



City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT
PART I, GENERAL INFORMATION

Reference Numbers

1. 09DEP041Q
 CEQR REFERENCE NUMBER (TO BE ASSIGNED BY LEAD AGENCY)
N/A
 ULURP REFERENCE NO. IF APPLICABLE

N/A
 BSA REFERENCE NO. IF APPLICABLE
N/A
 OTHER REFERENCE NO. (S) IF APPLICABLE
 (e.g., Legislative Intro, CAPA, etc.)

Lead Agency &

2a. **LEAD AGENCY**
NYC Department of Environmental Protection
 NAME OF LEAD AGENCY

2b. APPLICANT INFORMATION
New York City Department of Design and Construction
 NAME OF APPLICANT

Applicant Information
 PROVIDE APPLICABLE INFORMATION

Angela Licata
 NAME OF LEAD AGENCY CONTACT PERSON
59-17 Junction Boulevard
 ADDRESS
Flushing NY 11373
 CITY STATE ZIP
(718) 595-4398 (718) 595-4479
 TELEPHONE FAX
alicata@dep.nyc.gov
 EMAIL ADDRESS

N. Venugopalan, Assistant Commissioner
 NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON
30-30 Thomson Avenue
 ADDRESS
Long Island City NY 11101
 CITY STATE ZIP
(718) 391-2283 (718) 391-2277
 TELEPHONE FAX
venugopa@ddc.nyc.gov
 EMAIL ADDRESS

Action Description

SEE CEQR MANUAL SECTIONS 2A & 2B

3a. **NAME OF PROPOSAL** Capital Project QED983—Beach 88th/94th Street Infrastructure Improvements

3b. DESCRIBE THE ACTION(S) AND APPROVAL(S) BEING SOUGHT FROM OR UNDERTAKEN BY CITY (AND IF APPLICABLE, STATE AND FEDERAL AGENCIES) AND, BRIEFLY, DESCRIBE THE DEVELOPMENT OR PROJECT THAT WOULD RESULT FROM THE PROPOSED ACTION(S) AND APPROVAL(S):
 The proposed capital project involves the construction of a new 98-inch wide by 63-inch high storm sewer outfall that would be located in the Jamaica Bay Watershed at the northern terminus of Beach 88th Street (Block 16109, Lot 70) in the Far Rockaway area of Queens. In addition to the proposed outfall, the project includes the installation of new stormwater collection sewers along Beach 91st Street, Rockaway Beach Boulevard, and Beach Channel Drive, and the relocation of separate sanitary sewers and water mains, and a wetlands restoration project for temporary impacts for the proposed action and for permanent impacts for this and five other outfall projects discharging to Jamaica Bay. The streets proposed for new storm sewers, as well as the location of the proposed outfall and project area, are shown in Figure C-1 (see Attachment C, "EAS Graphics").

3c. DESCRIBE THE PURPOSE OF AND NEED FOR THE ACTION(S) AND APPROVAL(S):
 The proposed project is needed to improve infrastructure and street conditions in the project area. As a result, the proposed action would improve stormwater drainage and relieve street flooding in the drainage area of the project area.

Required Action or Approvals

4. **CITY PLANNING COMMISSION** Yes No
 Change in City Map Zoning Certification Site Selection – Public Facility
 Zoning Map Amendment Zoning Authorization Disposition – Real Property Franchise
 Zoning Text Amendment Housing Plan & Project UDAPP Revocable Consent Concession
 Charter 197-a Plan
 Zoning Special Permit, specify type: _____
 Modification of: _____
 Renewal of: _____
 Other: _____

5. **UNIFORM LAND USE PROCEDURE (ULURP)** Yes No

6. **BOARD OF STANDARDS AND APPEALS** Yes No
 Special Permit New Renewal Expiration Date
 Variance Use Bulk
 Specify affected section(s) of Zoning Resolution

7. **DEPARTMENT OF ENVIRONMENTAL PROTECTION** Yes No
 Title V Facility Power Generation Facility Medical Waste Treatment Facility

PLEASE NOTE THAT MANY ACTIONS ARE NOT SUBJECT TO CEQR. SEE SECTION 110 OF TECHNICAL MANUAL.

8. OTHER CITY APPROVALS Yes No
 Legislation Rulemaking: specify agency: _____
 Construction of Public Facilities Funding of Construction, Specify _____ Funding of Programs, Specify _____
 Policy or plan Permits, Specify: _____
 Other; explain: **See the "Permits and Approvals" section of Attachment A, "Project Description."**

9. STATE ACTIONS/APPROVALS/FUNDING Yes No
 If "Yes," identify **NYSDEC 401 Water Quality Certification; NYSDEC Tidal Wetlands Permit; NYSDEC SPDES General Permit for activities during construction; NYSDEC Industrial SPDES Permit; NYSDEC SPDES permit for new outfall (NY0026221); Long Island Well Permit**

10. FEDERAL ACTIONS/APPROVALS/FUNDING Yes No
 If "Yes," identify **Section 10, Construction in navigable waters; Section 401, dredging and filling of wetlands**

Action Type

11a. Unlisted; or Type 1; specify category (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended): _____

11b. Localized action, site specific Localized action, change in regulatory control for small area Generic action

Analysis Year

12. Identify the analysis year (or build year) for the proposed action: **February 2011**

Would the proposal be implemented in a single phase? Yes No NA.

Anticipated period of construction: **24 months**

Anticipated completion date: **January 2013**

Would the proposal be implemented in multiple phases? Yes No NA.

Number of phases: _____

Describe phases and construction schedule: _____

Directly

Affected Area
 INDICATE LOCATION OF PROJECT SITE FOR ACTIONS INVOLVING A SINGLE SITE ONLY (PROVIDE ATTACHMENTS AS NECESSARY FOR MULTIPLE SITES)

13a. LOCATION OF PROJECT SITE
See below.

STREET ADDRESS

The project area is bounded by Jamaica Bay and Beach Channel Drive to the north, Holland Avenue to the south, Cross Bay Parkway to the east, and Beach 88th Street to the west.

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS

R4, R6, C3, and C8-1 **30c**

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY ZONING SECTIONAL MAP NO.

N.A. **Queens** **14**

TAX BLOCK AND LOT NUMBERS BOROUGH COMMUNITY DISTRICT NO.

13b. PHYSICAL DIMENSIONS AND SCALE OF PROJECT

TOTAL CONTIGUOUS SQUARE FEET OWNED OR CONTROLLED BY PROJECT SPONSOR: **140,000¹** SQ. FT.

PROJECT SQUARE FEET TO BE DEVELOPED: **N.A.** SQ. FT.

GROSS FLOOR AREA OF PROJECT: **N.A.** SQ. FT.

IF THE ACTION IS AN EXPANSION, INDICATE PERCENT OF EXPANSION PROPOSED
 IN THE NUMBER OF UNITS, SQ. FT. OR OTHER APPROPRIATE MEASURE **N.A.** % OF _____
 DIMENSIONS (IN FEET) OF LARGEST PROPOSED STRUCTURE: **N.A.** HEIGHT **N.A.** WIDTH **N.A.** LENGTH _____
 LINEAR FEET OF FRONTAGE ALONG A PUBLIC THOROUGHFARE: **2,800**

13c. IF THE ACTION WOULD APPLY TO THE ENTIRE CITY OR TO AREAS THAT ARE SO EXTENSIVE THAT A SITE-SPECIFIC DESCRIPTION IS NOT APPROPRIATE OR PRACTICABLE, DESCRIBE THE AREA LIKELY TO BE AFFECTED BY THE ACTION:
N.A.

13d. DOES THE PROPOSED ACTION INVOLVE CHANGES IN REGULATORY CONTROLS THAT WOULD AFFECT ONE OR MORE SITES NOT ASSOCIATED WITH A SPECIFIC DEVELOPMENT? Yes No
 IF 'YES,' IDENTIFY THE LOCATION OF THE SITES PROVIDING THE INFORMATION REQUESTED IN 13a. & 13b. ABOVE.

¹ Approximately 2,800 linear feet of City streets (at 50 feet wide) and 200 linear feet of NYCDEP sewer easement. The project area that is affected is at the surface and below grade with the City streets and easements. The width of the easement for the proposed outfall is 45 feet.

PART II, SITE AND ACTION DESCRIPTION

Site Description

EXCEPT WHERE OTHERWISE INDICATED, ANSWER THE FOLLOWING QUESTIONS WITH REGARD TO THE DIRECTLY AFFECTED AREA. THE DIRECTLY AFFECTED AREA CONSISTS OF THE PROJECT SITE AND THE AREA SUBJECT TO ANY CHANGE IN REGULATORY CONTROLS.

1. **GRAPHICS** Please attach: (1) a Sanborn or other land use map; (2) a zoning map; (3) a tax map. On each map, clearly show the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. The maps should not exceed 8 1/2 x 14 inches in size.

See Attachment C, "EAS Graphics," Figures C-1 through C-6.

2. **PHYSICAL SETTING** (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 140,000 (streets) Water surface area (sq. ft.): 400²
 Roads, building and other paved surfaces (sq. ft.): 140,000 (streets) Other, describe (sq. ft.): 9,000 (vacant land)³

3. **PRESENT LAND USE**

Residential N/A

Total no. of dwelling units _____ No. of low-to-moderate income units _____

No. of stories _____ Gross floor area (sq. ft.) _____

Describe type of residential structures:

Commercial N/A

Retail: No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____

Office: No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____

Other: No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____

Specify type(s): _____ No. of stories and height of each building: _____

Manufacturing/Industrial N/A

No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____

No. of stories and height of each building: _____

Types of use(s): _____ Open storage area (sq. ft.) _____

If any unenclosed activities, specify:

Community facility N/A

Type of community facility:

No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____

No. of stories and height of each building: _____

Vacant Land N/A

Is there any vacant land in the directly affected area?

If yes, describe briefly:

Publicly accessible open space

Is there any existing publicly accessible open space in the directly affected area? Yes No

If yes, describe briefly:

The land has recently been transferred to NYCDPR for the creation of park. However, the site of the proposed outfall and the wetland restoration is currently unimproved with no park facilities and is temporarily accessible to the public until construction begins.

Does the directly affected area include any mapped City, State or Federal parkland? Yes No

If yes, describe briefly:

The proposed outfall will be constructed within an existing sewer easement that dissects recently acquired NYCDPR property. In-kind restoration and the Beach 88th/94th Restoration Plan will restore the site in preparation for NYCDPR to restore public access after the outfall construction is complete.

Does the directly affected area include any mapped or otherwise known wetland? Yes No

If yes, describe briefly:

The site of the proposed outfall includes Jamaica Bay tidal wetlands. (See also Attachment B, "Impact Analyses," under "Natural Resources.")

Other Land Use City streets

No. of stories N/A Gross floor area (sq. ft.): N/A

Type of use(s): City streets (±140,000 sq. ft.)

² Approximate area of proposed outfall within Jamaica Bay and below mean high water line.

³ Land within area of proposed NYCDEP sewer easement.

4. EXISTING PARKING **N/A**
- Garages
 No. of public spaces: _____ No. of accessory spaces: _____
 Operating hours: _____ Attended or non-attended? _____
 Lots
 No. of public spaces: _____ No. of accessory spaces: _____
 Operating hours: _____ Attended or non-attended? _____
 Other (including street parking) – please specify and provide same data as for lots and garages, as appropriate.

It is estimated that there are approximately 100 on-street parking spaces in the project area.

5. EXISTING STORAGE TANKS
- Gas or service station? Yes No Oil storage facility? Yes No Other? Yes No
- If yes, specify: _____
 Number and size of tanks: _____ Last NYFD inspection date: _____
 Location and depth of tanks: _____

6. CURRENT USERS **N/A**
- No. of residents: _____ No. and type of businesses: _____
 No. and type of workers by business: _____ No. and type of non-residents who are not workers: _____

7. HISTORIC RESOURCES (ARCHITECTURAL AND ARCHAEOLOGICAL RESOURCES)
- Answer the following two questions with regard to the directly affected areas, lots abutting that area, lots along the same blockfront or directly across the street from the same blockfront, and, where the directly affected area includes a corner lot, lots which front on the same street intersection.
- Do any of the areas listed above contain any improvement, interior landscape feature, aggregate of landscape of landscape features, or archaeological resource that:

- (a) has been designated (or is calendared for consideration as) a New York City Landmark, Interior Landmark or Scenic Landmark; **No**
- (b) is within a designated New York City Historic District; **No**
- (c) has been listed on, or determined eligible for, the New York State or National Register of Historic Places; **No**
- (d) is within a New York State or National Register Historic District; or **No**
- (e) has been recommended by the New York State Board for listing on the New York State or National Register of Historic Places? **No**
 Identify any resource:

Do any of the areas listed in the introductory paragraph above contain any historic or archaeological resource, other than those listed in response to the previous question? Identify any resource.

No.

8. WATERFRONT REVITALIZATION PROGRAM
- Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries? Yes No
 (A map of the boundaries can be obtained at the Department of City Planning bookstore.)
 If yes, append a map showing the directly affected area as it relates to such boundaries. A map requested in other parts of this form may be used.

See Figure C-12.

9. CONSTRUCTION
- Will the action result in demolition of or significant physical alteration to any improvement? Yes No
 If yes, describe briefly:

The proposed action requires excavation in existing streets and undeveloped parkland, in order to install the replacement water mains and sanitary sewers, as well as the new stormwater collection sewers and the proposed outfall to Jamaica Bay. All utility work would therefore be at the road surface or below-grade. The wetland restoration work would require some limited removal of structure (e.g., deteriorated bulkhead) and natural area improvements that will involve grading and planting of vegetation.

Will the action involve either above-ground construction resulting in any ground disturbance or in-ground construction? Yes No
 If yes, describe briefly:

The proposed action involves in-ground construction, principally in areas that have been previously developed, including City streets and a storm sewer outfall across previously disturbed but now City-owned land. All areas affected by construction, including streets and tidal wetland, would be restored as part of the proposed action once the proposed utilities have been installed.

SEE CEQR
 TECHNICAL MANUAL
 CHAPTER III F,
 HISTORIC RESOURCES

SEE CEQR
 TECHNICAL MANUAL
 CHAPTER III K,
 WATERFRONT
 REVITALIZATION
 PROGRAM

**Project
 Description**

THIS SUBPART SHOULD
 GENERALLY BE
 COMPLETED ONLY IF
 YOUR ACTION
 INCLUDES A SPECIFIC
 OR KNOWN
 DEVELOPMENT AT
 PARTICULAR
 LOCATIONS

10. PROPOSED LAND USE

Residential **N/A**
 Total no. of dwelling units _____ No. of low-to-moderate income units _____ Gross floor area (sq. ft.) _____
 No. of stories _____
 Describe type of residential structures: _____

Commercial **N/A**
 Retail: No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____
 Office: No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____
 Other: No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____
 No. of stories and height of each building: _____

Manufacturing/Industrial **N/A**
 No. of bldgs. _____ Gross floor area of each building (sq. ft.) _____
 No. of stories and height of each building: _____
 Type of use(s): _____ Open storage area (sq. ft.): _____
 If any unenclosed activities, specify: _____

Community facility **N/A**
 Type of community facility: _____
 No. of bldgs. _____ Gross floor area of each building (sq. ft.): _____
 No. of stories and height of each building: _____

Vacant land **N/A**
 Is there any vacant land in the directly altered area? Yes No
 If yes, describe briefly: _____

Publicly accessible open space
 Is there any publicly accessible open space to be removed or altered? Yes No

The proposed outfall would be constructed within a NYCDEP easement access City land under the jurisdiction of NYCDPR adjacent to Jamaica Bay at Beach 88th Street. While this land was recently transferred to NYCDPR, there is temporary public access at this time. After construction is complete, NYCDPR will restore public park access to the site.

Is there any existing publicly accessible open space to be added? Yes No
 If yes, describe briefly: _____

Other Land Use **N/A**
 No. of stories _____ Gross floor area (sq. ft.): _____
 Type of use(s): _____

11. PROPOSED PARKING

Garages **N/A**
 No. of public spaces: _____ No. of accessory spaces: _____
 Operating hours: _____ Attended or non-attended? _____

Lots **N/A**
 No. of public spaces: _____ No. of accessory spaces: _____
 Operating hours: _____ Attended or non-attended? _____

Other (including street parking) – please specify and provide same data as for lots and garages, as appropriate.
 No. and location of proposed curb cuts: _____

Street parking is currently allowed in the project area. While there would be temporary construction period impacts to street parking, no changes to street parking regulations are proposed with this project.

12. PROPOSED STORAGE TANKS **N/A**

Gas or storage stations? Yes No Oil storage facility? Yes No
 Other? Yes No

If yes, specify: _____
 Number and size of tanks: _____ Location and depth of tanks: _____

13. PROPOSED USERS **N/A**

No. of residents: _____ No. and type of businesses? _____

No. and type of workers by businesses: _____

No. and type of non-residents who are not workers: _____

14. **HISTORIC RESOURCES (ARCHITECTURAL AND ARCHAEOLOGICAL RESOURCES)**
Will the action affect any architectural or archaeological resource identified in response to either of the two questions at number 7 in the Site Description section of the form? Yes No
If yes, describe briefly:
See Attachment B, "Impact Analyses."

SEE CEQR
TECHNICAL MANUAL
CHAPTER III B.,
SOCIOECONOMIC
CONDITIONS

15. **DIRECT DISPLACEMENT**
Will the action directly displace specific businesses or affordable and/or low income residential units? Yes No
If yes, describe briefly:

SEE CEQR
TECHNICAL MANUAL
CHAPTER III C.,
COMMUNITY
FACILITIES & SERVICES

16. **COMMUNITY FACILITIES**
Will the action directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals, and other health care facilities, day care centers, police stations, or fire stations? Yes No
If yes, describe briefly:

**Zoning
Information**

17. What is the zoning classification(s) of the directly affected area?
R4, R6, C3, and C8-1
18. What is the maximum amount of floor area that can be developed in the directly affected area under the present zoning? Describe in terms of bulk for each use.

19. What is the proposed zoning of the directly affected area?

20. What is the maximum amount of floor area that could be developed in the directly affected area under the proposed zoning? Describe in terms of bulk for each use.

21. What are the predominant land uses and zoning classifications within a ¼-mile radius of the proposed action?
The predominant land uses within ½ mile of the project area include low-density, detached, attached, and semi-detached residential uses, with some commercial uses along Rockaway Beach Boulevard and Beach Channel Drive. There are also several community facility and institutional uses which include schools, places of worship, and municipal buildings. Industrial uses are limited to a warehouse/storage commercial use on Beach 88th Street between Rockaway Freeway and Rockaway Beach Boulevard.

The predominant zoning in the ¼ mile radius includes the R4, R6, C3, and C8-1 zoning districts. C1-2 overlay is located in and around Holland Avenue, and C2-2 overlay is present in and around Rockaway Beach Boulevard east of Cross Bay Parkway and north of Beach Channel Drive between Beach 88th and Beach 92nd Streets.

A more detailed description of land use patterns and zoning in the study area is provided in Attachment B, "Impact Analyses," under "Land Use, Zoning, and Public Policy."

**Additional
Information**

22. Attach any additional information as may be needed to describe the action. If your action involves changes in regulatory controls that affect one or more sites not associated with a specific development, it is generally appropriate to include here one or more reasonable development scenarios for such sites and, to the extent possible, to provide information about such scenario(s) similar to that requested in the Project Description questions 9 through 16.

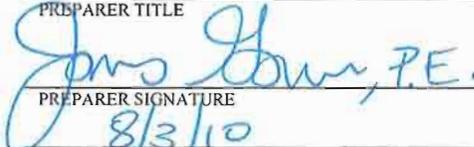
Analyses

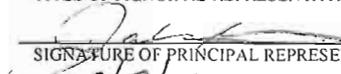
23. Attach analyses for each of the impact categories listed below (or indicate where an impact category is not applicable):

- a. LAND USE, ZONING, AND PUBLIC POLICY See Attachment B for Impact Analysis.
- b. SOCIOECONOMIC CONDITIONS See Attachment B for Impact Analysis.
- c. COMMUNITY FACILITIES AND SERVICES See Attachment B for Impact Analysis.
- d. OPEN SPACE See Attachment B for Impact Analysis.
- e. SHADOWS See Attachment B for Impact Analysis.
- f. HISTORIC RESOURCES See Attachment B for Impact Analysis.
- g. URBAN DESIGN/VISUAL RESOURCES See Attachment B for Impact Analysis.
- h. NEIGHBORHOOD CHARACTER See Attachment B for Impact Analysis.
- i. NATURAL RESOURCES See Attachment B for Impact Analysis.
- j. HAZARDOUS MATERIALS See Attachment B for Impact Analysis.
- k. WATERFRONT REVITALIZATION PROGRAM See Attachment B for Impact Analysis.
- l. INFRASTRUCTURE See Attachment B for Impact Analysis.
- m. SOLID WASTE AND SANITATION SERVICES See Attachment B for Impact Analysis.
- n. ENERGY See Attachment B for Impact Analysis.
- o. TRAFFIC AND PARKING See Attachment B for Impact Analysis.
- p. TRANSIT AND PEDESTRIANS See Attachment B for Impact Analysis.
- q. AIR QUALITY See Attachment B for Impact Analysis.
- r. NOISE See Attachment B for Impact Analysis.
- s. CONSTRUCTION IMPACTS See Attachment B for Impact Analysis.
- t. PUBLIC HEALTH See Attachment B for Impact Analysis.

The CEQR Technical Manual sets forth methodologies developed by the City to be used in analyses prepared for the above-listed categories. Other methodologies developed or approved by the lead agency may also be utilized. If a different methodology is contemplated, it may be advisable to consult with the Mayor's Office of Environmental Coordination. You should also attach any other necessary analyses or information relevant to the determination whether the action may have a significant impact on the environment, including, where appropriate, information on combined or cumulative impacts, as might occur, for example, where actions are independent or occur within a discrete geographical area or time frame.

**Applicant
Certification**

24. **James Garin, NYCDEP**
PREPARER NAME
**Director, Capital Projects, Bureau of Water and
Sewer Operations**
PREPARER TITLE

PREPARER SIGNATURE
8/3/10
DATE

NYCDEP
PRINCIPAL
Esther Siskind
NAME OF PRINCIPAL REPRESENTATIVE
**Assistant Commissioner, Bureau of
Environmental Planning and Analysis**
TITLE OF PRINCIPAL REPRESENTATIVE

SIGNATURE OF PRINCIPAL REPRESENTATIVE
8/3/10
DATE

NOTE: Any person who knowingly makes a false statement or who knowingly falsifies any statement on this form or allows any such statement to be falsified shall be guilty of an offense punishable by fine or imprisonment or both, pursuant to Section 10-154 of the New York City Administrative Code, and may be liable under applicable laws.

