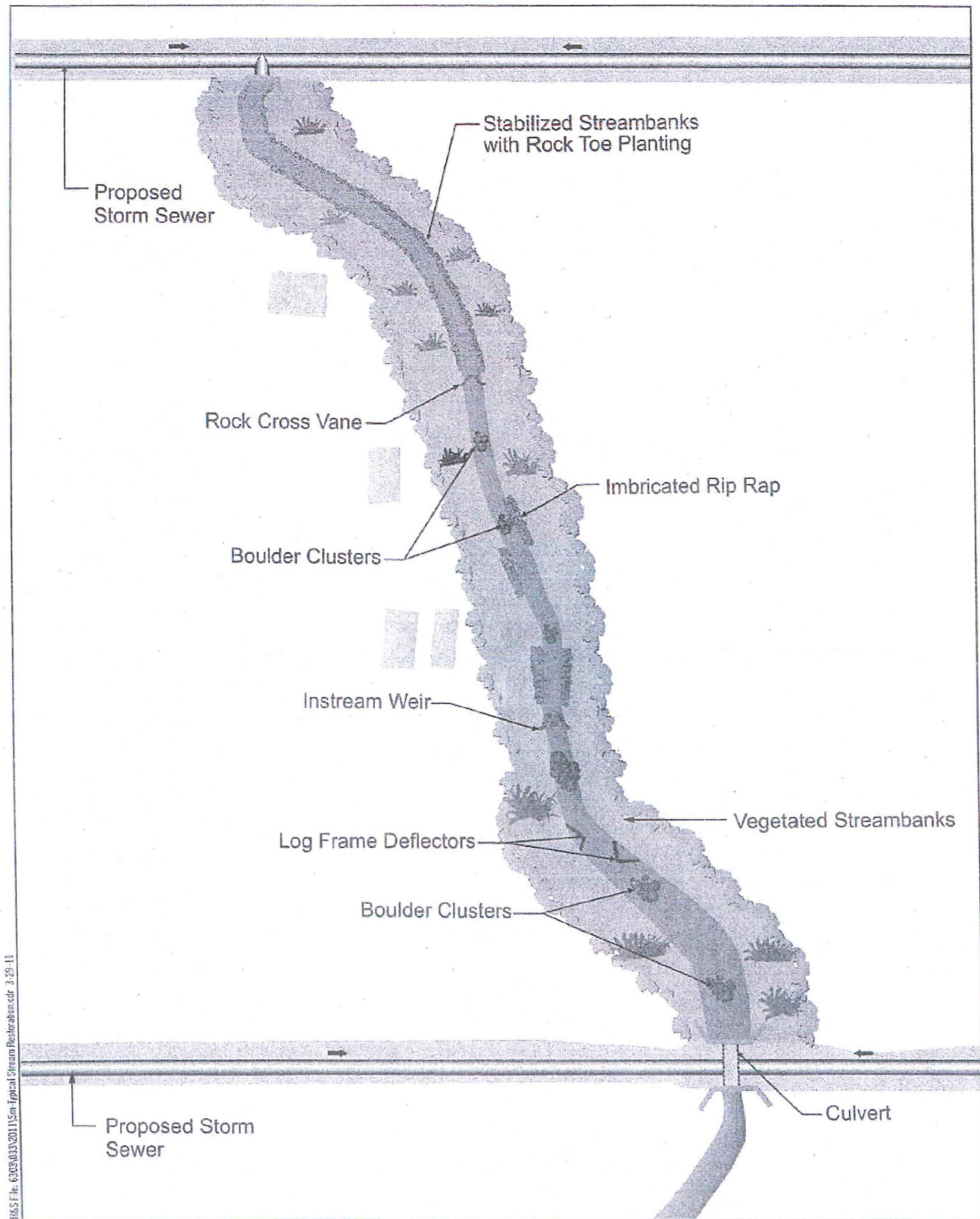