A. DESCRIPTION OF PROPOSED ACTION**OVERVIEW**

The New York City Department of Design and Construction (DDC), on behalf of the New York City Department of Environmental Protection (NYCDEP), is proposing Capital Project No. QED983, the “Beach 88th/94th Street Infrastructure Improvements.” The project area is within Queens Community Board 14 within the Hammels (Arverne) section of Far Rockaway, Queens, a largely residential community with some commercial uses fronting Rockaway Freeway and Beach Channel Drive (see Figures C-1 through C-3).

The proposed action involves the construction of a new stormwater water outfall and the installation of new stormwater collection sewers, relocation of water mains, upgrade of sanitary sewer lines along with the reconstruction of affected streets, and restoration of wetland areas that will enhance public access and recreation along the Jamaica Bay waterfront. Specifically, the proposed action includes the following:

- Construction of a new storm sewer outfall into Jamaica Bay from the northern terminus of Beach 88th Street (see Figure C-4). The proposed sewer outfall would be 98 inches wide and 63 inches high. It is reinforced concrete pipe encased in concrete and supported by 20-ton timber piles. Beginning from the bed of Beach Channel Drive, the proposed stormwater outfall would extend north for a distance of some 100 linear feet to the existing bulkhead line. This segment of the project would be constructed within an existing sewer easement. From the bulkhead line the outfall would continue out into Jamaica Bay for approximately 150 feet. This second segment of the outfall would be constructed within existing tidal wetlands and water area of Jamaica Bay.
- Installation of new stormwater collection sewers over an approximately 60-acre project area (the outfall “drainage area”) with the final grading and paving of streets. The storm sewers would be located along portions of Cross Bay Parkway, Rockaway Beach Boulevard, Beach Channel Drive, Beach 88th Street, Beach 89th Street, Beach 90th Street, Beach 91st Street, and Holland Avenue.
- Relocation of existing water mains and the upgrade of the existing 8-inch sanitary sewers to 10-inch sanitary sewers in some locations and upgrading 10-inch sanitary sewers to 15-inch sanitary sewers in other locations. NYCDEP sanitary sewer design criteria stipulate a minimum size of 10-inch sanitary sewers, thereby necessitating the replacement and upgrade of the existing 8-inch sewers in the project area. The water and sewers lines would, along certain segments, also need to be relocated in order to install the proposed storm water collection sewer.
- The streets affected by water and sewer installations would be reconstructed. In addition to the street areas affected by sewer installation, certain segments of curbs and sidewalks would be affected during the installation of the 8-inch water main on Beach 91st Street from

Rockaway Beach Boulevard to within approximately 400 feet north of Rockaway Freeway. Curbs and sidewalks would also be affected during the replacement of the existing 24-inch water main on Rockaway Beach Boulevard between Beach 90th Street to Cross Bay Parkway. All affected curbs and sidewalks would also be reconstructed.

- Restoration of the easement area and the larger site for permanent wetland impacts associated with this project and five other outfall projects within the Jamaica Bay Watershed.

PROPOSED WETLAND RESTORATION PLAN

PROPOSED ON-SITE RESTORATION PLAN

Design of the proposed Beach 88th/94th Street outfall has been developed with the objective to limit disturbance to tidal wetlands, to the extent feasible, while providing the necessary restoration for areas temporarily disturbed during construction. All areas disturbed by construction would be restored with in-kind restoration of habitat(s) and restoration of pre-construction grades. This includes restoration of transition areas between tidal wetland and upland maritime grassland plantings. In addition, the proposed project includes a pedestrian bridge that would facilitate public access across the sewer easement area near the shoreline.

Permanent impacts from the construction of the proposed project would be restored as part of a proposed restoration plan encompassing a 1.2-acre area surrounding the construction easement at the Beach 88th/94th Street site. This plan is described in fuller detail below, and would be implemented shortly after the completion of the outfall portion of the sewer work of the Beach 88th/94th Street Project.

PROPOSED BEACH 88TH/94TH RESTORATION PLAN

Block 16109, Lot 70, where the sewer easement is located, along with six other lots, have recently been transferred through the Trust for Public Land to the City to be used as a park.¹ NYCDDC and NYCDEP are proposing a restoration plan for Lots 70 and 185 of Block 16109 (see Figure C-4) that would include: debris removal and minor regrading along the shoreline, the construction of a pedestrian bridge to allow an access way over the new outfall structure near the shoreline, hydro-seeding of maritime grasses and some upland planting to secure the site, and wetland restoration on Lot 185 by removing a crumbling concrete retaining wall. NYCDDC and NYCDEP do not anticipate major regrading of Lot 185 as the removal of the concrete retaining wall should re-establish tidal flow and permit the establishment of wetland vegetation. Prior to the City acquiring the land on Lot 70, the previous property owner was required by an existing Consent Order to remove illegal fill placed within the waters of Jamaica Bay on the lot to an elevation of 7 feet above sea level. This regrading would provide a less steep slope for enhanced opportunities for restoration and public access.

It is anticipated that this restoration plan would provide compensatory restoration for the permanent tidal wetland impacts for NYCDDC/NYCDEP outfall projects (see Table A-1). Each environmental review for the respective projects would include cumulative impacts for the Beach 88th/94th Street Restoration Plan.

¹ A total of 5 parcels were acquired by the Port Authority for the TPL and have been transferred to the City. These include Block 16109 Lots 70 and 185 and Block 16110 Lots 195, 150, 30, 201, and 206. NYCDDC and NYCDEP are proposing restoration on only Lots 70 and 185 of Block 16109 (see Figure C-2).

Table A-1
Wetland Area Impacts from the Proposed Jamaica Bay Outfall Projects

Wetland Type	Impact Type	SEQ-200533 Beach 42nd Street Outfall (FY 2009)	QED-983 Beach 88th Street Outfall (FY 2010)	SE-795 Chandler Street Outfall (FY 2011)	SEQ-200508 Bay 32nd Street Outfall (FY 2011)	Other Proposed Outfall Projects (FY 2012 and 2013)
Littoral Zone	Permanent	0	0	0	0	260
	Temporary	0	0	0	0	320
Intertidal Vegetated	Permanent	105	0	1,770	145	0
	Temporary	400	0	4,785	1,060	0
Intertidal Unvegetated	Permanent	115	2,085	0	265	0
	Temporary	215	1,885	0	2,150	0
High Marsh	Permanent	140	0	175	95	0
	Temporary	475	0	4,365	1,040	0
Open Water	Permanent	0	0	0	0	0
	Temporary	0	0	0	0	0
Adjacent Area	Permanent/ Temporary	22,770	6,785	1,920	30,980	0

Source: Hazen and Sawyer, May 2010.

- Beach 42nd Street outfall (Capital Project SEQ200533);
- Chandler Street outfall (Capital Project SE-795);
- Beach 88th/94th Street outfall (Capital Project QED-983);
- Bay 32nd Street outfall (Capital Project SEQ-200508);
- 95th Street outfall (Capital Project SEQ-200490); and
- Alameda Avenue outfall (Capital Project SEQ-002641).

The restoration plan at the Beach 88th/94th Street site would be included in the capital budget for the Chandler Street Outfall Project (Capital Project SE-795) that is scheduled for Fiscal Year 2011. The restoration would be constructed after the new sewer outfall at Beach 88th Street is complete. NYCDDC and NYCDEP believe that the Beach 88th/94th Street Restoration Plan would serve multiple objectives, including wetland and upland restoration opportunities and provide additional public access to Jamaica Bay. These objectives are consistent with the NYCDEP Jamaica Bay Watershed Protection Plan and many other Jamaica Bay environmental objectives. The proposed restoration plan has been reviewed by the New York State Department of Environmental Conservation (NYSDEC).

B. PURPOSE AND NEED FOR THE PROPOSED ACTION

The outfall segment of the proposed action would provide the needed drainage outlet for the collected stormwater. It is necessary to construct the outfall in order to convey the stormwater collected from the local streets out to Jamaica Bay and thereby relieve the street flooding. The site of the proposed outfall has several advantages. First, it is currently vacant, but was previously disturbed by development which would minimize the impact of the proposed project with respect to natural resources. Secondly, it is at a low point in the drainage area which would provide positive drainage for the sewer system. The site is also directly accessible from Beach Channel Drive for construction and maintenance access for the proposed outfall.

With respect to the proposed wetland restoration project, there are also a number of purpose and need objectives for this site, which are as follows:

- The Trust for Public Land has recently transferred the site to the New York City Department of Parks and Recreation (NYCDPR), and the property is now under their jurisdiction and will allow public access temporarily before construction begins and permanently after the outfall construction and restoration plan are complete;
- The site was identified for open space preservation in the New York State Open Space Preservation Plan (2006);
- Restoring and creating waterfront access at the site is consistent with NYCDEP's Jamaica Bay Watershed Protection Plan.

C. CONSTRUCTION SCHEDULE

Construction of the proposed action is expected to begin in February 2011 and is expected to be completed in January 2013. Thus, the duration of construction is expected to be approximately 24 months. This includes about 18 months of sewer and street work (with a total of about 2,800 linear feet of sewer, water main and street improvements) and about 6 months for construction of the proposed outfall. Construction of the proposed restoration would take approximately 60-90 days and may be completed in two phases. This work would be initiated once work is completed on the outfall project at the site. A more detailed description of the proposed action's construction program is provided in Attachment B, "Impact Analyses."

D. ENVIRONMENTAL REVIEW, PERMITS AND APPROVALS

ENVIRONMENTAL REVIEW

This Environmental Assessment Statement (EAS) has been prepared in accordance with the requirements of both the City Environmental Quality Review Act (CEQR) and the State Environmental Quality Review Act (SEQRA). It has been prepared following the methodologies of the 2001 *City Environmental Quality Review (CEQR) Technical Manual*, which were used to assess the potential for environmental impacts resulting from the proposed action.

PERMITS AND APPROVALS

This EAS has been prepared in support of the following applications and approvals that must be issued prior to construction.

LOCAL (NEW YORK CITY)

- New York City Department of Transportation (NYCDOT) street and sidewalk construction permit for the work in local streets.
- Approval from the New York City Department of Parks and Recreation (NYCDPR) to install the proposed new storm outfall across City parkland within an existing sewer easement.

STATE (NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION)

- Tidal Wetlands Permit for activities in tidal wetlands and tidal wetlands adjacent areas (Article 25).

- Water Quality Certification for the activities in state waters (protection of waters, Article 15, Section 401).
- Industrial State Pollutant Discharge Elimination System (SPDES) Discharge Permit for a temporary dewatering that is expected for construction for the northernmost segment of the proposed new outfall and for discharges to Jamaica Bay (Article 1, Part 608) in accordance with the current Industrial SPDES Discharge Permit NY-0267651.
- SPDES General Permit for Stormwater Discharges from Construction Activity and the creation of a new outfall that would be added to NYCDEP's MS4 SPDES Permit (NY0026221).
- Long Island Well Permit (based on groundwater pumping rates for dewatering activities during construction).

FEDERAL (ARMY CORPS OF ENGINEERS [USACE])

- Section 404 of the Clean Water Act (Waters of the United States) permit for the proposed placement of the project outfall within tidal wetlands (dredging and filling activities) and the proposed tidal wetland restoration.
- Section 10 permit for structures in navigable waters.

With respect to the USACE permits, the construction of the new storm sewer and outfall would be covered under Nationwide Permit 7—Outfall Structures and Associated Intake Structures, which authorizes activities related to the construction or modification of outfall structures and associated intake structures where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted, or are otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System Program. Authorizations under Nationwide Permit 7 require Pre-Construction Notification under General Condition 27. This submission is intended to supply the information needed for the General Condition 27 notification requirement. No permit-specific regional conditions for the nationwide permit apply to this project. *

Table of Contents

Attachment B: Impact Analyses	B-1
A. Introduction.....	B-1
B.1 Land Use, Zoning, and Public Policy	B-1
Introduction	B-1
Land Use.....	B-1
Zoning.....	B-2
Public Policy.....	B-3
B.2 Socioeconomic Conditions	B-4
B.3 Community Facilities and Services	B-4
B.4 Open Space	B-4
B.5 Shadows	B-5
B.6 Historic Resources	B-5
Introduction	B-5
Archaeological Resources	B-6
Architectural Resources.....	B-6
B.7 Urban Design and Visual Resources.....	B-6
B.8 Neighborhood Character.....	B-7
B.9 Natural Resources.....	B-7
Methodology.....	B-7
Overview	B-8
Existing Conditions	B-9
Natural Resources Policies and Programs	B-19
Future Without the Proposed Action	B-22
Impacts of the Proposed Action.....	B-23
B.10 Hazardous Materials	B-29
Introduction	B-29
Proposed Beach 88/94th Street Restoration Plan (Cumulative)	B-31
B.11 Waterfront Revitalization Program.....	B-32
Introduction	B-32
Applicable New York City Waterfront Revitalization Policies.....	B-32
B.12 Infrastructure.....	B-33
Water Supply Systems.....	B-33
Storm and Sanitary Drainage Systems.....	B-34
B.13 Solid Waste and Sanitation Services.....	B-34
B.14 Energy.....	B-34
B.15 Traffic and Parking.....	B-34
B.16 Transit and Pedestrians	B-34
B.17 Air Quality	B-35
B.18 Noise	B-35
B.19 Construction Impacts	B-35

Description of Construction Activities.....	B-35
Land Use, Zoning and Public Policy.....	B-36
Open Space	B-37
Hazardous Materials.....	B-38
Natural Resources	B-38
Traffic and Parking	B-42
Transit and Pedestrians	B-43
Noise and Vibration	B-44
Air Quality	B-45
B.20 Public Health.....	B-46
B.21 Growth Inducing	B-47

Appendix A: Waterfront Revitalization Program Consistency Assessment Form

List of Tables

B-1 Birds Identified as Breeding within Breeding Bird Atlas Block 5949D B-10
B-2 New York State Water Quality Standards by Use Class B-11
B-3 Common Finfish of Jamaica Bay B-15
B-4 Essential Fish Habitat Designated Species for Jamaica Bay B-16
B-5 Wetland Area Impacts from the Proposed Jamaica Bay Outfall Projects B-23

List of Figures

All figures are provided in Attachment C, “Graphics.”

	Figure Number
Sanborn Map	C-1
Tax Lots.....	C-2
Aerial Photograph (2006).....	C-3
Proposed Wetland Restoration Plan: Debris Removal and Regrading at Beach 88th Street—Block 16109 Lots 70 and 185	C-4
Land Use	C-5
Zoning	C-6
National Wetlands Inventory Mapped Wetlands	C-7
NYSDEC Mapped Tidal Wetlands	C-8
Floodplains	C-9
Natural Resources Photograph Key	C-10
Natural Resource Photographs	C-11a–C-11c
Coastal Zone Boundary	C-12
	*

A. INTRODUCTION

This environmental assessment has been prepared to examine the potential environmental impacts of the proposed action. As described in detail in Attachment A, “Project Description,” the proposed action includes installation of new outfall and stormwater collection sewers, relocation of water mains and upgrade of sanitary sewers, street reconstruction, in areas affected by infrastructure installation, and restoration of wetland areas affected by the proposed construction (temporary impacts) within a proposed New York City Department of Environmental Protection (NYCDEP) sewer easement. In addition, a restoration plan for a number of NYCDEP/New York City Department of Design and Construction (NYCDDC) storm sewer outfall projects in the Jamaica Bay area (the structural or permanent wetland impacts) will be implemented at the Beach 88th/94th Restoration Plan site and will involve wetland restoration and enhanced public access to the Jamaica Bay waterfront. The project area is located in Queens Community District 14 in the Hammels section of Far Rockaway, Queens (see Figure C-1).

What follows are the environmental impact analyses for the proposed action that have been prepared following the methodologies of the City’s *CEQR Technical Manual*. Figures referred to in this attachment (e.g., land use) are provided in Attachment C, “EAS Graphics.”

B.1 LAND USE, ZONING, AND PUBLIC POLICY**INTRODUCTION**

This section examines the existing land use, zoning, and public land use policies that apply to the proposed project. It presents the current land use conditions in the project area and presents any anticipated changes in land use, zoning, and public policy that are expected to occur independently of the proposed project by 2013 (the project’s build year). The analysis then assesses any potential adverse impacts to or conflicts with land use, zoning, and public policy that would occur as a result of the proposed project.

As described below, this analysis concludes that construction of the proposed project would be compatible with and supportive of existing land uses in the study area, and would not result in significant adverse impacts to land use, zoning, or public policy.

LAND USE

The project area is primarily located along roads in the Hammels section of Far Rockaway, Queens, including Beach Channel Drive, Beach 88th Street, and Cross Bay Parkway. Roads in the project area include travel lanes, parking lanes, medians, landscaping, and sidewalks. The northernmost portion of the project area—where the proposed outfall would be constructed was formerly private land but was recently transferred to the City for use as a public park. The property is currently secured by fencing and is identified as tax lot Block 16109, Lots 70 and

185, and is approximately 1.02 acres (or 44,850 square feet) in size (see Figures C-2 and C-3). There is a City sewer easement across the property where the proposed outfall construction would take place (see Figures C-4). The study area as shown on Figure C-5 is predominantly developed with the exception of the waterfront site where the outfall and restoration plan are proposed.

The land use, zoning, and public policy study area includes the area within 400 feet of the project site. As shown in Figure C-5, the site is currently vacant waterfront land. However, most of the lots in the project area are occupied with detached, attached, and semi-detached low-density, residential uses. In addition, throughout the study area there are several community facility and institutional type uses which include schools, places of worship, and municipal buildings. Commercial retail uses and uses that have commercial on the ground floor and residential in the upper levels are present along Rockaway Beach Boulevard east of Cross Bay Parkway. Industrial uses are limited to a warehouse/storage commercial use on Beach 88th Street, between the Rockaway Freeway and Rockaway Beach Boulevard. There are also a number of vacant lots and lots used for vehicle parking scattered throughout the study area.

In the future without the proposed action, it is assumed that the project area would remain largely unchanged. No substantive changes in local land use are anticipated by the project's 2013 build year.

The proposed action would not displace or directly or indirectly conflict with local land uses. It would provide street improvements that would benefit the project area residential and commercial uses and would improve vehicular access through improved streets. The proposed action would also provide storm sewers in a previously unsewered (storm sewers) area of the Rockaways which would benefit local existing land uses. It would use the waterfront of the proposed outfall site for a tidal wetland restoration project and allow public access for recreation along the Jamaica Bay waterfront. These proposed activities would not conflict with local land uses or shoreline activities. Rather, the proposed sewer project would benefit local land uses through reduced street flooding, and the proposed wetland restoration would not conflict with uses along the Jamaica Bay shoreline. Use of the site for wetland restoration and public access is also consistent with management policies for Jamaica Bay (see the discussion below).

Therefore, the proposed action would not result in significant adverse impacts to land uses in the study area.

ZONING

Currently, the project area is predominately zoned with low- to moderate-density residential zoning districts, including R4 and R6 zoning districts. The commercial uses are concentrated along Beach Channel Drive and Rockaway Boulevard with existing commercial overlay C1-2 and C2-2 zoning districts, and a C8-1 district west of Cross Bay Boulevard. The waterfront is zoned C3 for marine commercial uses, but it is predominantly vacant land or residential uses (see Figure C-6).

The above zoning reflects the recently approved Rockaway Neighborhoods Rezoning, which affected zoning within the project area. In this area, zoning regulations were implemented to preserve the special character of the Rockaway Peninsula. These zoning changes establish contextual controls for the scale of development and seek to protect the low scale development pattern of the peninsula's housing stock while allowing some new housing and commercial opportunities near transit stations.

In the future without the proposed action, it is assumed that the zoning for the project area would remain unchanged.

The proposed action would not require changes to existing zoning, nor would it conflict with existing zoning district regulations. Therefore, the proposed action would not result in potential significant adverse impacts to zoning.

PUBLIC POLICY

OVERVIEW

In addition to the City zoning regulations, there are two City policies and one State policy that apply to the project area. One is the Jamaica Bay Watershed Protection Plan (2007). These policies and a consistency assessment for the proposed action are summarized below and also under “Natural Resources.” In addition, the proposed action is located within the boundaries of New York City’s Coastal Zone. An analysis of the consistency of the proposed action with the City’s Waterfront Revitalization Program (WRP) is also provided below under “Waterfront Revitalization Program.” Lastly, the site of the proposed outfall is a potential preservation site under the New York State Open Space Preservation Plan (2006). These policies are examined below with respect to the proposed action.

In the future without the proposed action, it is assumed that the project site would remain unchanged. No substantive changes in public policy are anticipated through the project’s 2010 build year. Therefore, the proposed action would not result in potential significant adverse impacts to public policy.

JAMAICA BAY WATERSHED PROTECTION PLAN

The proposed action would not conflict with the goals and objectives of the Jamaica Bay Watershed Protection Plan. As described in Attachment A, “Project Description,” the proposed action’s restoration plan is consistent with and recommended by the Jamaica Bay Watershed Protection Plan. The proposed project would therefore support the implementation of the Jamaica Bay Watershed Protection Plan and would be consistent with this policy.

NEW YORK STATE OPEN SPACE CONSERVATION PLAN

Beginning in 1992, the New York State Department of Environmental Conservation (NYSDEC) prepared and released a comprehensive plan for identifying priority lands for open space preservation across the state. The objectives of the plan are to:

- Create a state land acquisition that will guide state land conservation efforts;
- Incorporate the advice of the nine Regional Advisory Committees that provide information and assist in these land conservation efforts; and
- Map and identify the properties for open space conservation.

The New York State Open Space Conservation Plan is updated every three years and was last updated in 2006. The 2006 plan identified a number of properties for acquisition in the Jamaica Bay Watershed, one of which is the land where the outfall segment of the proposed action would be installed (referred to in this Plan as the Beach 90th Street property). This land was recently acquired by the Port Authority of New York and New Jersey, then donated to the Trust for Public Land and then transferred to the City and NYCDPR. Installation of the proposed outfall would not conflict with NYCDPR plans for the site (see discussion below) and, with the

exception of the proposed headwall, the proposed outfall would be below-grade. In addition, the proposed wetland restoration would support the use of this property for natural area restoration and preservation. The proposed project would therefore support this policy.

B.2 SOCIOECONOMIC CONDITIONS

The proposed action would not result in any new development or conflict with existing uses in the study area, nor would it generate new employees, or new residential or commercial uses. As described above, the proposed action would not displace either directly or indirectly any residents, businesses, institutions, or employees. Therefore, the proposed action would not result in significant adverse impacts on socioeconomic conditions.

B.3 COMMUNITY FACILITIES AND SERVICES

The *CEQR Technical Manual* states that actions that would add fewer than 100 residential units to an area generally do not need to examine impacts to community facilities and services unless the proposed action would have a direct effect on a community facility. The proposed action would not result in any new residential units, nor would it directly or indirectly affect any community facilities. Therefore, the proposed action would not result in significant adverse impacts on community facilities and services.