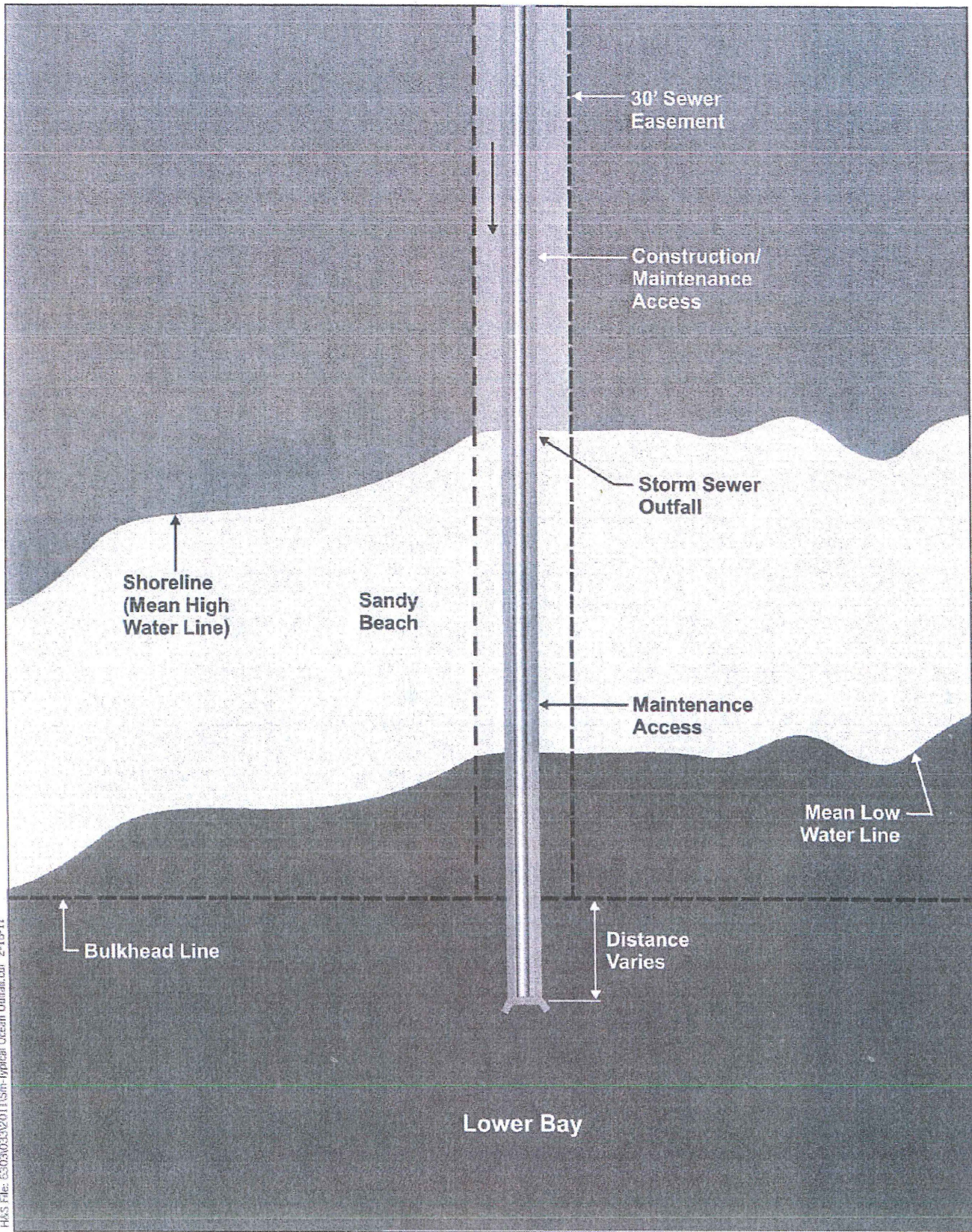