B.4 OPEN SPACE

The *CEQR Technical Manual* recommends a detailed open space assessment if a proposed action would add 200 residents or 500 employees to an area, or if a proposed action would have a direct impact on an open space. The proposed action would not introduce new residents or employees to the project area. Upland improvements would also occur within the area of City streets.

As described in Attachment A, "Project Description," the site for the Beach 88th/94th Street Restoration Plan on Block 16109, Lot 70 has recently been transferred through the Trust for Public Land to the New York City Department of Parks and Recreation (NYCDPR) to be used as a public park. The proposed restoration plan for Lots 70 and 185 of Block 16109 include debris removal and minor regrading along the shoreline, the construction of a pedestrian access way over the new outfall structure, hydro-seeding of maritime grasses and some upland planting to secure the site, and wetland restoration on Lot 185 by removing a crumbling concrete retaining wall. The design of the proposed wetland restoration would be coordinated with NYCDPR. In addition, the walkway over the outfall structure at the mean high-water line would facilitate public access across the outfall easement. In addition, the proposed project is consistent with the 2006 New York State Open Space Conservation Plan with the proposed wetland preservation and restoration plan.

Therefore, the proposed action would not result in potential significant adverse impacts on open space.

B.5 SHADOWS

The *CEQR Technical Manual* states that an assessment of shadows is generally necessary only for actions that would result in new structures or additions to existing structures of at least 50 feet in height. The proposed action would not develop in any structures 50 feet in height or greater than 50 feet in height, nor would it result in any new shadows. Therefore, the proposed action would not result in potential significant adverse impacts on shadows.

B.6 HISTORIC RESOURCES

INTRODUCTION

According to the *CEQR Technical Manual*, a historic resources assessment is required if there is the potential to affect either archaeological or architectural resources. Actions that could affect archaeological resources and that typically require an assessment are those that involve in-ground disturbance, or below-grade construction and excavation. Actions that trigger an architectural resources assessment include new construction, demolition, or significant alteration to any building, structure, or object; a change in scale, visual prominence, or visual context of any historic building, structure, object or landscape; construction, activities near historic resources; additions to or significant removal, grading, or replanting of significant historic landscape features; screening or elimination of publicly accessible views of historic resources; or the introduction of significant new shadows over an historic landscape or historic structure with sunlight dependent features. The assessment of potential impacts to archaeological and historical resources is presented below.

ARCHAEOLOGICAL RESOURCES

On February 13, 2008 the New York Landmarks Preservation Commission provided a technical review memorandum stating that the area of the proposed action is not archeologically significant. Therefore, a Phase IA survey is not required and the proposed project would not have a significant adverse impact on historic resources.

ARCHITECTURAL RESOURCES

With respect to historic architectural resources (standing structures), there are no individual designated historic landmarks or historic districts in the project area. The formerly vacant site of the proposed sewer outfall is now owned by NYCDPR but has no structures or facilities. In addition, all proposed stormwater collection sewers would be installed in City streets and no historic structures would be directly affected. Therefore, it is concluded that the proposed action would not result in potential significant adverse impacts to historic resources.

B.7 URBAN DESIGN AND VISUAL RESOURCES

The *CEQR Technical Manual* states that an analysis of potential impacts to urban design is appropriate if an action would result in structures that are substantially different in height, bulk, form, setbacks, size, scale, use, or arrangement from those that already exist, or if an action would change the form, arrangement, or use of blocks and streets to interrupt the general pattern of an area or jeopardize the consistency of street walls, curb cuts, pedestrian flow, or other streetscape elements. A visual resources assessment is also generally appropriate when above-ground construction would limit or alter existing view corridors.

The proposed action would not alter the local street grid nor would it modify local block/lots or street corridors. The proposed action would install a new below-grade collector storm sewer collection system with a new outfall. The proposed outfall would be constructed on a site previously disturbed with existing upland uses and waterfront infrastructure. In addition to the proposed infrastructure improvements, the proposed action would restore the waterfront site affected by the proposed outfall construction and would include a comprehensive Restoration Plan for the site (see Attachment A, "Project Description").

The proposed storm water collection sewers would be below grade and not visible, but the headwall of the outfall and portions of the outfall would be visible throughout much of the day, but particularly in low-tide cycles. The new outfall would be approximately 8 feet wide and 5 feet deep and per the Restoration Plan will have an access walkway to allow for enhanced public access along the shoreline. While this proposal would introduce a new waterfront structure to the site, this would not significantly alter the urban design and visual resources character of the area because much of the outfall would be underground.

The proposed action also includes final street improvements in the areas of proposed storm water collection sewers and sanitary line improvements. However, it would not alter the local street grid or built development pattern and the infrastructure would be below grade.

While the proposed project would remove only three trees, it would also transplant 15 trees and 160 trees would be pruned. The tree pruning is proposed by NYCDPR to reduce the long-term impacts of the proposed action on the existing trees, and would benefit the street trees. While the proposed pruning would have a temporary impact on local street trees, it would support the long-term growth and health of the trees and over time it would be expected that the tree canopy would grow in. Thus, while the local street trees would be pruned, the aesthetic and visual resource values provided by the local street trees would continue to be provided and there would not be any long-term impacts on visual character.

The proposed action also includes the planting of 23 replacement trees in the project area as part of the final design of the proposed action. While every effort will be made to replace the trees in their current location or close by, there is the potential that the street trees could not be replaced in their exact current location in order to minimize potential damage to NYCDEP infrastructure from tree roots. In the event that the trees cannot be replaced in their original location, a coordination effort would commence between NYCDDC, NYCDEP, NYCDPR, and the adjacent property owners to find the best location to plan the replacement trees. While the impact would not be considered significant, street trees provide important aesthetic, cooling, wildlife habitat, and other benefits in urban neighborhoods. Due to the limited scope and scale of the changes to the neighborhood, no significant impact would occur to urban design or visual resources because there are a limited number of trees that need to be removed for the project within the broader neighborhood and the general character of the surrounding area would remain unchanged.

Therefore, the proposed action would not result in potential significant adverse impacts to urban design or visual resources.

B.8 NEIGHBORHOOD CHARACTER

Neighborhood character is an evaluation of the many elements that define a community. As defined by the *CEQR Technical Manual*, these elements typically include land use, urban design and visual resources, socioeconomics, traffic, air quality, and noise conditions. As described in this attachment, the proposed action would not result in significant adverse impacts to any of these neighborhood elements. The proposed action would reduce street flooding and improve storm sewer conditions along several streets in the Far Rockaway area of Queens. This is considered a positive impact for the neighborhood that would benefit existing residential, commercial and industrial uses in the area. The proposed action would not result in significant increases in traffic or noise, or impact local air quality.

While the proposed project would remove three trees, it would also transplant 15 trees and 160 trees would be pruned. The tree pruning is proposed by NYCDPR to reduce the long-term

impacts of the proposed action on the existing trees, and would benefit the street trees. While the proposed pruning would have a temporary impact on local street trees, it would support the long-term growth and health of the trees and over time it would be expected that the tree canopy would grow in. Thus, while the local street trees would be pruned, the aesthetic and visual resource values provided by the local street trees would continue to be provided and there would not be any long-term impacts on neighborhood and visual character.

The proposed action also includes the planting of 23 replacement trees in the project area as part of the final design of the proposed action. While every effort will be made to replace the trees in their current location or close by, there is the potential that the street trees could not be replaced in their exact current location in order to minimize potential damage to NYCDEP infrastructure from tree roots. In the event that the trees cannot be replaced in their original location, a coordination effort would commence between NYCDDC, NYCDEP, NYCDPR, and the adjacent property owners to find the best location to plant the replacement trees. While the impact would not be considered significant, street trees provide import and aesthetic, cooling, wildlife habitat, and other benefits in urban neighborhoods. Due to the limited scope and scale of the changes in the neighborhood, no significant impact would occur to neighborhood and visual character because there is a limited number of trees that need to be removed for the project within the broader neighborhood and there general character of the surrounding area would remain unchanged. It is therefore concluded that the proposed action would not result in significant adverse impacts on neighborhood character.

B.9 NATURAL RESOURCES

METHODOLOGY

The proposed action includes the installation of storm sewers in developed City streets as well as a new storm outfall that would extend across vacant previously disturbed waterfront land and also across tidal wetlands into Jamaica Bay. In order to examine the potential for natural resources impacts of the proposed action, a 400-foot study area was delineated for the purposes of this natural resources analysis (see Figures C-7 and C-8).

In order to document existing conditions, seasonal field visits were conducted on February 22, 2008, April 29, 2008, and July 28, 2008. The project site was investigated by a field team, and observations of flora and fauna were recorded. The site visits were conducted between 7:30 AM and 5:00 PM in order to observe wildlife at peak times of activity (i.e., morning and evening for bird feeding activity, etc.). Habitat classifications were determined based on the field surveys and related to general habitat classifications identified on Ecological Communities of New York State (Reschke [1990], Edinger et al. [2002]) based on the observed dominant cover types and current uses of the project site. In addition to the field surveys, existing conditions at the project site were summarized from information contained in the following literature sources, database, reports, maps, and other sources, including United States Geological Survey (USGS)—topographic quadrangle map for the Flushing quadrangle; NYSDEC—Breeding Bird Atlas, Critical Environmental Areas of Queens County, tidal wetlands maps, the Amphibian and Reptile Atlas Project, and reports pertaining to the Jamaica Bay Borrow Pit Evaluation Project; Federal Emergency Management Agency (FEMA)—Flood Insurance Rate Maps; United States Fish and Wildlife Service (USFWS)—National Wetland Inventory (NWI) maps; National Oceanic Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS)—Essential Fish Habitat (EFH); and NYCDEP—Harbor Survey Program reports, Jamaica Bay and CSO Tributaries Waterbody/Watershed Facility Plan, and Jamaica Bay Watershed Protection Plan. A New York Natural Heritage Program (NYNHP) database search was performed for

federal- and state-listed species for a distance of 0.5 miles from the project site. Information on rare, threatened and endangered species or special habitats within the vicinity of the study area was obtained by USFWS, NMFS, New York State Department of State (NYSDOS), and the New York Natural Heritage Program (NYNHP).

Potential impacts to natural resources from the proposed action were assessed by considering the existing and expected future natural resources at the project location and the potential changes in wetlands and aquatic habitat that would occur as a result of the proposed action.

The future conditions without the proposed action were assessed by considering existing natural resources within the project site and assessing potential effects to these resources from projects proposed within and adjacent to the project site that are expected to occur independent of the proposed action by the 2011 build year.

The analysis of the proposed action relative to its potential impacts on street trees is provided above under “Urban Design and Visual Resources” and “Neighborhood Character.”

OVERVIEW

The project site is located in the southeastern portion of the Jamaica Bay Watershed along the north shore of the Rockaway Peninsula. Jamaica Bay is one of the largest coastal wetland ecosystems in New York State. The approximately 9,135 acres Jamaica Bay Wildlife Refuge encompasses southern shore of the City of New York, and straddles the boroughs of both Brooklyn and Queens, with the Rockaway Peninsula barrier beach forming the bay shoreline to the south. Jamaica Bay provides critical habitat for fish and wildlife, and contains extensive areas of salt marsh (1,000 acres), tidal flats, dredge spoil islands, dredged channels and basins, and upland habitats of shrub thickets, fields, and developing forests. Resident wildlife found on the islands and shorelines of the bay include reptiles, amphibians, and small mammals. Jamaica Bay is also part of the Atlantic Flyway bird migration route; more than 300 species of birds have been observed in the bay over the past 35 years. The bay provides a productive ecosystem for approximately 81 species of finfish, 121 benthic species, and other aquatic biota that use it for nursery and feeding habitats (USFWS 1997).

Jamaica Bay is also a unit in the National Park Service’s Gateway National Recreation Area (GNRA), which also encompasses parts of South Shore Staten Island (Great Kills) and Sandy Hook National Park in New Jersey. The Jamaica Bay Unit has three components: the North Shore, Breezy Point, and the Jamaica Bay Wildlife Refuge, all of which provide open spaces with coastal and upland habitats. One of the most unique features of the Jamaica Bay Unit is the Jamaica Bay Wildlife Refuge, which includes mixed habitat zones with freshwater and brackish ponds, upland fields, developing forests and, most notably, a vast network of salt marshes and islands in the center of the bay (NPS 2004). NYSDEC has designated all tidal wetlands within Jamaica Bay as Critical Environmental Areas (CEA).¹ The project site and 400-foot study area are comprised of

¹ NYSDEC indicates that “To be designated as a CEA, an area must have an exceptional or unique character with respect to one or more of the following: a benefit or threat to human health; a natural setting (e.g., fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality); agricultural, social, cultural, historic, archaeological, recreational, or educational values; or an inherent ecological, geological or hydrological sensitivity to change that may be adversely affected by any change. Following designation, the potential impact of any Type I or Unlisted Action on the environmental characteristics of the CEA is a relevant area of environmental concern and must be evaluated in the determination of significance prepared pursuant to Section 617.7 of SEQR.”

Jamaica Bay wetlands and upland habitats including high marsh, intertidal wetlands, tidal flats, and undeveloped and developed upland areas.

EXISTING CONDITIONS

LAND COVERAGE AND WETLANDS

Much of the project area is paved streets. However, the area of the proposed outfall is undeveloped land under the jurisdiction of NYCDPR that includes tidal wetlands along the shoreline and underwater (submerged) lands just offshore. The shoreline along and adjacent to the project site consists primarily of a brick, pebble, and sand composition along the eastern portion of the site, with a greater mix of construction and demolition debris to the west. It is assumed this is remnant demolition debris from structures that were once present at the site. Although there are timber pilings and a dilapidated pier, no functional bulkhead is present. In addition, site observations indicate that no submerged aquatic vegetation (SAV) or tidal wetland vegetation is present along the shoreline. The shoreline is mapped as wetlands as delineated by NYSDEC and the National Wetlands Inventory maps (see Figures C-7 and C-8).

NWI mapping for the area defines that the shoreline of the project site is composed of intertidal wetlands having two classifications: unconsolidated shores that are irregularly exposed (E2USM) and unconsolidated substrates continuously submerged at depths below extreme mean low water (MLW) that are always flooded (E1UBL). Unconsolidated shores contain substrates with less than 75 percent areal cover of stones, boulders, or bedrock and less than 30 percent vegetative cover. Unconsolidated bottoms have at least 25 percent cover of particles smaller than 6 or 7 cm, and less than 30 percent vegetative cover.

With respect to NYSDEC mapping, this portion of Jamaica Bay is designated as littoral zone wetlands. NYSDEC tidal wetland regulations state that water depths are the determining factor whether or not an area is a littoral zone (areas with less than 6 feet of water depth at mean low water). Jamaica Bay is typically described as a shallow waterbody, averaging 13 feet in depth, with channels reaching extreme depths (30 to 50 feet) in navigation channels and borrow pit areas (NYCDEP 2007a). Observed water depths along the shoreline and adjacent waters of the project site are shallow and it is therefore expected that the shoreline edge of the project site would be regulated as wetlands by NYSDEC as would the upland adjacent area (see Figures C-10 through C-11c).

FLOODPLAINS

Figure C-9 presents the 100-year floodplain (the area with a 1 percent chance of flooding each year) boundaries within the project area. A small portion of the project site (at the outfall location) is located within the 100-year floodplain. FEMA maps indicate that Base Flood Elevation (BFE)² is eight feet (FEMA 2007). See Figure C-12 for the coastal zone boundary.

WILDLIFE

Avian

The Jamaica Bay Wildlife Refuge supports one of the largest bird sanctuaries in the northeastern United States, where approximately 325 species of birds have been sighted over the last 35 years

² BFE is 10 feet National Geodetic Vertical Datum (1929) or ~7.28 feet Queens Highway Datum.

(USFWS 1997). The bay is one of the most important waterfowl wintering areas (November to March) in the region. Many of the islands in Jamaica Bay are important heronries for a variety of heron species including black-crowned night heron (*Nycticorax nycticorax*), green-backed heron (*Butorides striatus*), yellow-crowned night heron (*Nyctanassa violacea*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), and glossy ibis (*Plegadis falcinellus*). Nearby islands within Jamaica Bay are home to several important gull colonies, with nesting populations of great black-backed gull (*Larus marinus*) and herring gull (*Larus argentatus*) on Canarsie Pol, Ruffle Bar, Subway Island, and Little Egg Marsh, located near the project site (NYSDOS 1992). Herring gull, brant (*Branta berniclawas*), semipalmated plover (*Charadrius semipalmatus*), killdeer (*Charadrius vociferous*), common tern (*Sterna hirundo*) (flying offshore), and least tern (*Sterna antillarum*) (foraging along the shoreline) were observed during the field surveys.

The New York State Breeding Bird Atlas is an ongoing project to document the presence of avian breeders throughout the state. The project site is located in the eastern portion of block 5949D. Between 2000 and 2005, the New York State Breeding Bird Atlas recorded 21 species of potentially breeding birds within block 5949D, as indicated in Table B-1. It should be noted that block 5949D includes portions of protected habitat on Rockaway Beach in the neighborhood of Arverne, Queens (Beach 44th to Beach 57th streets) used by the federally listed threatened and state-listed endangered piping plover (*Charadrius melodus*) and the state-listed threatened least tern (see the “Endangered, Threatened, and Special Concern Species” section for more information these species).

Table B-1
Birds Identified as Breeding Within Breeding Bird Atlas Block 5949D

Common Name	Scientific Name
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Piping Plover*	<i>Charadrius melodus</i>
Killdeer	<i>Charadrius vociferus</i>
American Oystercatcher	<i>Haematopus palliatus</i>
Common Tern**	<i>Sterna hirundo</i>
Least Tern**	<i>Sterna antillarum</i>
Rock Pigeon	<i>Columba livia</i>
Mourning Dove	<i>Zenaida macroura</i>
Willow Flycatcher	<i>Empidonax traillii</i>
American Crow	<i>Corvus brachyrhynchos</i>
Barn Swallow	<i>Hirundo rustica</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
European Starling	<i>Sturnus vulgaris</i>
Yellow Warbler	<i>Dendroica petechia</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Song Sparrow	<i>Melospiza melodia</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
House Sparrow	<i>Passer domesticus</i>
Notes:	*Federally listed threatened and state-listed endangered shorebird. **State-listed threatened.
Source:	NYSDEC “New York State Breeding Bird Atlas” Block 5949D 2005 Survey. Available on the internet at: http://www.dec.ny.gov/cfm/xtapps/bba/ .

MAMMALS

While many of the mammalian species of the bay area may seem common and insignificant, it is noted that protected areas in and around Jamaica Bay provide habitat for these mammals that is

otherwise absent in the urban core of New York City. Mammals of the Jamaica Bay watershed also provide an important food source for hawks and owls. Some species include opossum (*Didelphis virginiana*), white-footed mouse (*Peromyscus leucopus*), eastern cottontail rabbit (*Sylvilagus floridanus*), little brown myotis (*Myotis lucifugus*), meadow vole (*Microtus pennsylvanicus*), and gray squirrel (*Sciurus carolinensis*) (USFWS 1997). However, due to the highly developed area surrounding the project site (including streets with residential and commercial uses), mammals expected to utilize the project site would be limited to common urban species such as small rodents (white footed mouse and gray squirrel) and feral cats. No mammals were observed during the field surveys, including at the site of the proposed outfall.

AMPHIBIANS AND REPTILES

The NYSDEC Amphibian and Reptile Atlas Project conducted a survey between 1990 and 1999 documenting the geographic distribution of New York’s reptiles: turtles, snakes, lizards and amphibians (frogs, toads, and salamanders). One important reptilian species, the northern diamondback terrapin (*Malaclemys terrapin terrapin*), is an estuarine turtle that breeds and forages throughout Jamaica Bay (USFWS 1997). The northern diamondback terrapin is a diurnal species of estuarine areas, brackish waters of coastal rivers and creeks, salt marshes, and tidal flats. It occurs mainly in salt marshes where it nests and feeds on fish, crustaceans, mollusks, and insects (Conant and Collins 1998). Other amphibians and reptiles with the potential to use the vacant land (outfall area) portion of the project site include the common garter snake (*Thamnophis sirtalis*) and eastern milk snake (*Lampropeltis t. triangulum*). However, due to the highly developed area surrounding the project site, and the prior disturbance at the outfall site, the potential presence of amphibians and reptiles expected to utilize this site is limited. No amphibians or reptiles were observed at this site during the field surveys.

AQUATIC RESOURCES

Water Quality

Water quality in Jamaica Bay is regulated by Title 6 of the NYCRR (Part 703), which defines water classification standards for each New York City water body. The open waters of Jamaica Bay are classified as SB waters, designating that these waters should be suitable for bathing and secondary contact recreation. Water quality should also be suitable for fish propagation and survival. Standards for SB waters are listed in Table B-2.

Table B-2
New York State Water Quality Standards by Use Class

Parameter	SB
Fecal Coliform (per 100mL)	Monthly geometric mean shall not exceed ≤200 Colonies/100mL from 5 or more samples.
Total Coliform (per 100mL)	Monthly geometric mean shall not exceed ≤ 2,400 colonies/100 milliliters (mL) from 5 or more samples.
Dissolved Oxygen (DO) (mg/L)	≥5.0 mg/L
pH	Normal range shall not be extended by more than 0.1 of a pH unit.

Source: NYCRR, Title 6, Part 703, 2008.

The City of New York has monitored New York Harbor water quality for over 95 years through its Harbor Survey Program. Harbor Survey data show that water quality has improved significantly throughout the Harbor Estuary since the 1970s as a result of the construction, upgrade, and operational improvements to both City-operated and regional water pollution control plants. Water quality improvements include both reductions in fecal and total coliform

concentrations and significant increases in DO concentrations. NYCDEP evaluates surface water quality in four designated areas of the Harbor: the Inner Harbor, Upper East River-Western Long Island Sound, Lower New York Bay-Raritan Bay, and Jamaica Bay.

Coliform

The presence of coliform bacteria in surface waters indicates potential health impacts from human or animal waste. Elevated levels of coliform can result in the closing of bathing beaches and shellfish beds. Within Jamaica Bay, overall mean fecal coliform bacteria levels have been at or below 200 cells/100mL over the past 20 years. In 2006, water quality for much of Jamaica Bay was consistent with recent trends; summer fecal coliform concentrations were below 200 cells/100mL for all stations, and seven of nine open waters stations sites had geometric means below 50 cells/100mL (NYCDEP 2007a). Although open waters of Jamaica Bay are meeting state standards for fecal coliform most of the time, tributaries of Jamaica Bay do receive combined sewer overflows (CSO).

Temperature, Salinity, and Dissolved Oxygen

Both temperature and salinity influence several physical and biological processes within aquatic ecosystems. Temperature has an effect on the spatial and seasonal distribution of aquatic species and affects oxygen solubility, respiration, and other temperature-dependent water column and sediment biological and chemical processes. Mean annual temperatures of Jamaica Bay range between 1° to 26° C (33.8° to 78.8° F) (Barry A. Vittor & Associates, Inc. 2001b). In general, temperatures in deep zones within Jamaica Bay rarely exhibit a surface-to-bottom temperature difference of greater than 1° to 2° C (1.8° to 3.6° F).

Salinity fluctuates in response to tides and freshwater inputs. Salinity and temperature largely determine water density and can affect vertical stratification of the water column. Salinity is also an important habitat variable, as a number of aquatic species have a limited salinity tolerance. Surface and bottom water salinities of Jamaica Bay generally range between 23 and 27 ppt, but vary for different portions of the bay. Salinity levels are generally higher (above 26.5 ppt) in the western and southern areas and lower (below 26.5 ppt) in the eastern and northern portions of the bay (NYCDEP 2007a).

The concentrations of DO in the water column are one of the most universal indicators of overall water quality in aquatic systems. Sufficient levels of oxygen are needed for the survival of marine life and for the prevention of nuisance conditions such as hydrogen sulfide odors produced from the anaerobic decay of organic material in sediments. Oxygen concentrations in coastal waters depend on a variety of interrelated chemical, physical, and biological factors such as salinity, temperature, photosynthesis, and respiration. Hypoxic conditions (DO < 3.0 mg/L), which can severely stress or kill aquatic organisms, are common in the New York region. Although DO levels have improved in Jamaica Bay, periods of low DO concentrations and hypoxia remain a problem in certain areas of the bay, particularly at the bottom of Norton and Conch Basins' pits.

High levels of nutrients (ammonia, nitrates/nitrites) can lead to excessive plant growth (a sign of eutrophication), reduced water clarity, and a depletion of DO. This is a particular issue in Jamaica Bay, where nitrogen and phosphorous are discharged by the WPCPs. An estimated 41,000 pounds per day of nitrogen enters the bay from WPCPs (NYCDEP 2005). Trends for nitrogen levels in Jamaica Bay have declined since 1995.

Secchi transparency is a measure of the clarity/turbidity in surface waters. Transparency greater than 5 feet (1.5 meters) is a sign of clear water in a turbid estuary. Decreased clarity can be caused by high suspended solid concentrations or plankton blooms. Secchi transparencies less than 3 feet (0.9

meters) are generally indicative of poor water quality conditions. Data show that average Secchi depths greater than 5.0 feet were common in the bay prior to 1993 (NYCDEP 2005).

Sediment Quality

Sediments in the New York Harbor Estuary often contain evidence of contamination. A 1998 survey found that the mean sediment contaminant concentrations in the Harbor were statistically higher than other coastal areas of the East Coast for 50 of the 59 chemicals measured (Adams et al. 1998), and Newark and Jamaica Bays have been ranked as the Harbor's highest for the most toxic sediments on the basis of sediment chemistry, toxicity, and benthic community (Adams and Benyi 2003). Biological effects, measured by relative impacts on the benthic invertebrate community, were found to be associated with the chemical contamination. While the sediments of the Harbor are contaminated, the concentrations of contaminants have been decreasing over the past 30 years (Steinberg et al. 2002). Between 1993 and 1998, the percentage of sediment samplings with benthic macroinvertebrate communities considered impacted, or of degraded quality, also decreased throughout the Harbor (Steinberg et al. 2004).

Jamaica Bay has a complex distribution of sediments because of variable currents and a high degree of sediment input from both natural and human sources. Sediments in the bay vary from coarse sands and gravels in high-energy areas to fine-grained silts and clays in low-energy areas. Jamaica Bay's sediments are contaminated from combined sewer overflow inputs, landfill leachate, atmospheric deposits, and other sources and contain various metals, such as nickel, zinc, copper, and cadmium from sewage effluent and lead from storm sewers and atmospheric deposition. The atmospheric contribution of zinc, copper, and cadmium is a substantial portion of the metals in the bay, and landfill leachate appears to be a lesser source of contamination (Seidemann 1991).

Aquatic Biota

Primary Producers

Phytoplankton are microscopic plants whose movements within the system are largely governed by the prevailing tides and currents. Several species can obtain larger sizes as chains or in colonial forms. Light penetration, turbidity, and nutrient concentrations are important factors in determining phytoplankton productivity and biomass. In a 1993 survey of the Harbor, 29 taxa of phytoplankton were identified. Phytoplankton sampling conducted at five stations in Jamaica Bay from 1995 through 1996 identified 83 species of phytoplankton. The most abundant species, accounting for 21 percent of phytoplankton organisms collected, was the diatom *Skeletonema costatum* (EEA 1997).

Zooplankton

Zooplankton are an integral component of aquatic food web. They are primary grazers on phytoplankton and detritus material and provide a major food source for organisms of higher trophic levels. The higher-level consumers of zooplankton include forage fish, such as bay anchovy, striped bass, and white perch. Predacious zooplankton species can consume eggs and larvae and can have a detrimental effect on certain fish species.

Crustacean taxa are the most abundant group of zooplankton collected throughout the Harbor. The most dominant species include the copepods (*Acartia hudsonica*, *Acartia tonsa*, *Eurytemora affinis*, and *Temora longicornis*), with each species being prevalent in certain seasons (Stepien et al. 1981, Lonsdale and Cosper 1994, Perlmutter 1971, Lauer 1971, Hazen and Sawyer 1983). A total of 31 species of zooplankton were noted during EEA surveys of the bay from 1995-1996, with *Acartia hudsonica* representing 39.5 percent of all organisms collected (EEA 1997).

Benthic Invertebrates

Benthic invertebrates inhabit the sediments and surfaces of submerged objects such as rock, pilings, or debris. They are important to the energy flow of aquatic systems because they use

detrital and suspended organic matter as food, and in turn provide an important food source for fish and waterfowl. Benthic invertebrates include those that are retained on a 0.5 millimeter (mm) screen (macroinvertebrates) and smaller forms (nematodes and harpacticoid copepods). Some of these animals live on top of the substratum (epifauna) and some within the substratum (infauna). Substrate type (rocks, pilings, sediment grain size, etc.) are the primary factors influencing benthic invertebrate communities. Secondary factors include currents, wave action, predation, succession, and disturbance.

Inventories of infaunal benthic organisms (i.e., mollusks, worms, arthropods) and epibenthos (i.e., organisms living on or above hard substrates, including barnacles, shrimp, and certain polychaete worms) were conducted as part of a 2001 Jamaica Bay Field Sampling and Analysis Program (HydroQual 2001a). Overall, the infaunal benthic community in Jamaica Bay can be characterized as abundant and somewhat diverse (NYCDEP 2007b). The presence of a large number of pollution-tolerant species collected during this sampling program indicated a degree of habitat degradation, although some positive indicators of habitat quality (i.e., presence of amphipods) were also noted. A total of 34 taxa of benthic organisms were collected during Ponar grab samples in Jamaica Bay, predominantly representing Annelida, Arthropoda and Mollusca, with one Cnidarian collected. Annelids that are typically found in human-enriched sediments, including the polychaete mud worm (*Streblospio benedicti*) and family Capitellidae (i.e., lugworms), accounted for 59 percent of individuals collected (NYCDEP 2007b). Patterns of polychaete worm abundance and species diversity in Jamaica Bay suggest the presence of overly enriched sediments (Gosner 1978, Weiss 1995). Two amphipod species (*Ampelisca* and *Corophium*) and the mollusc *Nassarius obsoletus* were also dominant. Amphipods are considered indicators of good localized environmental quality due to their limited mobility and susceptibility to pollution.

For epibenthos, the Harbor-wide Epibenthic Recruitment and Survival sampling program (HydroQual 2001a) identified a total of 43 taxa of Annelida, Arthropoda, Bryozoa, Chlorophyta, Chordata, Cnidaria, Mollusca, and Porifera within Jamaica Bay (HydroQual 2001a). Taxa dominant by weight included ivory barnacle (*Balanus eberneus*), the golden star tunicate (*Botryllus schlosseri*), the blue mussel (*Mytilus edulis*), and the cnidarians Tubularia and Campanularia. Epibenthic communities within the Harbor typically exhibit a vertical distribution on hard surfaces, such as piles and bulkheads, due to changes in water level, salinity, and DO associated with the tides and salinity stratification. The epibenthic sampling did not indicate a similar vertical distribution in Jamaica Bay, suggesting that low DO levels are not limiting to epibenthos in the lower portion of the water column in open areas of Jamaica Bay (NYCDEP 2007b). During the May 2008 field inventory undertaken by AKRF, dense clusters of ribbed mussels (*Geukenzia demissa*) were observed in a semi-infaunal state in the sediment and rhizomes of saltwater cordgrass.

Fish

Jamaica Bay is a highly productive and regionally significant habitat for finfish. Recent sampling identified 49 species of finfish within the bay (Kurtzke and Schriebman 2002), and a four-year survey in the 1980s identified 81 species (Scaglione 1991). Common marine species in Jamaica Bay include winter flounder (*Pleuronectes americanus*), weakfish (*Cynoscion regalis*), and windowpane (*Scophthalmus aquosus*). Forage fish species occurring in high abundances include Atlantic silverside (*Menidia menidia*), bay anchovy (*Anchoa mitchilli*), mummichog (*Fundulus heteroclitus*), Atlantic menhaden (*Brevoortia tyrannus*), and striped killifish (*Fundulus majalis*). These species form an important prey base for other fish and birds that use Jamaica Bay. Important recreational fish species include, but are not limited to weakfish (*Cynoscion regalis*), bluefish (*Pomatomus saltatrix*), scup (*Stenotomus chrysops*), striped bass, and winter flounder (USFWS 1997). Winter flounder is considered the most important commercial and recreational fish of the bay in great numbers during all life stages (USFWS 1997). Anadromous species that use the bay include blueback herring (*Alosa aestivalis*), Atlantic sturgeon (*Acipenser oxyrinchus*), alewife (*Alosa*

pseudoharengus), American shad (*Alosa sapidissima*), and striped bass (*Morone saxatilis*). The single catadromous species common to the bay is American eel (*Anguilla rostrata*).

Table B-3 lists finfish species that are common to Jamaica Bay.

Table B-3
Common Finfish of Jamaica Bay

Common Name	Scientific Name
Scup	<i>Stenotomus chrysops</i>
Bluefish	<i>Pomatomus saltatrix</i>
Atlantic silverside	<i>Menidia menidia</i>
Winter flounder	<i>Pseudopleuronectes americanus</i>
Windowpane	<i>Scophthalmus aquosus</i>
Blackfish or Tautog	<i>Tautoga onitis</i>
Weakfish	<i>Cynoscion regalis</i>
Mummichog	<i>Fundulus heteroclitus</i>
Atlantic sturgeon	<i>Acipenser oxyrinchus</i>
American shad	<i>Alosa sapidissima</i>
Atlantic menhaden (bunker)	<i>Brevoortia tyrannus</i>
Bay anchovy	<i>Anchoa mitchilli</i>
Striped killifish	<i>Fundulus majalis</i>
Striped bass	<i>Morone saxatilis</i>

Sources: Reipe et al. (1989) "Finfish of Jamaica Bay"; USFWS 1997 "Significant Habitats and Habitat Complexes of the New York Bight Watershed."

ESSENTIAL FISH HABITAT

The project site is within a portion of the Great South Bay estuary EFH that is situated in the NOAA/NMFS 10' x 10' square with coordinates (North) 40°40.0' N, (East) 73°40.0' W, (South) 40°30.0' N, (West) 73°50.0' W, which includes Atlantic Ocean waters within the square affecting the following areas of New York: Western Long Beach, Hewlett, Woodmere, Cedarhurst, Lawrence, Inwood, Far Rockaway, East Rockaway Inlet, eastern Jamaica Bay, Brosewre Bay, Grassy Bay, Head of Bay, Grass Hassock Channel, eastern Rockaway Beach, Atlantic Beach, Howard Beach, J.F.K. International Airport, Springfield, and Rosedale, along with many smaller islands. The eastern Jamaica Bay area containing the proposed action has been identified as EFH for 22 species of fish. Table B-4 lists the EHF species and their life stages in eastern Jamaica Bay.

PROTECTED, ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

Introduction

Information on endangered, threatened, special concern, and rare species within a half mile of the project site was requested from the USFWS Long Island Office, NMFS, and NYNHP on February 13, 2008. NYNHP records indicate that four state endangered plant species and one special concern vegetative community are present within the study area. In addition, NYNHP database search results include three plant species known to occur in wetlands or uplands in and around Jamaica Bay that could occur on the project site. According to the list of federally threatened or endangered species for Queens County, furnished by the USFWS, four species were identified, including one plant, two birds, and one fish species (Papa 2008). NMFS indicated that there are no endangered, threatened, or special concern species that are likely to occur along the shoreline where the proposed project would take place (Colligan 2008). As indicated above, the common tern and least tern were observed during field surveys. Both of these species are state-listed threatened, and the least tern is federally listed, but only for interior populations. A short description of state-listed species is provided below.

Table B-4

Essential Fish Habitat Designated Species for Jamaica Bay

Species	Eggs	Larvae	Juveniles	Adults
Atlantic Salmon (<i>Salmo salar</i>)				X
Pollock (<i>Pollachius virens</i>)			X	
Whiting	X	X	X	
Red hake (<i>Urophycis chuss</i>)	X	X	X	
Winter flounder (<i>Pseudopleuronectes americanus</i>)	X	X	X	X
Windowpane flounder (<i>Scophthalmus aquosus</i>)			X	X
Atlantic sea herring (<i>Clupea harengus</i>)				X
Monkfish			X	X
Bluefish (<i>Pomatomus saltatrix</i>)			X	X
Atlantic butterfish (<i>Peprilus triacanthus</i>)	X	X	X	X
Atlantic mackerel (<i>Scomber scombrus</i>)	X	X	X	X
Summer flounder (<i>Paralichthys dentatus</i>)			X	X
Scup (<i>Stenotomus chrysops</i>)	N/A	N/A	X	X
Black sea bass (<i>Centropristus striata</i>)	N/A		X	
King mackerel (<i>Scomberomorus cavalla</i>)	X	X	X	X
Spanish mackerel (<i>Scomberomorus maculatus</i>)	X	X	X	X
Cobia (<i>Rachycentron canadum</i>)	X	X	X	X
Sand tiger shark (<i>Odontaspis Taurus</i>)		X		
Blue shark (<i>Prionace glauca</i>)				X
Dusky shark		X		
Sandbar shark (<i>Charcharinus plumbeus</i>)		X	X	X
Tiger shark		X		

Source: National Marine Fisheries Service. "Summary of Essential Fish Habitat (EFH) Designation" posted on the internet at http://www.nero.noaa.gov/hcd/STATES4/conn_li_ny/403073407340.html.

Vegetative Communities and Individual Species

Vegetative Communities

Low salt marsh is a coastal marsh community that occurs in sheltered areas of the seacoast, in a zone extending from mean high tide down to mean sea level, or to about 2 m (6 ft) below mean high tide. Therefore, low salt marsh is regularly flooded by semidiurnal tides. The mean tidal range of low salt marshes in Jamaica Bay is about 80 cm, and they often form in basins with a depth of 1.6 m or greater. Although the community is degraded, about one-half of the total marsh acreage in Jamaica Bay is low salt marsh. A monotypic stand of cordgrass (*Spartina alterniflora*) is the characteristic plant of this vegetative community; other plants, present in very low numbers, include glasswort (*Salicornia europaea*), salt marsh sand-spurry (*Spergularia marina*), and lesser sea blite (*Suaeda maritima*) (Edinger et. al 2002). This plant community does not occur on the project site.

Plants

Cut-leaved evening primrose (*Oenothera laciniata*) is a state endangered plant that occurs in Queens County. Habitat includes dry or sandy soil in sunny places (CT Botanical Society 2005). Flowers: beginning of June to end of September. Fruits: middle of June to middle of October (Young 2007).

Willow oak (*Quercus phellos*) is a state endangered tree native to the eastern coast of the United States from New York to Florida and across to Texas. This species occurs in moist alluvial soils of lowlands, floodplains, and bottomlands of streams (Little 1980). Willow oak is commonly found in transitional communities between swamps and upland mesic forests. Vegetative: beginning of May through end of October (Young 2007).

Narrow-leaf seablite (*Suaeda linearis*) is a state endangered annual plant with habitat that includes salt marshes, sea beaches (Peterson/McKenny 1996), brackish marshes, and overwashes

(Duncan and Duncan 1987). Fruits: beginning of October through middle of November (Young 2007).

Roland's sea-blite (*Suaeda rolandii*) is a state endangered annual plant with habitat that includes tidal flats and salt marshes (FNA 2008). Fruits: beginning of October to middle of November (Young 2007).

Seabeach amaranth (*Amaranthus pumilus*) is a federally listed threatened annual plant with habitat that consists of dynamic barrier beach landscapes where there is low competition from other plants, as it is intolerant of vegetative competition. The plant often colonizes accreting shoreline, upper beach, foredune, overwash flat, dredge spoil, and sand/shell beach replenishment areas. Seabeach amaranth shares habitat with other endangered species, including piping plover and roseate tern (USFWS undated). Flowers: middle of August to end of October. Fruits: beginning of September to middle of November (Young 2007).

Yellow flatsedge (*Cyperus flavescens*) is a state endangered plant that occurs at wet sandy sites. In New York State, habitats include salt marshes (high marsh) and coastal plain pond shores, as well as wet, sandy, and weedy roadsides (NYNHP 2008). Fruits: beginning of August through end of September (Young 2007).

Retorse flatsedge (*Cyperus retrorsus* var. *retrosus*) is a state endangered plant that occurs in beach habitats and salt marshes. Fruits: middle of July through end of October (Young 2007).

Historical Records

Slender crabgrass (*Digitaria filiformis*) is a state-threatened plant with habitat in sandy soils and sterile open fields that receive full sun. Fruits: middle of August through the end of September (Young 2007).

Wildlife

Jamaica Bay supports 120 bird species of "special emphasis," including shorebirds, waterfowl, land birds, and raptors. The following federally listed species were specified by USFWS as having the potential to occur within Queens County.

Piping plover (*Charadrius melodus*) are federally listed threatened and state-listed endangered shorebirds that arrive to breeding grounds in coastal areas in mid-March in New York State. Breeding habitat typically consists of dry sandy beaches or areas that have been filled with dredged sand, often near dunes in areas with little or no beach grass. Although nests are usually found in areas with little or no vegetation, piping plovers will occasionally nest under stands of American beachgrass (*Ammophila breviligulata*) or other vegetation (USFWS 2007). Breeding occurs between April and September in the New York area (USFWS 2007). Three populations of piping plovers currently exist: one along the east coast, another on the upper Great Lakes, and a third on the major river systems and wetlands of the northern Great Plains. In New York, breeding occurs on the Atlantic shorelines sandy beaches, from Queens to the Hamptons. As noted above, in the New York City area, piping plover and the state-listed threatened least tern breed and nest in a protected area on Rockaway Beach in the neighborhood of Arverne, Queens (Beach 44th and Beach 57th streets) (NYCDPR undated).

Roseate tern (*Sterna dougallii dougallii*) are federally and state-listed endangered shorebirds that arrive to breeding grounds in late April or early May and begin nesting one month later. Nests typically consist of a simple depression in sand, shell, or gravel, lined with bits of grass and other debris, situated in dense grass clumps, under boulders, or in rip-rap. In New York State, roseate terns are always found nesting with common terns. Roseate terns feed on American sand lance—a small fish of estuarine, open-coastal, and offshore habitats that are an

important prey species of many marine fishes and mammals. In New York, the roseate tern breeds primarily at a small number of Long Island colonies; the largest located at the eastern end of Long Island (NYSDEC undated).

Common Tern (*Sterna hirundo*) Common tern are state-listed threatened species that arrive to breeding grounds in late April to mid-May. Common terns inhabit sand and shell beaches, grassy uplands and rocky inland shores. The nest is a simple scrape built above the high tide line in sand, gravel, shells or windrowed seaweed lined with vegetation. Common tern are the most widespread and abundant tern in the state. These colonies may contain several hundred to several thousand birds, including roseate, least, and gull-billed terns, and black skimmers on Long Island. In New York, common terns are predominately on Long Island, but they are known to breed on natural and artificial islands of waterbodies in the north western portion of the state (NYSDEC undated).

Least Tern (*Sterna antillarum*) Least tern are federally listed endangered and state-listed threatened shorebirds that arrive to breeding grounds in late April or early May, often before common tern. The nest is a scrape in sand, shell or gravel, and may be lined with small shells or other debris. Piping plovers are commonly found nesting in association with least terns. By late August and early September, least terns leave the breeding grounds to head for wintering areas (NYSDEC undated).

Shortnose sturgeon (*Acipenser brevirostrum*) is a federally listed endangered anadromous bottom-feeding fish that can be found throughout the Hudson River system, but it spawns, develops, and overwinters well north of the project site in the Hudson River, and prefers colder, deeper waters for all lifestages. While documented as occurring below the Tappan Zee Bridge in the Hudson River (Colligan 2007), this portion of the river is not considered optimal shortnose sturgeon habitat (Bain 2004), and sturgeon would be expected to occur rarely south of the southern tip of Manhattan (Bain 1997). Therefore, the shortnose sturgeon would not be expected to occur within Jamaica Bay.

There are no records of threatened, endangered, or special concern species or habitats being present on the project site.

NATURAL RESOURCES POLICIES AND PROGRAMS

SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT DESIGNATION

NYSDOS has designated Jamaica Bay as a Significant Coastal Fish and Wildlife Habitat (Block NY-22, NYS Coastal Management Program Atlas 2002). To designate a Significant Coastal Fish and Wildlife Habitat, NYSDEC evaluates the significance of the habitat and, following a recommendation from NYSDEC, NYSDOS designates and maps the area.

The Jamaica Bay Significant Coastal Fish and Wildlife Habitat covers an approximately 9,100-acre area that is defined by the mean high water elevation along the shorelines of the bay and also includes fringing tidal marsh and adjacent upland areas, which are important for nesting birds. The habitat does not include the deepwater portions of Beach Channel to the south. The fish and wildlife habitat is the entire bay, which includes extensive areas of salt marsh (1,000 acres), tidal flats, dredge spoil islands, dredged channels, and dredged basins. Some of the islands in the bay have upland communities including open field, shrub thicket, developing woodlands, and beach grass dune. Water depths in the bay average 16 feet, with depths up to 40 feet in the deepest portions of the dredged channels and basins. The tidal range averages about 5 feet, and the flushing rate for most of the bay is about 7 days while the back tributaries can take

about 33 days. The designation recognizes that the only remaining significant natural inflow of surface water into Jamaica Bay is Hook Creek, which drains into the head of the bay area at the northeastern end of the habitat. Additional freshwater inputs are limited to runoff (40 percent) and sewage effluent (60 percent). As stated in the designation report, salinity in the bay ranges from 24 to 30 parts per thousand.