Figure 6  
Typical Stream Restoration





Allentown Lane and Richmond Valley Road  
Typical Ocean Outfall  
Figure 7



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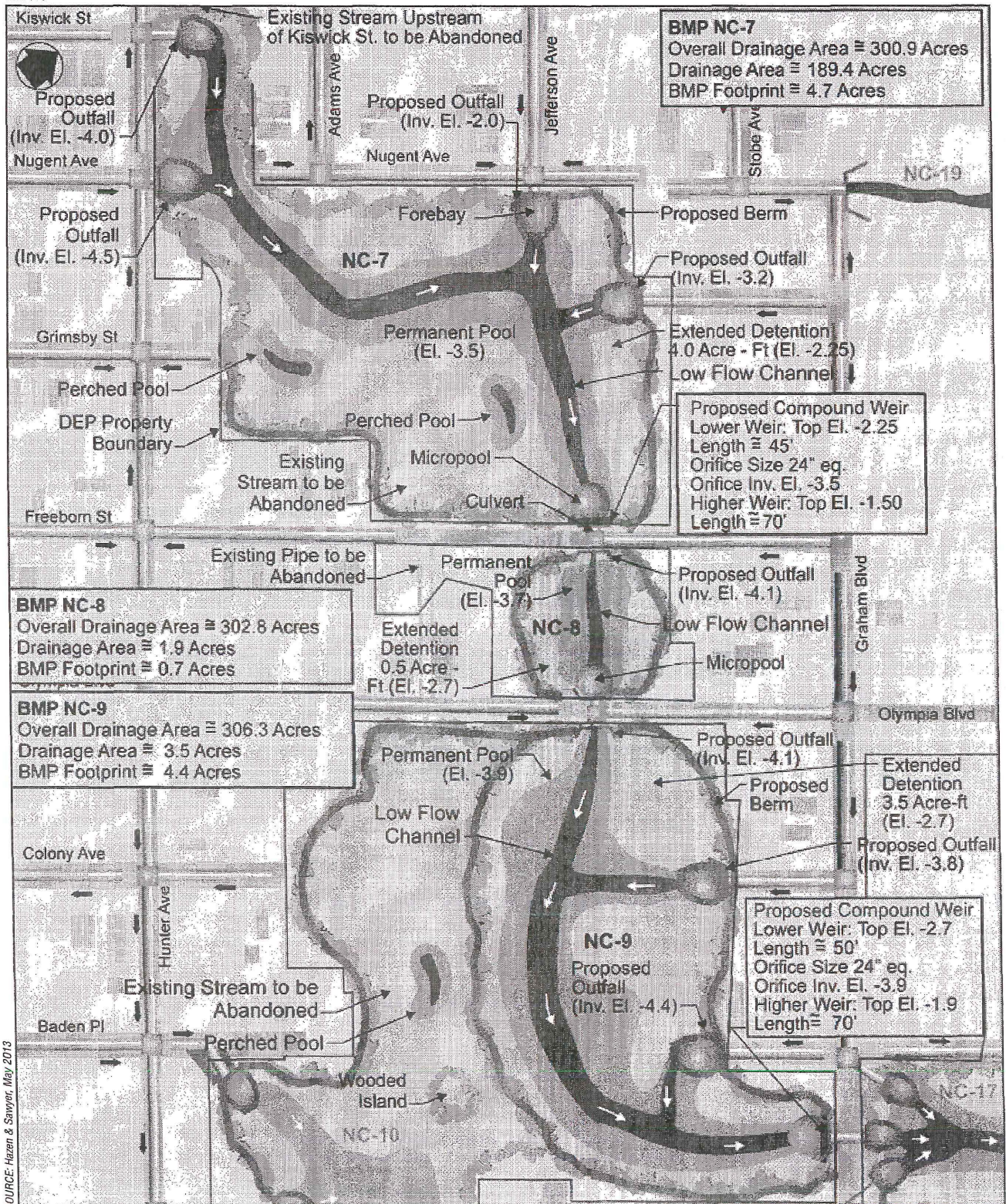


Figure 8

BMPs NC-7, NC-8 and NC-9:  
Extended Detention and Stream Relocation at  
Nugent Avenue, Freeborn Street and Graham Boulevard



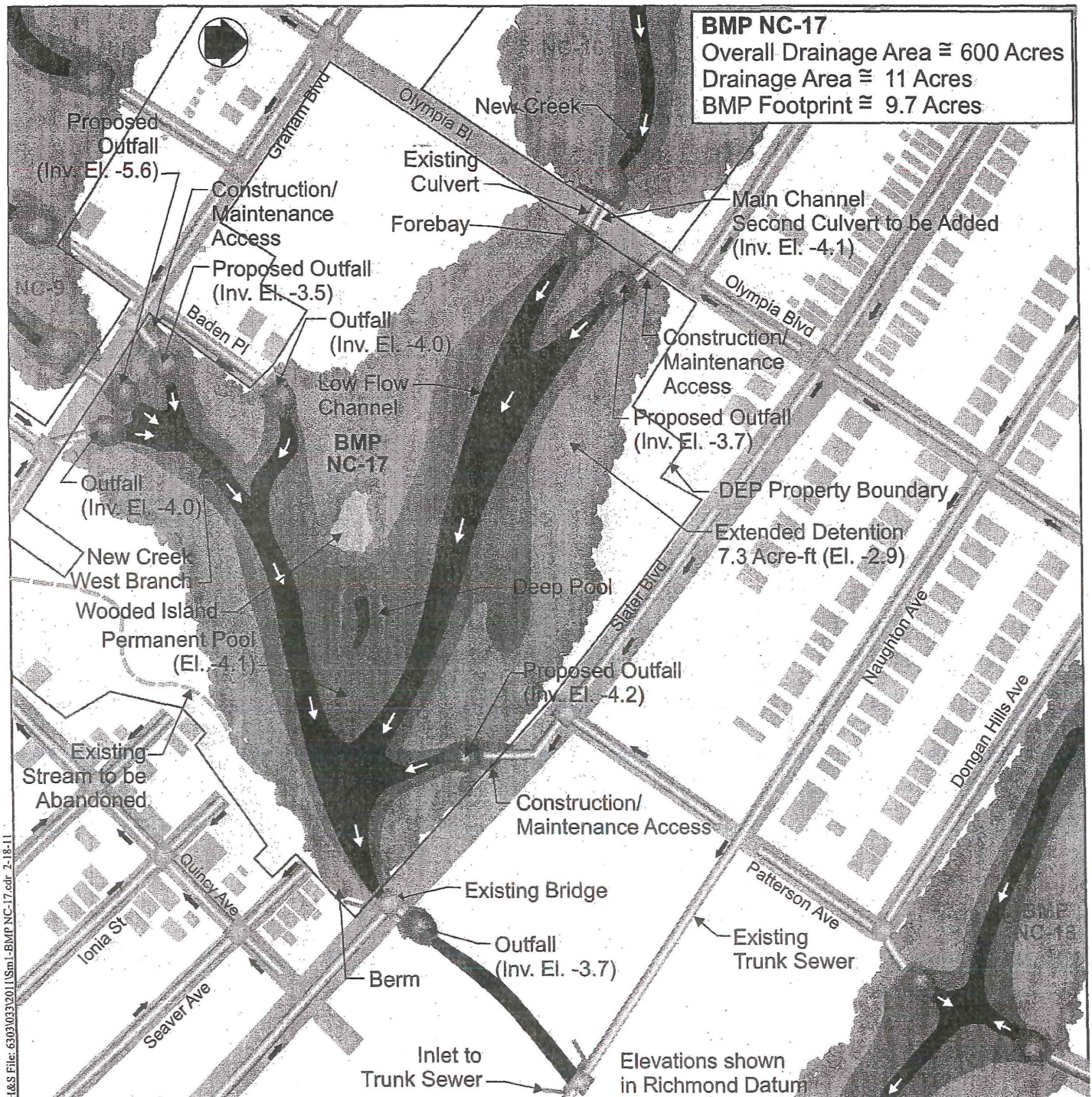


Figure 9

**BMP NC-17:  
Extended Detention Wetland  
at Slater Boulevard**



Table 1 - Overview of Bluebelt Watersheds and BMPs

BMP	Location	Description	Size (Acres)	Drainage Area (Acres)
<b>Richmond Creek</b>				
RC-7	Sloane Ave.	Outlet stilling basin and channel stabilization	0.05	6
<b>Lemon Creek</b>				
LC-1	Alverson Ave., SSGC	Outlet stilling basin	0.05	33
LC-13	Alysia Court	Retrofit of existing retention basin	1.5	32
LC-14	Bloeser's Pond	2 Outlet stilling basins, micropool, pond expansion	3.3	26
LC-20	Trenton Court	Stabilized swale	0.03	7
<b>Sweet Brook</b>				
SB-1	Annadale Wedge Pond	Retrofit of existing extended detention pond, wetland enhancement	3.2	209
<b>Butler Manor</b>				
B-1	Calcutta St.	Extended detention pond and flow splitter	2.5	41
B-2	Mount Loretto Pond	Extended detention pond	5.3	130
B-3	Mount Loretto Stream	Stream realignment/restoration	1	160
B-4	Richard Ave.	Outlet stilling basin	0.05	21
B-5	Sharrott Ave.	Outlet stilling basin	0.05	30
Outfall	Sharrot Ave	Ocean outfall	0.22	25
Outfall	Page Ave	Ocean outfall	0.22	30
<b>Mill Creek</b>				
MC-2	Winans St.	Extended detention basin and flow splitter	2	247
MC-3	Murray St./Pan St.	Two forebays and storm water wetland	1.9	470
MC-4	Richmond Valley Rd.	Swale and outlet stilling basin	0.1	62
MC-5	Amboy Rd.	Storm sewer inlet and micropool	0.03	226
MC-6	Englewood Ave.	Constructed wetland with two forebays	1.5	80
Outfall	Allentown Lane	Ocean outfall	0.22	100
Outfall	Richmond Valley Road	Ocean outfall	0.22	125
<b>Jack's Pond</b>				
JP-1	Jack's Pond	Extended detention pond and riser box	1.2	50
JP-2	Clovis Rd.	Stilling chamber in bed of road	0.05	16
JP-3	Hillside Ave.	Culvert replacement/forebay	0.1	25
JP-4	Cleveland Ave.	Culvert replacement/forebay	0.1	15
<b>Wood Duck Pond</b>				
WD-1	Amboy Rd.	Micropool and storm sewer inlet	0.1	52
WD-2	Cloverdale Ave.	Outlet stilling basin	0.05	16
WD-3	Ramblewood Ave.	Micropool, outlet structure, and wetland enhancement	0.1	26
WD-4	Holly Ave./Beth Place	Forebay, wetland enhancement, and pond dredging	0.4	12
<b>Arden Heights</b>				
AH-1	Woodrow Rd./Alexander Ave.	Extended detention pond with wetland enhancement	0.6	21