JAMAICA BAY CRITICAL ENVIRONMENTAL AREA DESIGNATION

Under the environmental laws of the State of New York, local agencies may designate specific geographic areas within their boundaries as “Critical Environmental Areas.” State agencies may also designate geographic areas they own, manage, or regulate. To be designated as a Critical Environmental Area, an area must have an exceptional or unique character with respect to one or more of the following:

- A benefit or threat to human health;
- A natural setting (e.g., fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality);
- Agricultural, social, cultural, historic, archaeological, recreational, or educational values; or
- An inherent ecological, geological or hydrological sensitivity to change that may be adversely affected by any change.

Once designated, the potential impact of any Type I or Unlisted Action on the environmental characteristics of the Critical Environmental Area is determined to be a relevant area of concern and must be examined in accordance with the environmental review requirements of Part 617. In accordance with the above requirements, and in consideration of Jamaica Bay’s role as a significant coastal fish and wildlife habitat, NYSDEC designated Jamaica Bay a Critical Environmental Area in the mid 1980s.

STATE AND REGIONAL PROGRAMS

New York/New Jersey Harbor Estuary Program (HEP) Projects

The New York/New Jersey Harbor Estuary Program (HEP) Final Comprehensive Conservation and Management Plan (CCMP) outlined a number of goals to improve water quality and aquatic resources throughout the Harbor. To achieve these goals, the CCMP outlines objectives for the management of toxic contamination, dredged material, pathogenic contamination, floatable debris, nutrients and organic enrichment, and rainfall-related sources. Most of these objectives aim to heighten knowledge and awareness of the bay’s natural features and the extent of various sources of pollution (e.g., toxic chemicals, sewage overflows, and floatables), techniques for reducing these pollutants, and increasing the habitat and human use potential of the Harbor. The floatables action plan of HEP seeks to reduce the amount of debris entering the water. It includes marine debris survey collection programs, improved street cleaning, combined sewer overflow and stormwater abatement, enforcement of solid waste transfer regulations, shoreline cleanup programs, and public education.

The HEP Habitat Workgroup developed watershed-based priorities for acquisition, protection, and restoration of wetland, aquatic, and upland communities that included the following criteria: the presence of species or communities that are rare, endangered, or threatened at the federal, state, or local level; existing and potential ecological value and size; and economic and development factors. The U.S. Army Corps of Engineers (USACE) New York District, as part of the HEP Habitat Workgroup, began a feasibility study in 2001 to assess potential sites for

habitat restoration in New York Harbor. In May 2003, the Regional Plan Association (RPA) also identified needs and opportunities for environmental restoration in the Hudson-Raritan Estuary. These sites include the preservation and enhancement of tidal wetlands that will provide improved habitat for fish and macroinvertebrates as well as the birds, mammals, and reptiles that depend on these habitats. HEP Acquisition and Restoration Sites in close proximity to the project site are listed below. HEP actions taken with respect to these sites could occur with or without the proposed action.

- *Conch Basin*—A sub-basin of Norton Basin, located approximately 0.3 miles from the project site, was identified for salt marsh restoration.
- *Healy Avenue and Michaelis Bayswater Park*—Located along Norton Basin, 0.3 miles northeast of the proposed action, was identified for salt marsh restoration.
- *Somerville Basin*—Located 0.2 miles east of the project site, was identified for salt marsh restoration.
- *Arverne Urban Renewal Area*—Located approximately 0.3 miles southeast of the project site on Rockaway Beach, was identified for beachfront habitat acquisition.
- *Dubos Point*—Located approximately 0.2 miles northeast of the project site, was identified for salt marsh restoration.

Hudson-Raritan Estuary Ecosystem Restoration Project

The Hudson-Raritan Estuary Ecosystem Restoration Project is a cooperative project led by USACE that was funded by a House of Representatives Resolution on April 15, 1999. PANYNJ is a co-sponsor of this project. Other agencies involved in this project include EPA, USFWS, NOAA, NRCS, the New Jersey Department of Environmental Protection (NJDEP), New Jersey Department of Transportation (Office of Maritime Resources) (NJDOT), NYSDEC, NYSDOS, NYCDEP, NYCDPR, and New Jersey Meadowlands Commission. The focus of the study is to identify the actions needed to restore the Hudson-Raritan Estuary and to develop a plan for their implementation. The study area for the program includes all the waters of the New York and New Jersey Harbor and the tidally influenced portions of all rivers and streams that empty into the Harbor and ecologically influence the Harbor. The program identifies measures and plans to restore natural areas within the estuary and enhance their ecological value, and address habitat fragmentation and past restoration and mitigation efforts that were piecemeal in nature.

Jamaica Bay Borrow Pit Evaluation Project

The New York district of the USACE in coordination with NYSDEC and several other federal, state, and local entities developed the Dredged Material Management Plan (DMMP) for NY/NJ Harbor. The DMMP identifies a number of options for the management of dredged material, but places a priority on options that “employ beneficial re-use” of dredged materials. The DMMP identified borrow pits (Grassy Bay, Norton Basin, Conch Basin, Jo-Co) as potential sites for the placement of dredged sediment (USACE, 1999). Between 2000 and 2003, NYSDEC and the New York District of the USACE conducted a number of ecological investigations, known as the Jamaica Bay Borrow Pit Evaluation Project, to determine the feasibility of beneficial re-use of sediments dredged from the New York-New Jersey Harbor for the restoration of borrow pits in Jamaica Bay, and a multi-agency committee was established to review data and determine the ecological conditions in the borrow pits. The committee established that if these pits were deemed to be degraded, the next steps would be to apply hydrodynamic modeling to determine whether a net environmental benefit could result from material disposal and improved water exchange. Study findings indicate that benthic habitat functions are suboptimal; Conch Basin is

significantly impaired (hypoxia persists within the pits during the summer months) and, as a result, the southern portion of Norton Basin and Conch Basin are sufficiently degraded. For these reasons, the Jamaica Bay Borrow Pit Evaluation Project technical committee recommended the implementation of the next step in the assessment process, which will include hydrodynamic modeling and an evaluation of alternatives for improving conditions in these pits (NYSDEC undated[d]).

RELATED NYCDEP PROJECTS

Jamaica Bay Long Term Control Plan

A 2005 CSO Consent Order signed by NYSDEC and the City of New York (NYSDEC 2008) directs the City to develop and implement watershed and facility plans to address CSO discharges and bring waters into compliance with the CWA (NYCDEP 2007a). The goal of the Jamaica Bay and CSO Tributaries Waterbody/Watershed Facility Plan is to reduce CSO discharges in Jamaica Bay and the CSO tributaries. The Long Term Control Plan includes some of the following measures: improvements related to WPCP drainage area infrastructure; separation of storm and combined sewers in the Rockaway WPCP service area (currently partially separated); and reductions in the number and volume of CSO discharges to CSO tributaries. The draft Jamaica Bay and CSO Tributaries Waterbody/Watershed Facility Plan was submitted to NYSDEC in June 2007.

Jamaica Bay Watershed Protection Plan

Overview

In October 2007, NYCDEP released the Jamaica Bay Watershed Protection Plan (October 2, 2007). Preparation of the Plan was required by Local Law 71 of 2005, which mandated NYCDEP to assess the “technical, legal, environmental and economical feasibility” of a diverse set of protection approaches for Jamaica Bay, with efforts to promote a comprehensive approach toward maintaining and restoring the ecosystems within the bay. The plan covers a number of major issues organized under six key elements: Water Quality; Restoration Ecology; Stormwater Management; Public Education and Outreach; Public Use and Enjoyment; and Implementation and Coordination. Within each of the six plan elements, recommendations related to implementation strategies are provided that promote a multifaceted approach to maintaining and restoring the integrity of the bay. Among the objectives and management strategies presented in the plan, it is recognized that several are being implemented through the City’s CSO Long Term Control Plan for Jamaica Bay and the CSO Tributaries Waterbody/Watershed Facility Plan submitted to NYSDEC in June 2007 (see the discussion above). The recommended strategies, which are summarized below, use a combination of infrastructure and engineering solutions, pilot studies using new technology, and ecosystem-based approaches to improve conditions in the bay.

Water Quality

Four priority objectives were identified in the plan with respect to improving water quality including reducing nitrogen loading to the bay. NYCDEP is undertaking a number of capital improvements to reduce nitrogen discharges to the bay.

Restoration Ecology

Federal, state, and City agencies as well as local environmental groups have been very active in restoring and preserving open spaces along the shoreline in Jamaica Bay and, to a lesser degree, portions of the upland. Restoration objectives of the plan focus on restoring the salt marsh islands within the bay and protecting natural areas along the shorelines of the bay.

Stormwater Best Management Practices (BMPs)

The City's Jamaica Bay Watershed Protection Plan calls for the treatment and control of stormwater at its source using both onsite (i.e., runoff captured on a single lot) and offsite (i.e., runoff captured from multiple parcels including streets and vacant lots) control measures as a way to reduce CSO and overland runoff currently entering the bay.

Wetlands Transfer Task Force

Local Law 83 of 2005 established a Wetlands Transfer Task Force (WTTF) established by the Mayor and City Council to evaluate the technical, legal, environmental, and economic feasibility of transferring City-owned properties containing wetlands to the jurisdiction of NYCDPR. Two high priority assessment areas are located in the vicinity of Norton Basin: Edgemere Urban Renewal Area and Norton Basin. A number of parcels in Block 15961, including Lot 110, which borders the project site, are recommended for transfer to NYCDPR by the Task Force, whose recommendations were submitted to the Mayor in September 2007.

FUTURE WITHOUT THE PROPOSED ACTION

In the future without the proposed action, natural resource conditions for the site and surrounding area are expected to remain essentially unchanged.

Many of the significant resources and habitats of Jamaica Bay on City-, state-, or federally owned lands or are regulated by federal, state, and City agencies and special programs that have been developed to manage and protect the bay's natural resources. Among those at the federal level, NPS and USFWS own or manage wetland and upland habitats and aquatic resources within Jamaica Bay. As stated above, state designations include Significant Coastal Fish and Wildlife Habitat (NYSDOS) and CEA (NYSDEC). NYSDEC also regulated activities in wetland, as well as the protection of waters through its regulatory program. The City of New York has also identified Jamaica Bay as one of three Special Waterfront Natural Areas (SWNA) in its Waterfront Revitalization Program (WRP). NYCDPR also manages habitat on properties within its purview, and NYCDEP has also developed a Comprehensive Watershed Management Plan (1993), a Jamaica Bay Watershed Protection Plan (2007), and a Jamaica Bay and CSO Tributaries Waterbody/Watershed Facility Plan (2007) that have been prepared to protect water quality and habitats of the bay. These federal, state, and City programs and other programs are specifically directed at improving biological resources and habitats of Jamaica Bay and would be expected to improve water quality and natural resource habitats in the future without the proposed project.

IMPACTS OF THE PROPOSED ACTION

The proposed action is being designed and implemented by NYCDDC on behalf of NYCDEP. After construction, the proposed sewer outfall would be maintained by NYCDEP. An impact assessment of the proposed action relative to operational (built) phase of the proposed action is presented below. Impacts that would occur during the construction period are presented later in this attachment under "Construction Impacts."

LAND COVERAGE AND WETLANDS

With the proposed project, impacts to tidal wetlands due to the area occupied by the proposed outfall would total 2,085 square feet (0.05 acres) of unvegetated wetlands characterized by a sandy/rubble shoreline and bay bottom. This is the area that would be occupied by the proposed outfall structure. The proposed action includes on-site tidal wetland restoration to take place within sewer easement to restore the temporary impacts of construction. It also includes the

restoration plan for permanent impacts by this project and five other outfall projects located in the Jamaica Bay Watershed at the Beach 88th/94th Street site. Both the on-site restoration plan and the Beach 88th/94th Restoration Plan are summarized in Attachment A, "Project Description".

Block 16109 Lot 70, lot where the sewer easement is located, along with six others lots, have recently been transferred through the Trust for Public Land to the City to be used as a park. Prior to the City acquiring the land on Lot 70, the property owner was required by an existing Consent Order to removal illegal fill placed within the waters of Jamaica Bay on the lot to an elevation of 7 feet above sea level. This regrading will provide a less steep slope for enhanced opportunities for restoration and public access.

NYCDDC and NYCDEP are proposing a restoration plan for Lots 70 and 185 of Block 16109 that would include: debris removal and minor regrading along the shoreline, the construction of a pedestrian access way over the new outfall structure, upland planting to secure the site, and wetland restoration on Lot 185 by removing a crumbling concrete retaining wall. NYCDDC and NYCDEP does not anticipate major regrading of Lot 185 as the removal of the concrete retaining wall should re-establish tidal flow and permit the establishment of wetland vegetation.

It is anticipated that this restoration plan would provide compensatory restoration for the permanent tidal wetland impacts for NYCDDC/NYCDEP outfall projects: Capital Project SEQ200533 Beach 42nd Street (FY 2009), Capital Project QED983 Beach 88th Street (FY 2010), Capital Project SE-795 Chandler Street (FY 2011), Capital Project SEQ200508 Bay 32nd Street (FY 2011), Almeda Avenue Outfall, and 95th and Shellbank Outfall (see Table B-5). Each environmental review for the respective projects would include cumulative impacts for the Beach 88th/94th Restoration Plan.

Table B-5
Wetland Area Impacts from the Proposed Jamaica Bay Outfall Projects

Wetland Type	Impact Type	SEQ-200533 Beach 42nd Street Outfall (FY 2009)	QED-983 Beach 88th Street Outfall (FY 2010)	SE-795 Chandler Street Outfall (FY 2011)	SEQ-200508 Bay 32nd Street Outfall (FY 2011)	Other Proposed Outfall Projects (FY 2012 and 2013)
Littoral Zone	Permanent	0	0	0	0	260
	Temporary	0	0	0	0	320
Intertidal Vegetated	Permanent	105	0	1,770	145	0
	Temporary	400	0	4,785	1,060	0
Intertidal Unvegetated	Permanent	115	2,085	0	265	0
	Temporary	215	1,885	0	2,150	0
High Marsh	Permanent	140	0	175	95	0
	Temporary	475	0	4,365	1,040	0
Open Water	Permanent	0	0	0	0	0
	Temporary	0	0	0	0	0
Adjacent Area	Permanent/ Temporary	22,770	6,785	1,920	30,980	0

Source: Hazen and Sawyer, May 2010.

The restoration plan at the Beach 88th/94th Street site would be included in the capital budget for the Chandler Street Outfall Project (Capital Project SE-795) that is scheduled for Fiscal Year 2011. The restoration would be constructed after the new sewer outfall at Beach 88th Street is complete. NYCDDC and NYCDEP believe that the Beach 88th/94th Street Restoration Plan would serve multiple objectives, including wetland and upland restoration opportunities and

provide additional public access to Jamaica Bay. These objectives are consistent with the NYCDEP Jamaica Bay Watershed Protection Plan and many other Jamaica Bay environmental objectives.

With these measures in place, the proposed action would not result in potential significant adverse impacts on land coverage and wetlands.

FLOODPLAINS

Only the outer portion of the outfall and the headwall would be located within the 100-year floodplain. Installation of the proposed outfall would not adversely affect the floodplain or exacerbate flooding conditions in the area. New York City is affected by local flooding (e.g., flooding of inland portions of the City from short-term, high-intensity rain events in areas with poor drainage), fluvial flooding (e.g., rivers and streams overflowing their banks), and coastal flooding (e.g., long and short wave surges that affect the shores of the Atlantic Ocean, bays such as Jamaica Bay, and tidally influenced rivers, streams, and inlets [FEMA 2007]). The floodplain over the project site is affected by coastal flooding, which is the result of astronomic tides and meteorological forces (e.g., northeasters and hurricanes [FEMA 2007]). This floodplain would not be adversely impacted by the proposed action. Rather, the project would provide beneficial impacts with respect to flooding as one of the project goals is to reduce local street flooding.

Therefore, the proposed action would not result in potential significant adverse impacts on floodplains.

WILDLIFE

As stated above, the majority of the project site has been previously disturbed and does not possess high wildlife habitat. As stated above, the proposed outfall would permanently impact a small area (approximately 0.05 acres) of tidal wetland. The affected area is also previously disturbed, and does not possess any significant wildlife habitats, attractors, or unique features. It is expected that any wildlife species using the site (e.g., mussels), would recolonize the site post-construction. In addition, the proposed action includes a wetland preservation and restoration element that would offset the wetlands impacts of this project and five other outfall projects in Jamaica Bay (see the description in Attachment A, "Project Description").

Therefore, the proposed action would not result in potential significant adverse impacts on wildlife populations or habitats during construction.

WATER QUALITY

The proposed sewer outfall would drain a small area, only about 60 acres of what is a primarily residential uses. The proposed installation of a separate storm sewer outfall proposed as part of the project is consistent with efforts to improve sewer conditions within this area of Queens.

Modeling efforts have been conducted at the other locations in Jamaica Bay for the purposes of assessing the potential water quality impacts at locations where new storm sewer outfalls have been proposed in the Jamaica Bay Watershed. For example, potential water quality impacts from the operation of the proposed Chandler Street outfall project (Capital Project SE-795; CEQR No.: 09DEP052Q) and the proposed Alameda Avenue outfall project (HWQ631B2, SEQ002641, SEQ100485) were examined in both individual and cumulative water quality impact analyses. The proposed Chandler Street outfall project would discharge to Mott Basin and the proposed Alameda Avenue outfall project would discharge to Vernam Basin. Both discharge locations are east of the project site and within confined basins. Potential water quality impacts from both

proposed outfalls were modeled using the Jamaica Bay Eutrophication Model (JEM). That modeling concluded that discharges from the proposed outfalls would have only a negligible impact on water quality within these waterbodies and the larger Jamaica Bay system (HydroQual 2008a,b). Although Mott Basin and Vernam Basin are confined, the modeling results provide a guide to water quality impacts associated with the operation of the proposed Beach 88th Street outfall, which would have the benefit of discharging stormwater into the open waters of Jamaica Bay, where greater mixing can occur, rather than to a more confined basin.

Chandler Street Water Quality Outfall Impacts

The sizes of the drainage areas for both this Beach 88th Street proposed action and the proposed Chandler Street project are similar. The proposed Chandler Street drainage area is about 57 acres. Flushing time in Mott Basin is on the order of two days, allowing for higher pollutant residence time, higher biological demand, and lower dissolved oxygen concentrations. Under modeled baseline conditions, DO concentrations at the head of Mott Basin are below 4.0 mg/L (Class I standard) 24 percent of the time during the summer. Modeling results indicate that DO violations under the Chandler Street outfall project would increase only 1 percent, to 25 percent (HydroQual 2008a), and the baseline and proposed conditions would be 0.11 mg/L different in DO concentrations at a location where the baseline concentrations are typically the lowest. Other water quality parameters, including total and fecal coliform, would be in compliance with NYSDEC standards for Class I waters with the operation of the proposed outfall. For these reasons, it was concluded that the proposed outfall to Mott Basin would not have a significant adverse impact on water quality (HydroQual 2008a).

Alameda Avenue Outfall Water Quality Impacts

The proposed Alameda Avenue outfall to Vernam Basin would also serve a drainage area of about 56 acres. Calculated flushing time in this basin is approximately half a day, thereby limiting impacts to a short-term basis. Water quality data for Vernam Basin show that DO concentrations drop below 4 mg/L at about eight meters in depth at the head end of the basin. However, projections of the difference between the baseline and the impacts of that proposed outfall would be 0.04 mg/L at the head of the basin. This result is less than a one percent decrease of the baseline DO concentrations calculated for the head end of the basin, and therefore would not be expected to cause an adverse significant impact to water quality. In addition, other water quality parameters are expected to meet state standards with additional increases in stormwater discharges (HydroQual 2008b).

Beach 88th/94th Street Outfall Water Quality Impacts

Based on the results of the above modeling studies, conclusions can be drawn regarding potential water quality impacts of the proposed outfall with the Beach 88th/94th Street project. The drainage area for the proposed outfall is about 60 acres and largely low-density residential, with some limited commercial and institutional uses. With the proposed storm sewer outfall, there would be some additional in stormwater runoff pollutants discharged to Jamaica Bay in an open water area of good mixing. Given the negligible impacts on water quality from other drainage areas into more contained water bodies (described above), it is concluded that the proposed project would not result in adverse impacts on the water quality of Jamaica Bay. As discussed under "Existing Conditions," mean DO concentrations and fecal coliform counts in the vicinity of the project site are well above the state standards for 2007, and general trends for these parameters indicate that improvements have been made over the last several years in the open water areas of Jamaica Bay. Therefore, given the baseline conditions and the minimal anticipated impacts of the proposed outfall on local water quality, it is concluded that there

would not be a significant impact on water quality as a result of the proposed Beach 88th/94th Street outfall project.

Cumulative Water Quality Impacts

A cumulative water quality impact assessment was completed to assess the water quality for the impacted basins for five outfall projects discharging to Jamaica Bay.³ The analysis covered five proposed NYCDEP/NYCDDC proposed outfalls to discharge into basins of Jamaica Bay to be included in the Beach 88th/94th Restoration Plan.

In summary, the assessment states that existing water quality conditions within Vernam Basin, Mott Basin, and Norton Basin/Little Bay and in the larger Jamaica Bay, would not be significantly impacted due to the five proposed stormwater discharges. Water quality would continue to meet water quality standards for total coliform, fecal coliform, copper, lead, and zinc. Enterococcus reference levels would be met in all of the areas of the basins, with the exception of the south head of Mott Basin, for both the baseline and projected conditions. Since the predicted change from the baseline worst case enterococci monthly geometric mean of 38 MPN/100mL to the projected worst case enterococci monthly geometric mean of 44 MPN/100mL is small, it is considered to be a negligible impact.

Surface water DO would be in compliance with Class I water quality standards in Vernam and Mott Basins under both the baseline and proposed scenarios. Surface water DO is expected to be in compliance with Class SB water quality standards in Norton Basin and Little Bay except during the summer months in the Little Bay and Norton Basin borrow pits. Since the proposed discharges would not change DO levels, this same scenario would occur with the proposed stormwater outfalls, and it can be concluded that there is no cumulative impacts on surface DO in any of the three Basins due to the proposed discharges.

Bottom summer DO concentrations in Vernam Basin are above the 4.0 mg/L applicable standard under both the baseline and projected scenarios. Bottom summer DO concentrations in Mott Basin and in Norton Basin/Little Bay are below applicable water quality standards both under the baseline and projected scenarios. Since cumulative changes in DO due to the proposed discharge are small (0.11 mg/L change in minimum DO and median change of 0.02 mg/L in Norton Basin/Little Bay), it can be concluded that there are no significant cumulative impacts from the proposed discharges.