BMP	Location	Description	Size (Acres)	Drainage Area (Acres)
AH-2	Grantwood Ave.	Retrofit of existing extended detention basin	0.3	70
AH-3	Legate Ave./Halpin St.	Outlet stilling basin and streambank stabilization	0.1	6
AH-4	Carlton Blvd.	Outlet stilling basin and streambank stabilization	0.1	30
AH-5	Arden Ave.	Outlet stilling basin and streambank stabilization	0.1	52
AH-6	Arden Ave./Hampton Green	Forebay and pocket wetland	0.4	2.5
<b>South Shore Golf Course</b>				
SG-1	Morris St.	Outlet stilling basin	0.05	5
<b>Clay Pit Ponds Park</b>				
CP-1	Woodrow Rd.	Outlet stilling basin	0.02	9.7
CP-2	Turner St.	Stream restoration and storm sewer inlet	1.05	9.7
CP-3	Bloomingtondale Rd.	Outlet stilling basin	0.03	15.4
CP-4	Carlin St.	Two outlet stilling basins and streambank stabilization	0.04	40
CP-5	Ellis Rd.	Two outlet stilling basins	0.04	50
Outfall	Arthur Kill	Six (6) ocean outfalls	1.15 <sup>1</sup>	223.3
<b>New Creek</b>				
NC-1	Merrick Ave.	Velocity attenuator and slope stabilization	0.1	19.7
NC-2	Ocean Terr.	Drop pipe and velocity attenuator	0.1	18.2
NC-3	Annfield Ct.	Extended detention wetland and stream stabilization	0.2	17.5
NC-4	Whitlock Ave.	Extended detention wetland	0.3	104.6
NC-5	Todt Hill Rd	Extended detention wetland	0.9	57.4
NC-6	Boundary Ave.	Extended detention pond and wetland	3	111.5
NC-7	Grimsby St.	Extended detention, flood plain creation and stream relocation	4.7	189.4
NC-8	Freeborn St.	Extended detention, flood plain creation and stream relocation	0.7	1.9
NC-9	Graham Blvd.	Extended detention, flood plain creation and stream relocation	4.4	3.5
NC-10	Jefferson Ave.	Extended detention wetland and ocean outfall	4.5	50.7
NC-11	Last Chance Pond	Extended detention wetland	8.8	174.5
NC-12	Joyce St.	Outlet stilling basin	0.1	5.4
NC-13	Hylan Blvd.	Pocket wetland	2.9	52.8
NC-14	Meadow Pl.	Outlet stilling basin	0.2	8.6
NC-15	Laconia Ave.	Outlet stilling basin	0.1	9.2
NC-16	Olympia Blvd.	Extended detention	12	28.5
NC-17	Slater Blvd.	Extended detention wetland	9.7	11
NC-18	Patterson Ave.	Extended detention wetland	7.4	57.1
NC-19	Buel Ave.	Outlet stilling basin	0.1	13.2
Outfall	Hunter and Jefferson Ave.	Ocean outfall	0.01	52.5
Outfall	Seaview Ave	Ocean outfall enlargement	0.08	635.1

Table 1 - continued

BMP	Location	Description	Size (Acres)	Drainage Area (Acres)
<i>Oakwood Beach</i>				
OB-1	Kissam Ave.	Extended detention wetland	28.2	66.4
OB-2	Tysens Ln.	Extended detention wetland	27.9	455
OB-3	Falcon Ave.	Outlet stilling basin and pocket wetland	28.3	263.6
OB-4	Adelaide Ave.	Extended detention wetland	1.4	182.8
OB-5	N. Railroad Ave.	Retrofit of basin and flow conveyance	3	25.4
Outfall	Kissam Ave. & Fox Ln.	Ocean outfall	0.18	95.6
Outfall	Ebbitts Street	Ocean outfall enlargement	0.02	120.3
Outfall	Tysens Lane	Ocean outfall enlargement	0.09	
<i>South Beach</i>				
SBE-1A	Quintard Ave.	Extended detention wetland	18.6	586
SBE-1B	Sand Ln.	Extended detention wetland	23	384
SBE-1C	McLaughlin St.	Extended detention wetland	0.6	1.5
SBE-2	Cameron's Lake	Conveyance and water quality improvement	0.6	65
SBE-3	Whitney Woods	Conveyance with velocity attenuation	1.2	10.8
Outfall	Andrews Street	Ocean outfall	0.6	1.9
Outfall	Sand Lane	Ocean outfall enlargement	0.09	381.9
Outfall	Quintard Street	Ocean outfall enlargement	0.12	617
1. This represents the total disturbed and drained acres for all six of the tidal outlets in Clay Pit Ponds. Information on individual outlets is provided in the Clay Pit Ponds write-up (Section 1C, J)				



**Proposed Arthur Kill Storm Water Outlets**

<b>Outlet Location</b>	<b>Ownership</b>	<b>Drainage Area</b>	<b>Area of Disturbance*</b>
Chemical Lane	Easement to be mapped on private property	40.6	0.33
Johnson Avenue	Easement to be mapped on private property	42.4	0.00
Sharrotts Road	Easement to be mapped on private property	8.8	0.33
Androvette Street	Easement to be mapped on private property	6.6	0.33
Winant Place	Easement to be mapped on private property	22.3	0.33
Kreischer Street	Easement to be mapped on private property	102.6	0.33
<p>*Areas of disturbance are preliminary and conceptual designs. Detailed areas of disturbance would be determined in preliminary design and finalized as part of the tidal wetland permit process.</p> <p>Source: Lau &amp; Shabunia Consulting Engineers, P.C., draft drainage plan, February 2002</p>			

New York City Department of Environmental Protection

Staten Island Bluebelt

Regional General Permit Application submitted to U.S. Army Corps of Engineers

Table with more details on proposed ocean outfalls:

1/31/2013 Table 2 - Outfalls

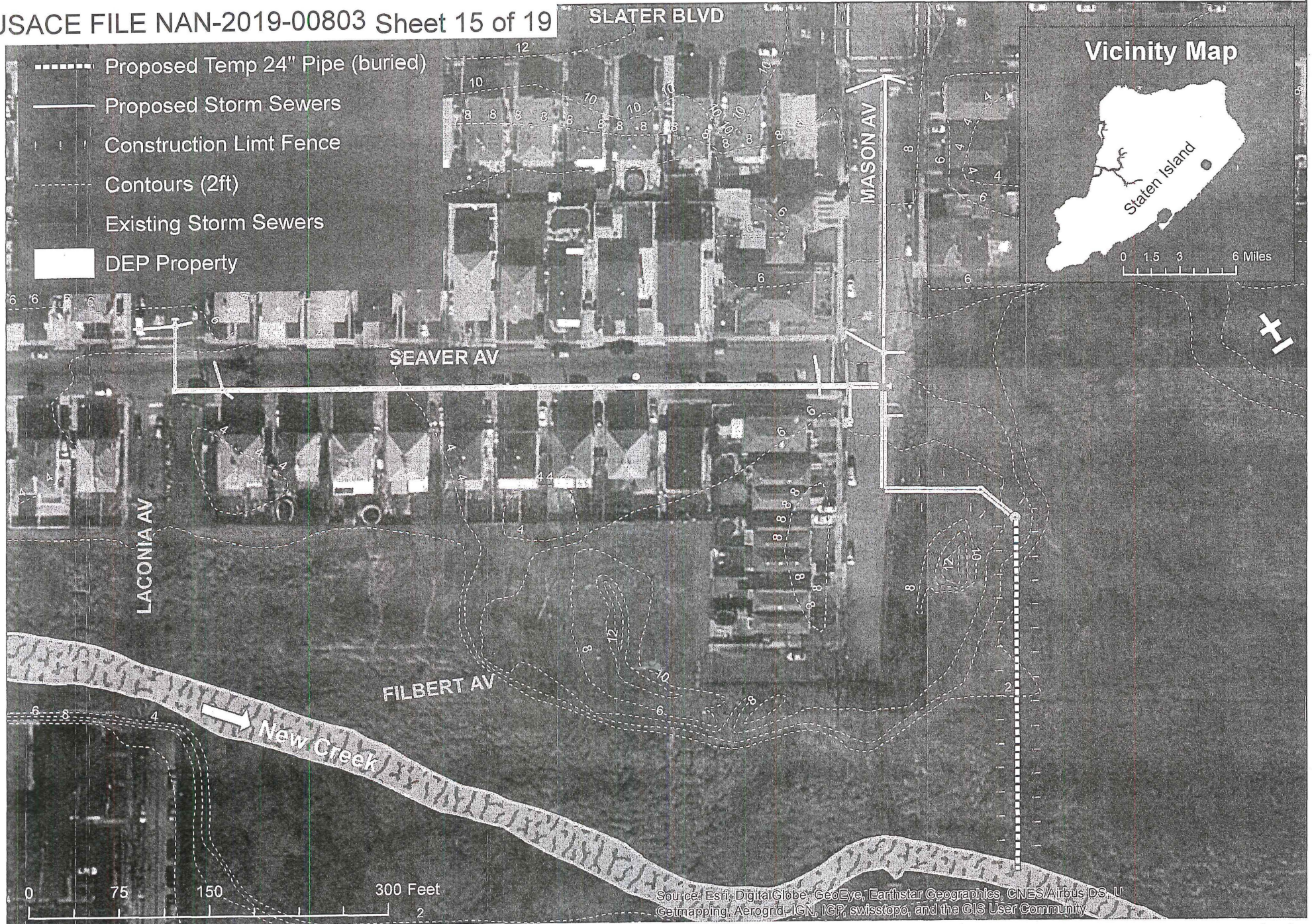
Location	Estimated Area of Permanent Impact from Outfall Structure (Acres)	Drainage Area (Acres)	Pipe Dimensions	Tide Gate	Associated BMP
<i>Butler Manor Watershed</i>					
Sharrot Ave.	.22	100	7'-0" W X 3'-0" H	Yes	N/A
Page Ave.	.22	40	83" W X 53" H	Yes	N/A
<i>Mill Creek</i>					
Allentown Lane	.22	100	48" Circular	Yes	N/A
Richmond Valley Rd.	.22	125	48" Circular	Yes	N/A
<i>Clay Pit Ponds Park- Arthur Kill</i>					
Chemical Lane	.33	40.6	5'-0" W X 3'-0" H	Yes	N/A
Johnson Ave.	.33	42.4	5'-6" W X 3'-0" H	Yes	N/A
Sharrots Rd.	.33	8.8	66" Circular	Yes	N/A
Androvette Place	.33	6.6	36" Circular	Yes	N/A
Winant Place	.33	22.3	48" Circular	Yes	N/A
Kreischer St.	.33	102.6	10'-6" W X 3'-0" H DB	Yes	N/A
<i>New Creek</i>					
Hunter and Jefferson Ave.	.01	52.5	8'-0" W X 6'-0" H	Yes	NC-10
Seaview Ave.*	.08	635.1	14'-0" W X 6'-0" H	Yes	N/A
<i>Oakwood Beach</i>					
Kissam Ave. and Fox Lane	.18	95.6	10'-0" W X 5'-6" H	Yes	OB-1
Ebbitts St.*	.02	120.3	5'-0" W X 5'-0" H	Yes	N/A
Tysens Lane*	.09	428.7	8'-0" W X 7'-0" H	Yes	N/A
<i>South Beach</i>					
Andrews St.	.06	1.9	24" Circular	Yes	SBE-1C
Sand Lane*	.10	381.9	13'-0" W X 6'-6" H DB	Yes	N/A
Quintard St.*	.12	617	15'-0" W X 6'-6" H	Yes	N/A
<b>Total</b>	<b>3.52</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