Since the differences between the baseline and proposed water quality are negligible and generally occur in the mid to head of the basins, leaving the mouths of the basins unaffected, the cumulative impact of the proposed discharges on water quality in the larger Jamaica Bay, where greater dilution will occur, is negligible.

Therefore, the proposed action would not have a potential significant adverse impact on water quality during its operational phase.

AQUATIC BIOTA

The proposed action would permanently remove some limited benthic habitat in the footprint of the new outfall, about 0.05 acres. This is a minimal direct impact on aquatic habitat and the associated biota of Jamaica Bay. Impacts on primary produces, zooplankton and

³ “Cumulative Water Quality Impact Assessment of the Proposed Stormwater Outfalls in Vernon Basin, Mott Basin, and Norton Basin/Little Basin,” HydroQual Environmental Engineers and Scientists (January 2010).

macroinvertebrate populations, would be negligible. In addition, the proposed action includes a wetland protection and restoration program (see Appendix A, "Project Description"). As stated above, no water quality impacts are expected during operation of the proposed outfall. No indirect impacts to the aquatic biota community are expected to occur as a result of the proposed action with respect to shellfish and finfish resources.

Therefore, the proposed action would not result in potential significant adverse impacts on aquatic biota.

ESSENTIAL FISH HABITAT

As described above, no significant adverse operational impacts are expected on water quality with the proposed action. In addition, no significant direct impacts would occur with respect to essential fish habitat, since only a limited area is directly impacted by the proposed outfall.

Therefore, the proposed action would not result in potential significant adverse impacts on essential fish habitat.

ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

Vegetation

As stated above, under "Existing Conditions," federally listed and state-listed endangered and special concern species are present within Jamaica Bay. While, no federally- or state-listed species or special communities have been identified for the project site, the low salt marsh community of Jamaica Bay is home to the endangered, threatened, and special concern species listed above. Narrow-leaf sea-bite, Roland's sea-bite, and retrorse flatsedge are found in low salt marsh habitat in the bay region. Due to the absence of a low salt marsh community, individuals and habitat of narrow-leaf sea-bite, Roland's sea-bite, and retrorse flatsedge are unlikely to occur on the project site. Furthermore, due to the vegetated successional field and woodland habitat located on the project site, it is unlikely that individuals of seabeach amaranth, which depend on dune habitat, would be present on the project site. Cut-leaved evening primrose and willow oak also occur in disturbed maritime grassland habitat within the study area. Due to the disturbed conditions of the project site, it is possible that the habitat for these two species is present. In addition, although yellow flatsedge occurs as a salt marsh species in the region, it also has the potential to occur in disturbed, sandy locations. However, threatened and endangered species surveys performed on July 28, 2008 confirmed that none of these species are present on the project site. For these reasons, the proposed action would not result in potential significant adverse impacts on vegetative communities or endangered plants are not expected.

Wildlife

As stated above, breeding habitat for piping plover consists of dry sandy beaches or areas that have been filled with dredged sand, often near dunes, in areas with little or no beach grass. Based on the present conditions at the project site (i.e., rock, brick, and concrete riprap), it would be extremely unlikely that piping plover would use the project site, since roosting and breeding habitat required by the species is not present. Therefore, no significant adverse impacts are expected with respect to individuals or habitat of piping plover as a result of the proposed project.

As stated above, one common tern (flying offshore) and one least tern (foraging along the shoreline) were observed in the vicinity of the project site during field surveys. These species, including the Roseate tern, are known to feed in the waters of Jamaica Bay. Although these terns could utilize rocks of the project site to roost, it would be unlikely due to more suitable beach

habitat located in the vicinity of the project site. Thus, occurrences of this species on the project site would be limited to transient individuals. It is therefore concluded that implementation of the proposed project would not result in the loss of individuals or habitat of Roseate, common, and least terns.

Shortnose sturgeon habitat is found in the Hudson River. The shallow waters of Jamaica Bay would not provide adequate habitat to the shortnose sturgeon. As mentioned above, shortnose sturgeon would not be expected to occur in the offshore waters of the project site. Therefore, no significant adverse impacts to the shortnose sturgeon or on its habitat would occur as a result of the proposed project.

Although the osprey, listed as a special concern species by the state, was observed in one of the site visits, no nests have been sighted at project site. Osprey typically nest at the tops of dead trees or on human made tree-like structures (e.g. telephone poles). These ecological features are not present on the project site, although osprey may use the area for flyover or foraging.

Therefore the proposed action would not result in potential significant adverse impacts to endangered, threatened, or special concern species.

NATURAL RESOURCES PROGRAMS AND POLICIES

The proposed action would not result in significant adverse impacts to wetlands, plant communities, wildlife, water quality, or the aquatic biota of Jamaica Bay. The proposed restoration plan, located on a property that has been identified for protection, will assist in providing a new access point to the Jamaica Bay waterfront in addition to supporting the goals and objectives of the Jamaica Bay Watershed Protection Plan. For these reasons, it is concluded that the proposed action would not conflict with the natural resources public policies of the Jamaica Bay Watershed Protection Plan, the Jamaica Bay Long-Term Control Plan, the Jamaica Bay Significant Coastal Fish and Wildlife Habitat, the New York and New Jersey Harbor Estuary Program, or the Hudson-Raritan Estuary Ecosystem Restoration Project.

Therefore, the proposed action would not result in potential significant adverse impacts with respect to natural resources programs and policies.

B.10 HAZARDOUS MATERIALS

INTRODUCTION

The *CEQR Technical Manual* states that the potential for significant impacts related to hazardous materials can occur when: 1) elevated levels of hazardous materials exist on a site; 2) an action would increase pathways to their exposure; or 3) an action would introduce new activities or processes using hazardous materials and the risk of human or environmental exposure is increased.

The conclusions presented below with respect to hazardous materials are based on information gathered from NYSDEC on the Consent Order for Queens Block 16109, Lot 70, a Phase I Corridor Assessment Report and a Phase II Limited Subsurface Corridor Investigation Report prepared in 2004 that was prepared for the proposed action.

The Phase I corridor assessment report studied historical documents and maps relevant to the properties along the project area for the purposes of identifying environmental conditions of high or moderate risk. The high-risk conditions were then further investigated to assess the potential for soil conditions to have been impacted by hazardous materials. Initially, 22 sites were

categorized as high-risk, but after further investigation, NYCDDC concluded that only 11 sites that posed a high risk. A summary of these reports is presented below.

PROPOSED BEACH 88/94TH STREET RESTORATION PLAN

As part of a Consent Order agreement between the prior landowner and NYSDEC, fill soil and debris materials were removed from the property (Block 16109, Lot 70) and the site was graded and stabilized. No hazardous materials were identified during those construction activities. The material that was removed was classified as solid waste (not hazardous waste) and properly disposed.

Given the limited grading activities associated with the proposed wetland restoration plan and that the prior Consent Order activities at the site did not identify the presence of any contaminated materials at this site, it is not expected that hazardous materials would be encountered during the construction phase of the proposed wetland restoration project. However, a CHASP will be prepared in the event that hazardous materials are encountered during the restoration work. The above conditions that would apply to the proposed infrastructure elements of the proposed action including proper disposal of soils (or solid waste debris materials) that is removed from the site and standards for any imported soil would also apply to this element of the proposed action. No dewatering is expected to be necessary during the proposed wetland restoration phase; however, a CHASP will be prepared in the event that hazardous materials are encountered during the restoration work.

With these measures in place, the proposed wetland restoration element of the proposed action is not expected to have significant adverse impacts with respect to hazardous materials.

PHASE I CORRIDOR ASSESSMENT REPORT

On behalf of NYCDDC, Environmental Health and Safety Services (EHSS) prepared a Phase I Corridor Assessment Report (March 2004) for the purposes of determining the potential for areas of environmental concern and possible contamination within or adjacent to the project corridor.

The Phase I scope included a site visit and reconnaissance to document current property use, the corridor; providing photographic documentation of properties within and adjacent to the corridor that are categorized as initial "High" or initial "Moderate" risk or otherwise considered a potential environmental concern; conducting a review of Sanborn fire insurance maps to document historical property use; a review of selected government regulatory databases; and finally preparing and submitting a written report summarizing the sites or issues identified during the assessment that are considered to be of potential environmental concern to the project and provide conclusions and recommendations for additional investigation.

That assessment identified eleven (11) sites that present a "High" risk concern and one (1) site that presents a "Moderate" risk concern for environmental impacts due to hazardous materials. The site(s) identified as "High" and "Moderate" risk were then further analyzed in a Phase II subsurface investigation.

PHASE II LIMITED SUBSURFACE CORRIDOR INVESTIGATION

The Phase II Limited Subsurface Corridor Investigation was prepared by ATC Associates (August 2004) for the purposes of testing project area soils and groundwater to determine if hazardous materials are present. To that end, the Phase II included the following:

- Review construction drawings, performing a site visit for scoping the Subsurface Investigation, and the preparation of a Work Plan;
- Perform twenty-four (24) soil borings in the overburden, using the hydraulic push drive drilling method, to a maximum depth of 12 to 16 feet below ground surface, the collection of a boring-composite soil sample from each boring, and the preparation of two (2) segment-composite soil samples by mixing the soil from all the soil borings with each segment;
- Field screening, consisting of visual and olfactory methods as well as photo ionization detection (PID) of contamination. Selection of soil samples for laboratory analysis based on field screening results and information regarding the former uses on the properties;
- Laboratory analysis of the boring-composite soil samples for volatiles organic compounds (VOCs), semi-volatile organic compounds/base natural compounds (SVOC/BNs), and priority pollutant metals (PP Metals). Analysis of the two (2) segment-composite soil samples for full list toxicity characteristic leaching procedure (TCLP), (polychlorinated biphenyls (PCBs), total petroleum hydrocarbons including diesel and gasoline range organics (TPH-DRO/GRO), and ignitability, reactivity, and corrosivity;
- Installation of six (6) monitoring wells and the collection of six (6) groundwater samples. ATC collected groundwater samples from all installed monitoring wells for the analysis required by NYCDEP for effluent to sanitary or combined sewer systems; and
- Presentation of a written report with schematic drawings depicting the boring locations, significant site features, and if applicable, contamination occurrence and distribution.

In order to evaluate the subsurface soil and groundwater quality, laboratory analytical results were compared with NYSDEC and NYCDEP regulatory standards identified in the following documents:

- NYSDEC Technical and Administrative Guidance Memorandum 4046 (TAGM 4046), Recommended Soil Cleanup Objectives (RSCO);
- NYSDEC Spill Technology and Remediation Series (STARS) Memo #1, Petroleum-Contaminated Soil Guidance Policy;
- Toxicity Characteristics of Leaching Procedure (TCLP) Alternative Guidance Values (AGV);
- NYSDEC Unrestricted Use (Track 1) Soil Cleanup Objectives (SCOs) Subpart 375-6, Remedial Program Soil Cleanup Objectives;
- Characteristics of Hazardous Waste published in the United States Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act (RCRA) and NYSDEC Part 371; and
- NYCDEP Bureau of Wastewater Treatment Limitations for Effluent to Storm Sewers and Effluent to Sanitary or Combined Sewers.

The soil analytical results for the Phase II analysis revealed VOCs, and pesticides or PCBs were either non-detect (ND) or below guidance levels. Several SVOCs from borings B-12 and B-16 exceeded TAGM 4046 RSCOs actionable levels. Several metals (mercury and zinc) exceeded NYSDEC TAGM 4046 guidance levels. The groundwater analytical results revealed that several VOCs (benzene, ethyl benzene, naphthalene, and tetrachloroethylene) from monitoring well MW-4 exceeded NYCDEP effluent limitations for sanitary/combined sewers.

Based on these results, a Construction Health and Safety Plan (CHASP) would be developed for the purposes of constructing the proposed action. Also, soil disturbance would not be performed without NYCDEP's written approval of the CHASP. In addition:

- Soil removed from the site must be properly disposed of in accordance with the applicable NYSDEC regulations. Additional testing of soils may also be required by the receiving and/or recycling facility;
- Imported soil on the site must be from an approved facility/source and graded across the landscaped/grass-covered areas. The clean fill/top soil must be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one sample for every 250 cubic yards, analyze the samples for Target Compound List (TCL) VOCs, SVOCs, pesticides/PCBs and Target Analyte List (TAL), metals by an New York State Department of Health (NYSDOH)-certified laboratory, and compared to NYSDEC 6NYCRR Part 375 standards with NYCDEP written approval to use the clean fill/top soil. Upon receipt of NYCDEP's written approval, the clean fill/top soil may be transported to the site for grading. The clean fill/top soil should not be comprised of any construction or demolition debris;
- The CHASP should be submitted to NYCDEP for review/approval prior to the start of construction; and
- Any dewatering activities would be subject to the requirements of an Industrial Stormwater Pollutant Discharge Elimination System (SPDES) Discharge Permit for temporary dewatering activities (in accordance with the current Industrial SPDES Discharge Permit NY0026221).

With these measures in place, the proposed action would not have potential significant adverse impacts from hazardous materials.

B.11 WATERFRONT REVITALIZATION PROGRAM

INTRODUCTION

This section examines the proposed action's consistency with the City's Waterfront Revitalization Program.

The New York City Waterfront Revitalization Program (WRP), first adopted in 1982, encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. New York City Department of City Planning (NYCDCP) administers the program which is designed to balance economic development and preservation by promoting waterfront revitalization and water-dependent uses while protecting fish and wildlife, open space and scenic areas, public access to the shoreline, and farmland; and minimizing adverse changes to ecological systems and in erosion and flood hazards.

Because the proposed action is located within the City's coastal zone (see Figure C-12), it is subject to a review of the policies under the City's Coastal Zone Management Program. Therefore, this section reviews the applicable WRP policies and assesses the consistency of the proposed action with specific policies. A completed New York City Waterfront Revitalization Program Consistency Assessment Form is also provided with this EAS (see Appendix A).

As described in greater detail below, the proposed action is expected to be consistent with the City's coastal zone policies specifically with respect to policies that address infrastructure and

development in the coastal zone, protection and restoration of coastal ecosystems (e.g., wetlands), protection of water quality, and minimizing coastal flooding and erosion impacts. Therefore, the proposed action would not have significant adverse impacts with respect to the City's Waterfront Revitalization Program.

APPLICABLE NEW YORK CITY WATERFRONT REVITALIZATION POLICIES

Policy 1: Support and facilitate commercial and residential redevelopment in appropriate coastal zone areas.

The proposed action would not directly result in any new residential or commercial uses or redevelopment nor would it induce any new development through the installation of new infrastructure (see the discussion below under "Growth Inducing"). Installation of the proposed infrastructure would support existing (and appropriate) residential and commercial development in the coastal zone as the new infrastructure would relieve local flooding and provide new and improve local infrastructure (see also "Attachment A: Project Description" under the section "Background Purpose and Need") supporting these existing uses, which is consistent with this policy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York City coastal area.

A portion of the proposed outfall would be built on tidal wetlands along Jamaica Bay. In addition, the project site is located within the Waterfront Revitalization Program and the Jamaica Bay Special Natural Waterfront Area (SNWA) and is part of the New York State-designated Jamaica Bay Significant Coastal Fish and Wildlife Habitat and the Jamaica Bay Critical Environment Area. The proposed action involves the installation of a storm sewer system and the installation of a new outfall. As described above under "Natural Resources," and also below under "Construction Impacts" consistent with this policy, the proposed action would not adversely impact water quality and includes a restoration plan for tidal wetlands and adjacent areas. With these measures in place, and consistent with this policy, the proposed action would not result in significant adverse impacts on ecological systems and aquatic resources in Jamaica Bay.

In addition, in order to avoid impacts due to construction-period activity, consistent with this policy, the proposed action includes methods and measures to protect tidal wetlands from construction-period impacts. These protection and restoration measures are described below under "Construction" and would be implemented with the project construction program.

With these measures in place, it is concluded that the proposed action is consistent with this policy.

Policy 5: Protect and improve water quality in the New York City coastal area.

The proposed action would not have significant adverse impacts on local water quality during operation or construction of the proposed outfall. In addition, the proposed action would manage any direct or indirect discharges to waterbodies during construction through a Stormwater Pollution Prevention Plan (SWPPP). It is therefore concluded that the proposed action is consistent with this policy.

Policy 6: Minimize the loss of life, structures, and natural resources caused by flooding and erosion.

The proposed action is a publicly funded capital improvement project that would provide a new stormwater collection and conveyance improvements that would relieve flooding on local roadways in the Far Rockaway area. It would therefore provide the public benefits of

reducing street flooding in the Far Rockaway area of Queens. All construction activities would also be performed in accordance with NYSDEC's technical standards for erosion and sediment control (e.g., use of silt fences, hay bales, and containment booms) that would be implemented in accordance with a SWPPP in order to minimize potential erosion impacts. With these measures in place, no significant erosion impacts are expected as a result of project construction. It is therefore concluded that the proposed action is consistent with this policy.

B.12 INFRASTRUCTURE

WATER SUPPLY SYSTEMS

The proposed action would not introduce new residents or employees and therefore would not increase water supply demands. The proposed action includes the installation of new water mains in the project area. Therefore, the proposed action would not result in potential significant adverse impacts to the City's water supply system.

STORM AND SANITARY DRAINAGE SYSTEMS

As stated above, the proposed action would not introduce any new development or employees that would add demands on the City's stormwater or sanitary drainage system. Thus, no increase in sewage generation is expected, and the proposed action would not result in significant adverse impacts to wastewater and sewerage treatment infrastructure. The proposed action would provide a substantial improvement in the local storm sewer collection system and provide an outfall for the discharge of collected stormwater runoff, thereby resulting in a positive impact on infrastructure and relieving local street flooding conditions. It would also upgrade local sanitary sewers. Therefore, the proposed action would not result in potential significant adverse impacts to storm and sanitary drainage.

B.13 SOLID WASTE AND SANITATION SERVICES

The proposed action would not introduce any new residents or employees. Thus, no increase in solid waste generation is expected. Therefore, the proposed action would not result in potential significant adverse impacts to solid waste and sanitation services.

B.14 ENERGY

The proposed action would not generate any additional demand for energy. While additional energy demand would be generated during the construction phase, any increase in energy use would be negligible and temporary. Therefore, the proposed action would not result in potential significant adverse impacts to the consumption or supply of energy.

B.15 TRAFFIC AND PARKING

The impact methodology guidelines of the 2001 *CEQR Technical Manual* state that for projects that generate new vehicular trips, such as the development of new residential or commercial buildings, the potential for traffic impacts should be analyzed. The proposed action would install new infrastructure, but would not generate new vehicular trips, nor would it open new streets that would create any permanent traffic diversions (the need for any temporary limited traffic diversions during construction is discussed below under "Construction Impacts"). Long-term, positive impacts of the proposed action would include the reconstruction of streets where the

new sewer system would be installed, resulting in improved road surfaces and reduced street flooding.

The proposed action does not include any changes in local on-street parking regulations nor would result in the permanent loss of on any street parking (any temporary loss of street parking along the segments of active construction is discussed below under “Construction Impacts”).

Therefore, the proposed action would not have potential significant adverse impacts to traffic and parking conditions.

B.16 TRANSIT AND PEDESTRIANS

The proposed action involves the installation of new storm sewers and road reconstruction and would not result in any additional demands, pedestrians, rail, or bus patrons. It would not permanently adversely impact any transit service or pedestrian conditions (see also “Construction Impacts” below for a discussion of any temporary construction impacts). Therefore, the proposed action would not result in potential significant adverse impacts to transit and pedestrian conditions.

B.17 AIR QUALITY

As described in the *CEQR Technical Manual*, an air quality analysis is appropriate if a project would result in direct or indirect impacts on ambient air quality.

Direct impacts include emissions generated by stationary sources, such as fuel burned on site for heating, ventilation or air conditioning (HVAC) systems. The proposed action does not include the addition of any new stationary emission sources. Therefore, the proposed action would not result in potential significant adverse impacts to air quality conditions due to stationary sources.

Indirect air quality impacts involve emissions generated by mobile sources, such as motor vehicles traveling to and from the site of the proposed action. The proposed action would not generate new vehicle trips (see “Traffic and Parking” above). Therefore, the proposed action would not result in potential significant adverse impacts to air quality conditions due to mobile sources.

B.18 NOISE

According to the *CEQR Technical Manual*, a noise analysis is appropriate if a proposed action or action would generate any mobile or stationary sources of noise or would be located in an area with high ambient noise levels. The proposed action would not generate new traffic, nor does it include any new stationary sources. Therefore, the proposed action would not result in potential significant adverse noise impacts.

B.19 CONSTRUCTION IMPACTS

DESCRIPTION OF CONSTRUCTION ACTIVITIES

The proposed action involves the construction of a new stormwater outfall to Jamaica Bay, relocation of water mains, upgraded sanitary sewers, and new stormwater collection sewers. Also proposed is the reconstruction of streets affected by the installation of infrastructure and the Beach 88th/94th Street wetland restoration plan that would provide restoration for permanent wetland impacts from six outfall projects in the Jamaica Bay watershed (see Attachment A, “Project Description”).

The proposed outfall would be approximately 250 linear feet in length, 8 feet wide and 5.25 feet high. All outfall construction activities and related staging would occur within a proposed 45-foot-wide NYCDEP easement.

Construction of the proposed action is expected to start in February 2011 and be completed by January 2013. The major phases of construction would include:

- Project initiation and construction staging;
- Partial and phased in-street work with lane closings for the installation of new storm sewers, relocation of the water mains, and the upgrade of sanitary lines including street excavation, installation of sewers, and final paving and surfacing (it is assumed this construction would progress at about 40 to 80 feet per day);
- Street tree pruning and removal, street tree transplanting, and street tree replacement within the project area;
- Construction of the northern phase of the project including excavation and installation for the proposed outfall and headwall (within the NYCDEP easement) at the Beach 88th/94th Street Restoration Site;
- Limited excavation in the area of the outfall headwall including the following detailed stages of construction: installation of a turbidity curtain; installation of a cofferdam to allow dewatering pumps to remove water from the construction area before dredging; a portable sediment tank to remove sediments from dewatered water prior to discharge into Jamaica Bay; mechanical dredging with dredge spoils transported in a sealed/watertight container and disposed of at a NYSDEC-approved upland disposal facility. Dredge material would undergo chemical analyses prior to disposal to satisfy requirements of the disposal facility (no dewatering effluent from the dredging operation will be discharged directly to the Jamaica Bay);
- Landscaping and wetland restoration within the NYCDEP easement where the proposed outfall would be constructed; and
- Beach 88th/94th Street Restoration Plan which is expected to commence in winter 2011 and be completed in spring 2012 (there may be two planting phases to this project element)—this phase of the proposed action would include regrading, debris removal, and targeted plantings and seeding, the removal of a retaining wall, and the building of a walkway over the outfall structure along the shore for pedestrian access.

While it is expected that construction activities would overlap, the general duration of the activities is expected to be as follows:

- Project initiation and staging—45 days (start date, February 2011);
- Installation of storm sewers and street reconstruction including street tree removal and pruning—360 days;
- Outfall and headwall construction—180 days (completion, fall 2011);
- Landscaping and wetlands restoration (in-kind)—45 days;
- Final finishes, including street tree replacement—150 days (project completion January 2013); and
- Proposed Beach 88th/94th Street Restoration Plan—60 to 90 days (completion spring 2012).

Principal activities during sewer construction are expected to include heavy equipment, including the use of backhoes and small cranes, pile driving, concrete and dump trucks for the delivery and removal of materials, tractor trailers that would deliver materials, and pavement cutters and pavers. Use of lighter duty vehicles and equipment would be used during the final

landscaping and finishing work, as well as the restoration of wetlands (both in-kind and the cumulative restoration project). Some heavier equipment (e.g., backhoe) may be necessary for a short period to remove a concrete retaining wall at the site of the proposed wetland restoration.

Construction activities primarily occur Monday through Friday, between 7:00AM and 4:00PM, although there may be special exception when it may be necessary to perform work outside these time periods. Construction staging for the in-street work is expected to be within the street itself and would be subject to NYCDOT permits and approvals. Construction staging areas are expected to be located within City streets or within the existing sewer easement. The contractor may also secure a local property for construction staging.

Construction staging for the proposed outfall and in-kind wetland restoration is expected to occur within the existing 45-foot-wide sewer easement, on the adjacent street (Beach Channel Drive) or at an off-site location to be determined by the contractor. Staging for the wetland restoration element of the proposed action is expected to occur on the NYCDPR property (Block 16109, Lots 70 and 185) and would also involve the use of the adjoining street (i.e., for truck parking), since the restoration would take place along the shoreline and upland of this property.

The analysis below examines the potential for construction-period impacts as a result of the proposed infrastructure improvements and Beach 88th/94th Restoration Plan.

LAND USE, ZONING AND PUBLIC POLICY

Construction impacts with the proposed action would be typical for a sewer installation project in the right-of-way and would be temporary and short in duration. Construction of the proposed outfall would occur on NYCDPR land that is largely buffered from uses that may be sensitive to construction activities (e.g., residences and community facilities). Although public access will be temporarily allowed until construction begins, public access to the site as a waterfront park will be possible once the proposed action and restoration of the site is complete.

PROPOSED BEACH 88TH/94TH STREET RESTORATION PLAN

The site of the proposed restoration plan would occur on City parkland but related construction would be temporary and short and duration. The proposed wetland restoration would involve construction activities associated with removal of debris, removal of a retaining wall, building of a walkway over the outfall at the shoreline, and installation of wetland plants to provide ecological benefits and enhance waterfront access for local residents. This work is also expected to be temporary, and would not result in potential significant adverse construction period impacts on land use, zoning, and public policy.

Construction of the proposed action would not conflict with local zoning or public policies. The construction period impacts are necessary in order to provide storm sewers to the area, which is a long term beneficial impact of the proposed action. The restriction of use will be temporary and short in duration and therefore, the proposed action would not result in potential significant adverse impacts on land use, zoning, or public policy during construction.

OPEN SPACE

Construction would occur at the Beach 88th/94th Street Outfall and Restoration Plan site that is currently owned by NYCDPR. All infrastructure work (i.e., installation of the proposed outfall) and in-kind wetland restoration would take place within the existing 45-foot-wide sewer easement that exists between Beach Channel Drive on the south and Jamaica Bay on the north (see Figure C-4). This work area would also define the limits of all infrastructure construction

activities and it is expected that any construction staging areas would be within this corridor, in the adjacent street, or at an off-site location to be determined by the contractor.

Construction of the proposed outfall and the associated in kind wetland restoration is expected to take about 3-4 months. Although the project site is currently accessible to the public, no public access will be allowed during construction or completion of the restoration plan. However, construction is expected to be temporary and short in duration. As requested by NYCDPR, signs will be posted at the construction site to inform potential users that the park will not be accessible during construction. Therefore, it is concluded that the proposed action would not have potential significant adverse impacts on open space during construction. All construction activities would also require coordination and approval from NYCDPR. In accordance with the requirements of NYCDPR, all areas affected by construction would be restored including the upland sewer corridor and wetlands affected by construction.

Since the potential for any indirect impacts on parkland would be avoided through the limitation of construction staging activities within the 45-foot-wide sewer corridor and implemented through coordination and agreements with NYCDPR, all affected areas would be restored and the period of construction is temporary. It is therefore concluded that the proposed action would not have potential significant adverse impacts on open space during construction.

PROPOSED BEACH 88TH/94TH RESTORATION PLAN

The site of the proposed restoration plan would occur on recently acquired City parkland. However the proposed wetland restoration construction would be temporary and of short duration and would ultimately improve public access and the conditions of natural features of this site. The proposed wetland restoration would involve construction activities associated with removal of debris, removal of a deteriorated retaining wall, building of a pedestrian walkway over the outfall along the shoreline, and planting. This work is expected to be temporary. During this period of construction any informal use of the site for public access would need to be restricted. However, post construction, public access to the site as a waterfront park would be possible once the proposed restoration is complete.

Given the limited construction activities and the duration of construction associated with the wetland restoration element of the proposed action, it is concluded that this element of the proposed action would not result in potential significant adverse impacts on open space during construction.

HAZARDOUS MATERIALS

See "Hazardous Materials," above.

NATURAL RESOURCES

LAND COVERAGE AND WETLANDS

Construction of the proposed stormwater collections lines, water mains, sanitary sewer lines, and street reconstruction would not adversely impact land coverage or wetlands. Construction of the proposed stormwater outfall would impact wetlands within the construction area.

The northern segment of the proposed construction would include excavation and the installation of the proposed outfall and headwall. The affected area is the location of the existing outfall and the area parallel and adjacent (to the west) all of which is within an existing 45-foot-wide NYCDEP sewer easement. This area is comprised of intertidal unvegetated wetlands totaling

approximately 3,970 square feet (about 0.09 acres). This includes areas that would be directly impacted through the installation of the proposed storm sewer outfall as well as adjacent areas that would be disturbed during construction. All areas affected by construction would be re-vegetated post-construction and these impacts are considered temporary construction impacts.

Impacts associated with construction of the proposed action, including activities related to the proposed outfall construction, would be temporary and short-term in duration. In addition, the proposed action would include measures to minimize indirect impacts to wetlands during construction, including the implementation of soil erosion and sediment control practices. Areas affected by construction would also be stabilized with maritime grassland vegetation post-construction (see also Attachment A, "Project Description"). Therefore, the proposed infrastructure improvements would not result in potential significant adverse impacts to tidal wetland or adjacent areas during construction.

WILDLIFE

As stated above, the majority of the project area is City streets with the exception of the area of the proposed outfall. The outfall segment of construction is occupied by intertidal and subtidal marsh wetlands. Construction of the proposed action would impact approximately 0.09 acres of tidal wetland, which would be re-vegetated post construction (with the exception of the 0.05 acres that would be occupied by the proposed outfall). Although, some species of birds, mammals, and other wildlife would be temporarily displaced during project construction, or would avoid the area affected by construction, suitable habitat is located near to the project site and within greater Jamaica Bay area for the limited wildlife population that would be affected. Given the small size of the site and its previously disturbed condition, significant wildlife populations do not currently inhabit or use the area of the proposed outfall. Moreover, it is expected that any wildlife currently using the site would return to the project site post-construction and this loss of habitat would only be temporary (about 3-4 months).

Therefore, the proposed action would not result in potential significant adverse impacts on wildlife populations or habitats during construction.

WATER QUALITY

Bottom disturbing activities with the proposed action would include the installation of the proposed outfall within subtidal and intertidal wetlands of Jamaica Bay. Water quality changes associated with increases in suspended sediment during construction are expected to be temporary and limited to the immediate area of the activity. Suspended sediments would be expected to dissipate shortly once the outfall construction is completed and would not result in long-term adverse impacts to water quality. The proposed action also includes measures to control and contain turbidity during construction (e.g., booms and silt curtains). In addition, with respect to upland construction, all construction activities would be subject to and performed in accordance with NYSDEC's technical standards for erosion and sediment control (e.g., use of silt fences, hay bales, and containment booms; see the discussion below under "Runoff Sediment Controls") that would be implemented in accordance with a SWPPP to minimize potential adverse impacts to water quality and aquatic biota during construction.

Therefore, with these measures in place, the proposed project would not result in potential significant adverse impacts on water quality during construction.

TERRESTRIAL RESOURCES

No potential significant adverse impacts on terrestrial resources are expected with the construction of the proposed outfall. These activities would occur primarily within existing streets. Within the northern segment of the project area the proposed outfall would be developed across the wetlands. This impact is described below.

RUNOFF AND SEDIMENT CONTROL

All construction activities would be performed in accordance with NYSDEC's technical standards for erosion and sediment control (e.g., use of silt fences, hay bales, and containment booms) that would be implemented in accordance with a SWPPP in order to minimize potential adverse impacts to water quality and aquatic biota. With these measures in place, no significant impacts on the water quality of Jamaica Bay are expected as a result of project construction. This SWPPP must be in compliance with New York's SPDES General Permit for Storm Water Runoff from Construction Activity.

The SWPPP would describe the specifics of Stormwater Management Practices (SMPs) to be used to reduce the pollutants in stormwater runoff, and would ensure that with the implementation of the prescribed SMPs the proposed action would not contravene water quality standards. The SWPPP also includes a soil and erosion control plan (SECP) in conformance with NYSDEC's "Standard and Specifications for Erosion and Sediment Control" that at a minimum includes, but is not limited to, the following control measures: construction limit fence, staked straw bales, reinforced silt fence, sediment trap with filter, sediment filter, portable sediment tank, storm drain inlet protection, and sandbags.

During construction, the contractor must conduct a site inspection at least once a week and after each rainfall of 0.5 inches or more, and would perform a final site inspection to certify that the site has undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long term erosion control have been removed. The contractor would also be required to retain the services of a licensed/certified professional to develop and implement the SWPPP that would minimize the pollutants entering the storm sewer systems in compliance with the State of New York's most recent General Permit for Storm Water Runoff from Construction Activity.

Impacts associated with construction of the proposed action including runoff and sediment control would be temporary and short-term in duration. Therefore, the proposed action would not result in potential significant adverse impacts to water quality and aquatic resources during construction.

NATURAL RESOURCES AND WATER QUALITY PROTECTIONS

Construction of the proposed collection sewers and outfall involves activities within tidal wetlands and tidal wetland adjacent areas. As a result, the following measures are proposed to avoid this potential impact:

- Sediment and erosion control practices would be made part of the contract requirements, including specific techniques and methods to control sedimentation and erosion, such as snow fencing and silt fence/surface water collectors along the particularly sensitive segments, as appropriate (see the discussion above).
- Within the wetland areas to be replanted, biodegradable erosion-control matting or jute mesh would be used to stabilize soils during the grown-in period. Individual plants would be

planted after the mat has been installed. This matting reduces erosion and sedimentation from the created wetlands to existing wetlands by protecting soil during the period when new wetland plantings are taking root.

- Flagging and marking the edge of wetlands so that construction activities do not extend into wetland areas not intended for construction or restoration.
- Removal of debris and invasive species within the project area. With the installation of the proposed outfall, several measures would be undertaken to restore the areas disturbed under the current condition. This would include the removal of invasive plants as well as the removal of debris (e.g., concrete, rebar, bricks, etc., along the shore). Under this proposal, these disturbed areas would be planted with tidal plants that are native to Jamaica Bay and consistent with surrounding habitats.

In addition, to protect surface waters from the impacts of turbidity during construction, the proposed action would include techniques to minimize turbidity impacts and ensure that the proposed construction activity does not adversely impact the Jamaica Bay water quality. These measures are expected to include the following.

- A turbidity curtain and cofferdam, to be installed prior to the start of any construction activities associated with the construction of the new storm sewer outfall. The turbidity curtain would be placed below the mean low water line, in order to continually control the turbidity of the surrounding area. The cofferdam would be installed to allow dewatering pumps to remove water within the construction area before excavation.
- All dewatering activity would occur within the NYCDEP easement and no dewatering effluent from the excavating operation would be discharged directly into Jamaica Bay.
- During construction, portable sediment tanks would be used to remove sediments from dewatering effluent prior to discharge into Jamaica Bay. If required, dewatering would be covered by a Long Island Wells permit, applied for by the construction contractor.
- When water level within the cofferdam rises, mechanical excavation would be performed.

Impacts associated with construction of the proposed action including natural resources and water quality would be temporary and short-term in duration. Therefore, the proposed action would not result in potential significant adverse impacts to natural resources during construction.

AQUATIC BIOTA

As discussed above, the proposed action would have limited short-term construction related impacts to water quality and aquatic biota. These impacts may include localized temporary increases in suspended sediment and re-suspension of contaminated sediments, fish habitat avoidance, and a *de minimis* disturbance to benthic communities during the installation of the proposed outfall. Water quality changes associated with these increases in suspended sediment are expected to be minimal, temporary, and limited to the immediate area of the activity. Protection measures (e.g., silt curtains and erosion control) are also proposed.

In addition, as described above, the proposed action would comply with all construction period requirements for runoff control and sediment control practices, which would be specified in a SWPPP and the construction documents. Lastly, the proposed action would implement measures as required by the permits to protect tidal wetlands, water quality, and aquatic habitats during construction.

The proposed action also includes a wetland restoration program for areas affected by construction (see Attachment A “Project Description”). With this wetland restoration, benthic

macroinvertebrates would be expected to recolonize the area shortly after construction is completed.

Impacts associated with construction of the proposed action including aquatic biota would be limited as well as temporary and of short duration. Therefore, the proposed action would not result in potential significant adverse impacts to aquatic biota during construction.

PROPOSED BEACH 88TH/94TH RESTORATION PLAN

The proposed wetland restoration element of the proposed action would include debris removal and minor regrading along the shoreline, the construction of a pedestrian access over the proposed outfall structure, some upland plantings to secure the site, and wetland restoration of Lot 185 that would include removal of a crumbling concrete wall. No major regrading is proposed as the removal of the concrete retaining wall should reestablish tidal flow and allow the natural reestablishment of wetland vegetation. To the extent that soil erosion and sediment control practices are necessary during construction of the proposed wetland restoration project and required by NYSDEC/USACE, they would be implemented. However, if these measures are necessary, they would be limited. Therefore, the wetland restoration element of the proposed action would not result in potential adverse significant impacts on wetlands, wildlife, water quality, or aquatic resources during construction.

TRAFFIC AND PARKING

Temporary increases in vehicular traffic during construction of the proposed action would not be expected to exceed the 50-peak hour trip threshold established by the CEQR guidelines. The project would generate trips from workers traveling to and from the site, as well as from the movement of goods and equipment. The estimated average number of construction workers on site at any one time would vary, depending on the stage of construction, as follows:

- Sewer installation and outfall work would require an average of approximately 10 to 20 individuals;
- Street and parking area construction work would require an average of approximately 10 to 15 individuals; and
- For lesser intensive work periods, average workers at the site work would total between 5 to 10 individuals.

Given typical construction hours (described above), worker trips occur in off-peak travel times and are not represent a substantial increase in local traffic. Standard peak traffic hours in New York City are from 8:00 AM to 10:00 AM and 5:00 PM to 7:00 PM. Temporary increases in vehicular traffic during construction of the proposed outfall would not be expected to exceed the 50 peak-hour threshold established by the CEQR guidelines during these time periods. Therefore, vehicle trips associated with the proposed action are not expected to have potential significant adverse impacts on the surrounding streets during construction.

TRUCK TRAFFIC

Truck traffic, including removal and delivery and removal of soil, asphalt, piping, and materials, would be spread throughout the weekday, and generally occur between the hours of 7:30 AM and 3:30 PM on weekdays, depending on the period of construction. The following estimated numbers of trucks (for delivery of soils, materials, and concrete) are anticipated during the various stages of construction based upon NYCDDC experience for other construction projects would be as follows:

- Sewer installation and outfall work: 10 to 15 trucks per day (e.g., dump trucks, concrete trucks)
- Street construction work: 7 trucks per day
- Other site work(e.g., staging): 2 trucks per day

It is assumed that all construction truck traffic would be distributed throughout the day and only a limited number of trips would occur in the standard peak traffic hours (e.g., 8:00 to 10:00 AM and 5:00 to 7:00 PM).

Impacts associated with construction of the proposed action including truck traffic generated during construction would be temporary and short in duration. For the level of construction activity proposed, it is also expected that truck traffic would not exceed CEQR thresholds for significant traffic impacts during the standard hours for analysis. Therefore, the proposed action would not result in potential significant adverse impacts to traffic generated during construction.

MAINTENANCE AND PROTECTION OF TRAFFIC

The proposed action would require work in local streets for the installation of storm sewers. It is expected that traffic flows would be only partially and temporarily affected by the proposed action and if full street closures are required for limited street segments, these too would be temporary. Overall, work in local streets is expected to be short in duration and last for approximately three months. In addition, the contractor would be required to restore the full width of the street at the end of each daily construction period to allow free flow of traffic. Lastly, all construction activities and closures would be subject to NYCDOT approval under a street and sidewalk construction permit. A plan for the maintenance and protection of traffic would be submitted to NYCDOT for review and approval.

Traffic impacts due to construction and the associated diversions would be temporary and short in duration. There would also be a plan in place to protect traffic flows. Therefore, the proposed action would not result in potential significant adverse impacts to traffic during construction.

PARKING

It is expected that the affected curbside parking would be temporary and short in duration (as stated above, about three to six months of street work are expected and the work would proceed in phases). Street construction is expected to impact about 20-30 on-street parking spaces during the periods of more intensive construction activities. This parking impact would also shift to different street segments as the construction program progresses. All construction activities and temporary removal of street parking would be subject to a NYCDOT approval under a street and sidewalk construction permit.

Impacts associated with construction of the proposed action including on-street parking would be temporary and short in duration. Therefore, the proposed action would not result in potential significant adverse impacts to parking during construction.

PROPOSED BEACH 88TH/94TH RESTORATION PLAN

The proposed wetland restoration element of the proposed action would generate limited employee traffic, as well as limited truck deliveries. There would also be limited truck traffic to haul debris from the site and the majority of this project-generated traffic would occur outside of the peak travel periods. In addition, the street parking demands during this phase of construction would be both limited and temporary. The project site also has direct access to Beach Channel Drive, which would minimize trips on local neighborhood streets. Therefore, the wetland

restoration element of the proposed action would not result in potential significant adverse impacts on traffic and parking during construction.

TRANSIT AND PEDESTRIANS

While this element of the proposed action would have some limited impact on local bus service or stops (i.e., along Rockaway Beach Boulevard) these impacts are expected to be temporary in duration. Total in-street construction activity on Rockaway Beach Boulevard is about 1,000 linear feet along the Boulevard, which is expected to last about 45-60 days. To the extent any bus stops would need to be temporarily relocated during this period, the relocation would be coordinated with NYCDOT and the MTA prior to construction and implemented during construction by the contractor.

It is also expected that the proposed action would require some temporary sidewalk closure along each segment of construction for the purpose of providing the street improvements. Sidewalk closure periods would be temporary and short in duration, and adequate temporary diversions would be provided for each phase of street construction. During construction any sidewalk diversions would be provided with the appropriate protection measures as well as diversion signage and all sidewalks and pedestrian paths would be restored as part of the street reconstruction. All construction activities and sidewalk closures would also be subject to NYCDOT approval under a street and sidewalk construction permit.

In sum, impacts associated with construction of the proposed action, including temporary sidewalk closures would be temporary and short-term in duration. The proposed project would also not have any impacts on transit rail service and would only have a limited impact on bus service during the short duration of construction activity along Rockaway Beach Boulevard. Therefore, the proposed action would not result in potential significant adverse impacts to public pedestrians during construction.

The proposed action would have temporary impacts to local bus service along Rockaway Beach Boulevard and therefore, the proposed action would not result in potential significant adverse impacts to transit service in the area during construction.

PROPOSED BEACH 88TH/94TH RESTORATION PLAN

The proposed wetland restoration element of the proposed action would occur outside of the local streets and would therefore not have potential significant adverse impacts on transit or pedestrians during construction.

NOISE AND VIBRATION

NOISE

Construction activities associated with the proposed action would result in localized temporary noise increases. Impacts on community noise levels during construction typically result from two sources (1) construction equipment operation; and (2) construction vehicles and delivery vehicles traveling to and from the site. Noise levels at a given location typically depend on the number and types of construction equipment being operated, distance of the receptor from the construction site, and any shielding effects (attenuation due to structures or natural barriers). Noise levels caused by construction activities also vary widely and depend on the construction phase. Typically, the loudest noise associated with construction is jackhammers and pile driving.

Construction noise is regulated by the New York City Noise Control Code (Local Law 113) and the Environmental Protection Agency noise emission standards for construction equipment. These federal and local requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards. Except under exceptional circumstances, construction activities must be limited to weekdays between the hours of 7 AM and 6 PM. Construction materials would also be handled and transported in such a manner as to not create any unnecessary noise. Compliance with these noise control measures would be ensured by including them in the contract documents as specifications and directives to the construction contractors.

In addition, in accordance with City regulations, a noise control plan would be developed and implemented to minimize intrusive noise into nearby areas and effects on sensitive receptors. The noise control plan may include such restrictions as locations of generators and avoiding unnecessary evening construction activities. A copy of the noise mitigation plan would be kept at the project site for compliance review by the NYCDEP and the New York City Department of Buildings (NYCDOB). Significant noise impacts to sensitive receptors would not result from the proposed action due to the temporary nature and short duration of construction.

However, pursuant to section 24-222, there are a number of circumstances under which after hours work (i.e., outside of the 7 AM to 6 PM weekdays limit) can be authorized by the NYCDEP. If after hours work is scheduled, NYCDEP would be notified to ensure all other analyses and findings completed for the environmental review remain applicable. The NYCDEP may authorize such after hours work provided that the noise control plan is updated by the Contractor and submitted to the NYCDEP for review and approval.

In conclusion, impacts associated with construction noise would be temporary and short in duration with a number of controls in place to minimize construction noise impacts. Therefore, the proposed action would not result in potential significant adverse noise impacts during construction.