\*Enlargement of existing outfall- additional barrel



# Plan View: Proposed Temp Storm Sewer Outlet to New Creek, Staten Island, NY (NYC DEP)

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# Profile View: Taken from final construction drawings of SER002321

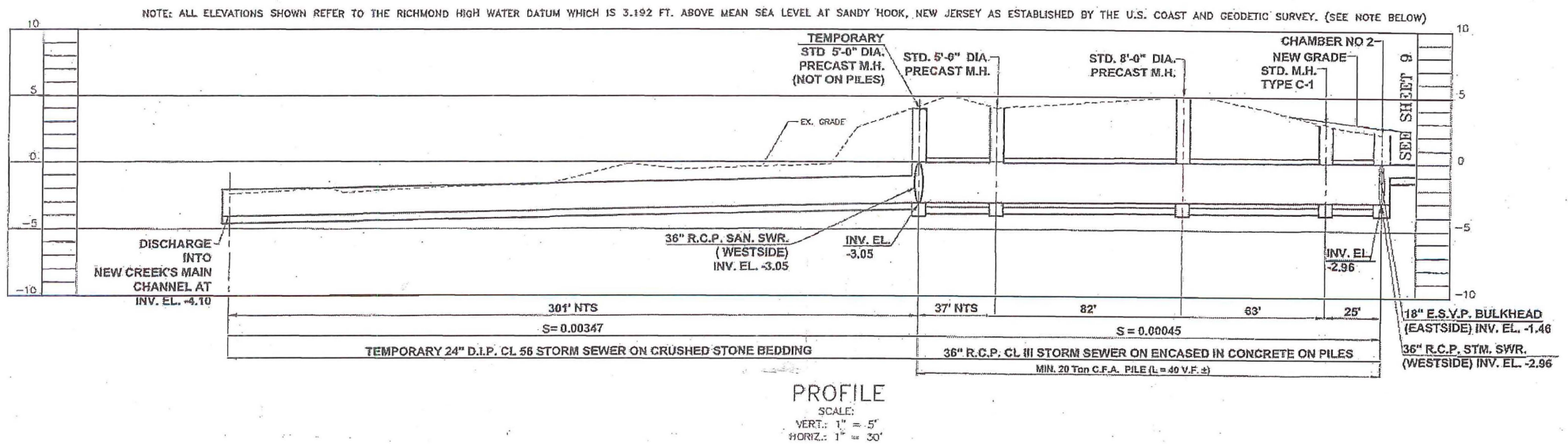




Table 1- RGP Associated Remaining BMPs to Construct

BMP	Location	Description	Size (Acres)	Drainage Area(Acres)
Lemon Creek		NYSDEC Watershed Permit: 2-6499-00035/00001		
LC-1	Alverson Ave., SSGC	Outlet stilling Basin	0.05	33
LC-13	Alysia Court	Retrofit of existing retention basin	1.5	32
LC-14	Bloeser's Pond	2 outlet stilling basin	3.3	26
LC-20	Trenton Court	Stabilized swale	0.03	7
Butler Manor				
Outfall	Sharrott Ave	Ocean outfall	0.33	25
Outfall	Page Ave	Ocean outfall	0.33	30
Mill Creek		NYSDEC Watershed Permit: 2-6405-00464/00007		
MC-2	Winans T.	Extended detention basin and flow splitter	2	247
MC-3	Murray St./Pan St.	Two forebays and stormwater wetland	1.9	470
MC-5	Amboy Rd.	Storm sewer inlet and micropool	0.03	226
MC-6	Englewood Ave.	Constructed wetland with two forebays	1.5	80
Outfall	Allenton Lane	Ocean outfall	0.22	100
Outfall	Richmond Valley Road	Ocean outfall	0.22	125
Jack's Pond		NYSDEC Watershed Permit: 2-6404-00394/00008		
JP-1	Jack's Pond	Extended detention pond and riser box	1.2	50
JP-2	Clovis Rd.	Stilling chamber in bed of road	0.05	16
JP-3	Hillside Ave.	Culvert replacement/forebay	0.1	25
JP-4	Cleveland Ave.	Culvert replacement/forebay	0.1	15
Wood Duck Pond		NYSDEC Watershed Permit: 2-6404-00940/00002		
WD-1	Amboy Rd.	Micropool and storm sewer inlet	0.1	52
WD-2	Cloverdale Ave.	Outlet stilling basin	0.05	16
WD-3	Ramblewood Ave.	Micropool, outlet structure, and pond dredging	0.1	26
WD-4	Holly Ave./Beth Place	Forebay, wetland enhancement, and pond dredging	0.4	12
Clay Pit Ponds Park		NYSDEC Watershed Permit: 2-6405-00463/00002		
CP-1	Woodrow Rd.	Outlet stilling basin	0.02	9.7
CP-2	Turner St.	Stream restoration and storm sewer inlet	1.05	9.7
CP-3	Bloomingtondale Rd.	Outlet still basin	0.03	15.4
CP-4	Carlin St.	Two outlet stilling basins and streambank stabilization	0.04	40



**Table 1- RGP Associated Remaining BMPs to Construct**


BMP	Location	Description	Size (Acres)	Drainage Area(Acres)
CP-5	Ellis Rd.	Two outlet stilling basins	0.04	50
Outfall	Arthur Kill	Six (6) ocean outfalls	1.15 <sup>1</sup>	223.3
New Creek		NYSDEC Watershed Permit: 2-6464-01113/00006		
NC-1	Merrick Ave.	Velocity attenuator and slope stabilization	0.1	19.7
NC-2	Ocean Terr.	Drop Pipe and velocity attenuator	0.1182	
NC-3	Annfield Ct.	Extended detention wetland and stream stabilization	0.2	17.5
NC-4	Whitlock Ave.	Extended detention wetland	0.3	104.6
NC-5	Todt Hill Rd	Extended detention wetland	0.9	57.4
NC-6	Boundary Ave.	Extended detention pond and wetland	3	111.5
USACOE Drainage Area C, Pond 3 <sup>1</sup> , formerly Bluebelt BMP NC-10	Jefferson Ave.	Extended detention wetland	4.5	50.7
NC-11	Last Chance Pond	Extended detention wetland	8.8	174.5
NC-12	Joyce St.	Outlet stilling basin	0.1	5.4
NC-13	Hylan Blvd	Pocket wetland	02.9	52.8
NC-14	Meadow Pl.	Outlet stilling basin	0.2	9.2
NC-15	Laconia Ave.	Outlet stilling basin	0.1	9.2
NC-16	Olympia Blvd.	Extended detention	12	28.5
USACOE Drainage Area C, Pond 1 <sup>1</sup> , formerly Bluebelt BMP NC-17	Slater Blvd.	Extended detention wetland	9.7	11
USACOE Drainage Area C, Pond 2 <sup>1</sup> , formerly Bluebelt BMP NC-18	Paterson Ave.	Extended detention wetland	7.5	70.3
Outfall	Hunter and Jefferson Ave.	Ocean outfall	0.01	52.5
Outfall	Seaview Ave	Ocean outfall enlargement	0.08	635.1
Oakwood Beach				
USACOE Drainage Area B, Pond B <sup>1</sup> , formerly Bluebelt BMP OB-2	Tysens Ln.	Extended detention Wetland	27.9	455
OB-3	Falcon Ave.	Outlet stilling basin and pocket wetland	28.3	263.6
OB-4	Adelaide Ave.	Extended detention wetland	1.4	182.2





**Table 1- RGP Associated Remaining BMPs to Construct**

BMP	Location	Description	Size (Acres)	Drainage Area(Acres)
OB-5	N. Railroad Ave.	Retrofit basin and flow conveyance	3	25.4
Outfall	Kissam Ave. & Fox Ln.	Ocean outfall	0.18	95.6
Outfall	Ebbitts Street	Ocean outfall enlargement	0.02	120.3
Outfall	Tysens Lane	Ocean outfall enlargement	0.09	
South Beach		NYSDEC Watershed Permit: 2-6404-01170/00011/00012/00013/00014/00015		
USACOE Drainage Area E, ponds 1 and 2 <sup>1</sup> , formerly Bluebelt BMPs SBE-1A and 1B	Quintard St. to Sand Ln.	Extended detention wetland	42.2	971.5
SBE-2	Cameron's Lake	Conveyance and water quality improvement	0.6	65
SBE-3	Whitney Woods	Conveyance with velocity attenuation	1.2	10.8
Outfall	Andrews Street	Ocean outfall	0.6	1.9
Outfall	Sand Lane	Ocean outfall enlargement	0.09	381.9
Outfall	Quintard Street	Ocean outfall enlargement	0.12	617
<ol style="list-style-type: none"> <li>1. Pond to be constructed by US Army Corps of Engineers as part of the South Shore Staten Island Line of Protection drainage management.</li> <li>2. This represents the total disturbed and drained acres for all six of the tidal outlet in Clay pit ponds. Information on individual outlets is provided in the Clay Pit ponds write-up (Section 1C, J).</li> </ol>				

Key:

 BMPs with construction drawings

 BMPs with design drawings

 BMPs with schematics from FEIS
**Table 2- Watershed and Associated FEIS and DEC Watershed Permit References**

Watershed	FEIS	Watershed Level Permit
Arden Heights Woods	01DEP004R	2-6404-00939/00001
Clay Pit Ponds\Port Mobil	01DEP004R	2-6405-00463/00002
Jack's Pond	01DEP004R	2-6404-00394/00008
Lemon Creek/Sandy Brook	97DEP026	2-6499-00035/00001
Mill Creek	01DEP004R	2-6405-00464/00007
New Creek	07DEP063R	2-6464-01113/00006
South Beach	07DEP063R	2-6404-01170/00011/00012/00013/00014/00015
Sweet Brook	99DEP006	2-6499-00023/00001
Wood Duck Pond	01DEP004R	2-6404-00940/00002