VIBRATIONS

Vibrations generated by construction activities can be perceptible and in some cases potentially damaging to structures. No blasting is proposed with the proposed action; however, pile driving (or drilling) would be used for the proposed outfall. Vibratory levels at a given receptor are a function of the source strength (which in turn is dependent upon the construction equipment and construction methods utilized), the distance between the equipment and the structural receptor, characteristics of the transmitting medium, and the receiver building construction. Construction equipment operation can cause ground vibrations that travel through the ground and therefore decrease in strength with distance. Vehicle traffic, even in locations close to major roadways, typically does not result in perceptible vibration levels, unless there are irregular road surfaces. With the exception of the case of fragile structures or buildings, typical construction activities do not attain levels that result in architectural or structural damage to buildings, but they can achieve levels that are perceptible. During the pile phase of construction, monitoring would be used to determine if vibration levels are potentially damaging to nearby structures.

Impacts associated with construction of the proposed action including vibration would be temporary and short in duration. Therefore, the proposed action would not result in potential significant adverse impacts due to vibration during construction.

PROPOSED BEACH 88TH/94TH RESTORATION PLAN

In addition to being temporary in duration (approximately 45 to 60 days), the elements of the proposed action would primarily require hand-operated equipment and limited heavy equipment, although removal of the existing retaining wall may require some heavier equipment, but this would also be temporary and short in duration. Therefore, this element of the proposed action would not result in potential significant adverse noise impacts during construction.

AIR QUALITY

PROPOSED INFRASTRUCTURE IMPROVEMENTS

Emissions during construction can include mobile source emissions from vehicles (e.g., trucks and automobiles) and particulate matter from dust. Such emissions may result from trucks delivering or hauling construction and demolition materials and removing debris; worker vehicles; and construction equipment. While it would be expected that there would be a limited localized increase in mobile source emissions during construction, these emissions are not expected to significantly impact air local quality. Moreover, such impacts, while minimal, would also be temporary. City regulations require all project contractors to reduce particulate matter emissions to the extent practicable by employing relatively new equipment including diesel oxidation catalysts (DOCs). Construction activities would be subject to New York City Local Law 77, which requires the use of Best Available Technology (BAT) for equipment at the time of construction.⁴

The contractor would also be required to implement a dust control plan with fugitive dust control measures and specifications. Loose materials would be watered, stabilized with a biodegradable suppressing agent, or covered. In addition, the soil erosion and sediment control practices presented above would have the dual benefit of providing dust suppression. In addition, all fugitive dust control measures would be employed as required by the City of New York to reduce the creation and spread of construction dust.

Any effects on local air quality associated with construction of this element of the proposed action, including air quality, would be temporary and short-term in duration. Therefore, the proposed action would not result in potential significant adverse impacts to air quality during construction.

PROPOSED BEACH 88TH/94TH RESTORATION PLAN

The proposed wetland restoration phase of the proposed action would require minor disturbance of soil and limited vehicle traffic. Therefore, the proposed action would not result in significant adverse period air quality impacts during construction.

⁴ New York City Administrative Code § 24-163.3, adopted December 22, 2003, also known as Local Law 77, requires that any diesel-powered non-road engine with a power output of 50 hp or greater that is owned by, operated by or on behalf of, or leased by a City agency shall be powered by ultra low sulfur diesel fuel (ULSD), and utilize the best available technology (BAT) for reducing the emission of pollutants, primarily particulate matter and secondarily nitrogen oxides. NYCDEP is charged with defining and periodically updating the definition of BAT.

B.20 PUBLIC HEALTH

According to the 2001 *CEQR Technical Manual*, public health may be impacted by poor air quality resulting from traffic or stationary sources, hazardous materials in soil or groundwater used for drinking water, significant adverse impacts related to noise or odors, solid waste management practices that attract vermin and pest populations, and actions that exceed City, state, or federal standards.

As described above, the proposed action would not result in significant adverse impacts to traffic, air quality, or noise, nor would any applicable City, state, or federal standards that protect air and noise conditions be exceeded. The proposed action would not involve solid waste management practices that would attract vermin or pest populations. In addition, any hazardous materials encountered during construction would be handled in accordance with all federal, state, and local regulations, and in accordance with the protection measures described above under “Hazardous Materials.” With these protection measures in place, impacts from hazardous materials on construction works of local residents would be avoided.

Therefore the proposed action would not result in potential significant adverse public health impacts.

B.21 GROWTH INDUCING

The proposed project would relieve local street flooding through storm drainage improvements with the construction of a new outfall and storm sewers and replace existing sanitary sewers and water mains, and reconstruct streets affected by the sewer construction. The area of the proposed project is largely developed with residential uses and a small commercial center (see Figure C-5). Of the approximately 60 acres that comprise the project area, only about 10 lots covering about 3 acres or 5 percent of the study area is undeveloped vacant land. The area is also well-served by transportation infrastructure with public transportation access and a local street grid for vehicular access, along with existing water supply and sanitary sewer service. The area was also recently rezoned for a contextual rezoning (see the “Rockaway Neighborhoods Rezoning” discussion under “Land Use, Zoning, and Public Policy,” above); the zoning action was instituted to manage growth in the Rockaway Peninsula area while supporting growth at sites located near transit stations.

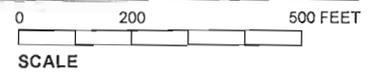
The *CEQR Technical Manual* identifies the introduction or expansion of infrastructure as a potentially growth inducing proposed action. However, given that this area is largely developed and is already served by transportation systems and infrastructure (with the exception of stormwater runoff management), it is concluded that the proposed action would not induce new development in the area. Therefore, the proposed project would not result in potential significant adverse growth inducing impacts. *

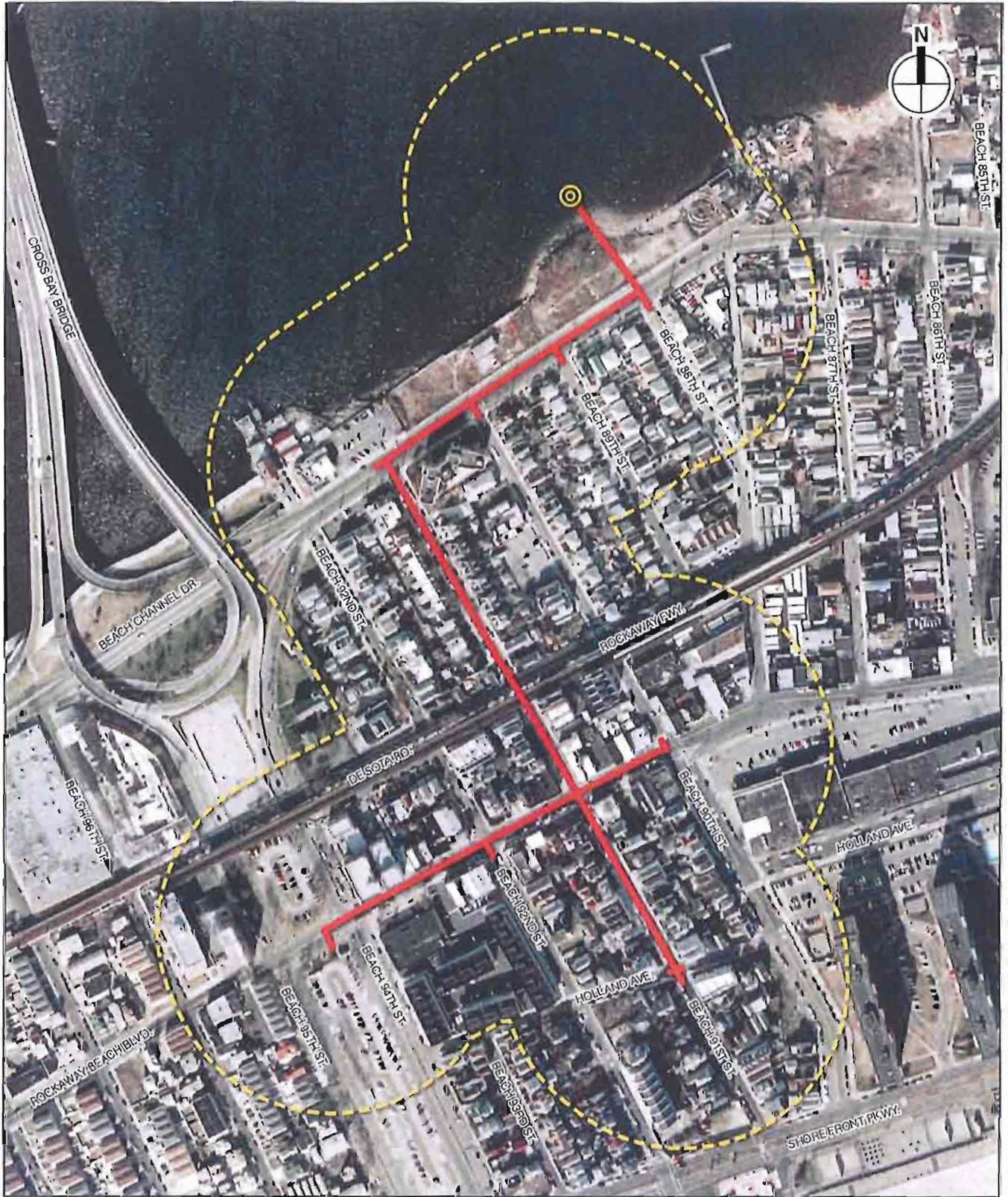
ATTACHMENT C
EAS Graphics



- Proposed Storm Sewer
- - - Study Area Boundary (400-foot Project Area)
- Outfall

- 16139 Block Number
- 13 Lot Number





— Proposed Storm Sewer
 Study Area Boundary
 (400-Foot Perimeter)

Outfall

0 200 500 FEET

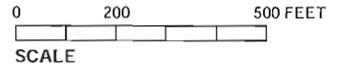
 SCALE

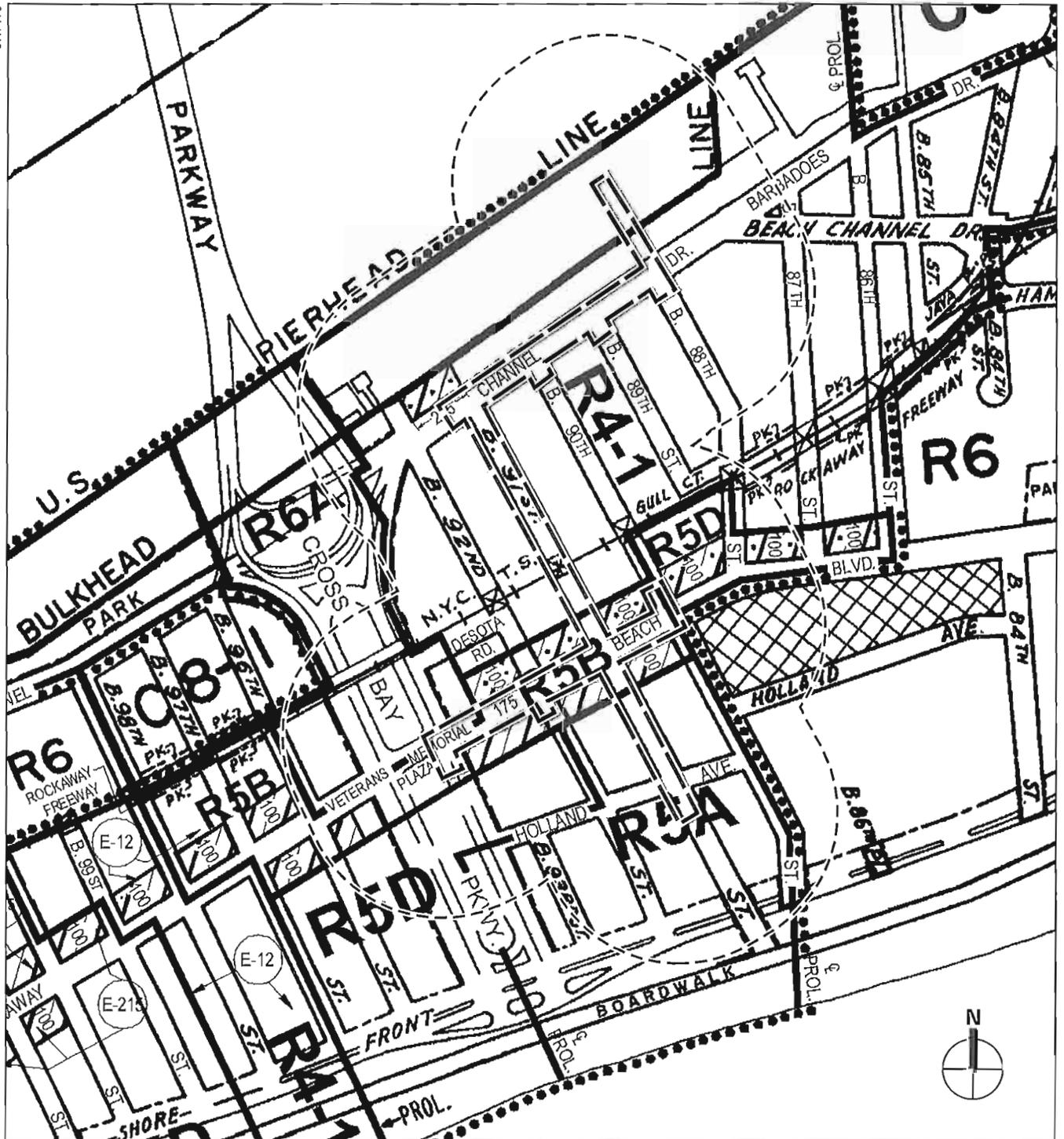
Aerial Photograph (2006)
Figure C-3



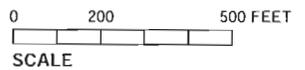
Source: CAD

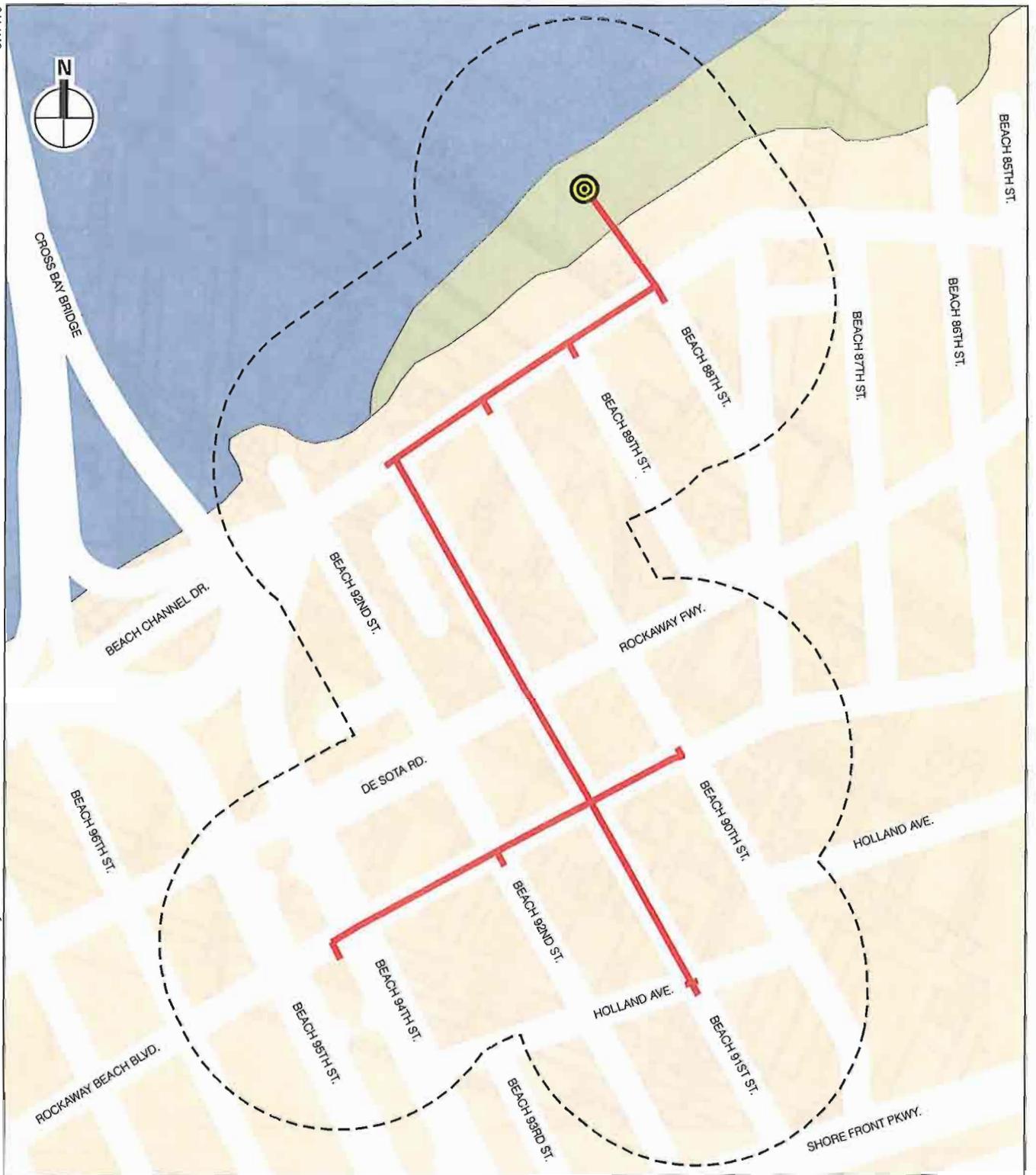
- Proposed Storm Sewer
- Study Area Boundary (400-Foot Perimeter)
- Outfall
- Recently Conveyed to NYCDPR
- Residential
- Residential (with Commercial Below)
- Commercial and Office Buildings
- Hotel
- Public Facilities and Institutional
- Transportation and Utility
- Industrial and Manufacturing
- Open Space
- Parking Facility
- Vacant
- Under Construction
- Vacant Building





-  Project Site
-  Study Area Boundary (400-Foot Perimeter)
-  C1-2 Overlay
-  C1-3 Overlay
-  C2-3 Overlay
-  Areas Rezoned





Outfall



Proposed Storm Sewer



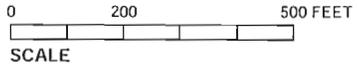
Study Area Boundary (400-Foot Perimeter)



Estuarine Subtidal Unconsolidated Bottom Subtidal



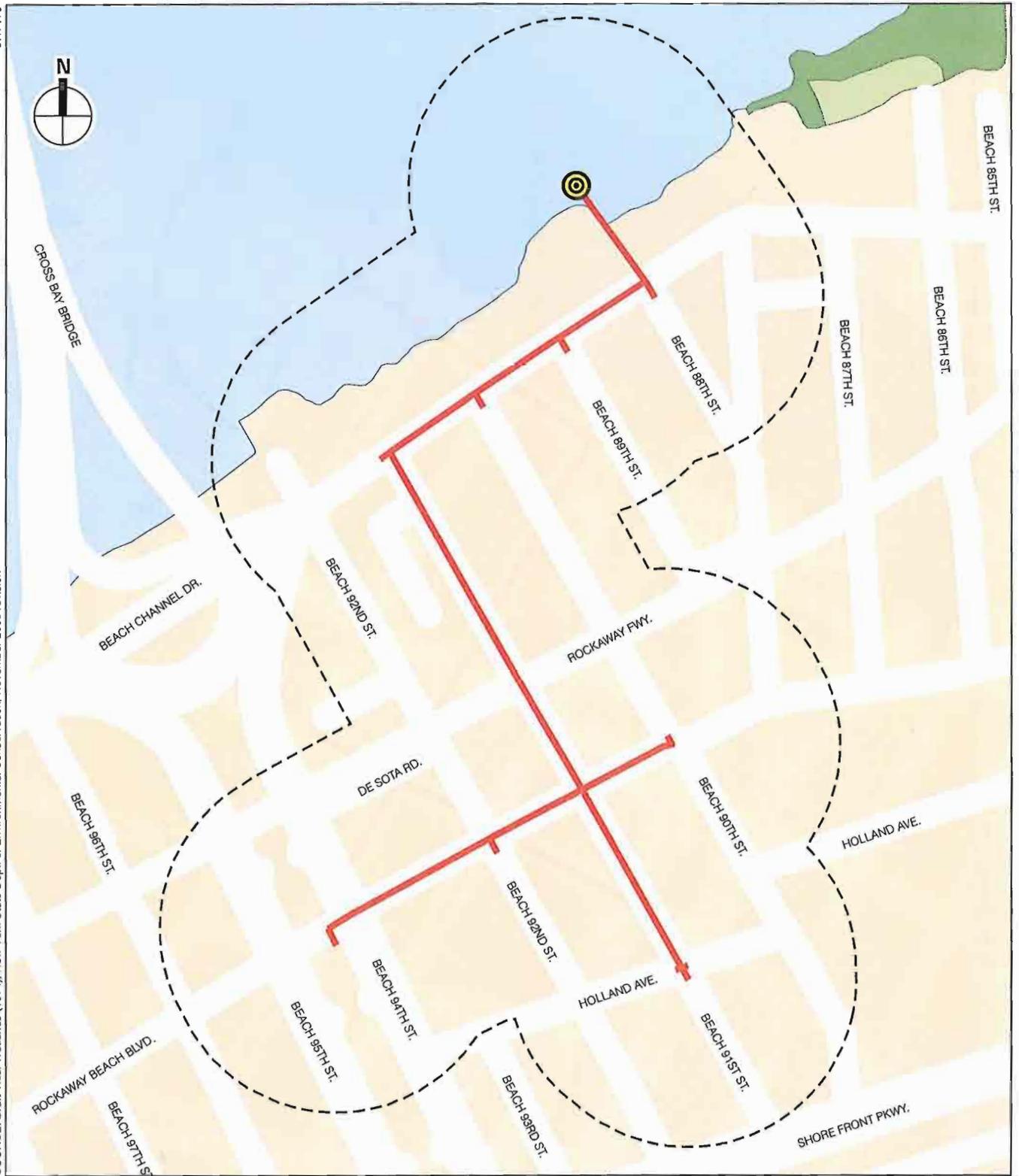
Estuarine Subtidal Unconsolidated Shore Irregularly Exposed



SCALE

National Wetlands Inventory Mapped Wetlands

Figure C-7

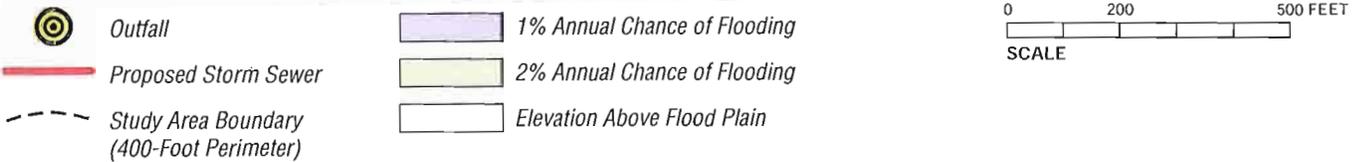
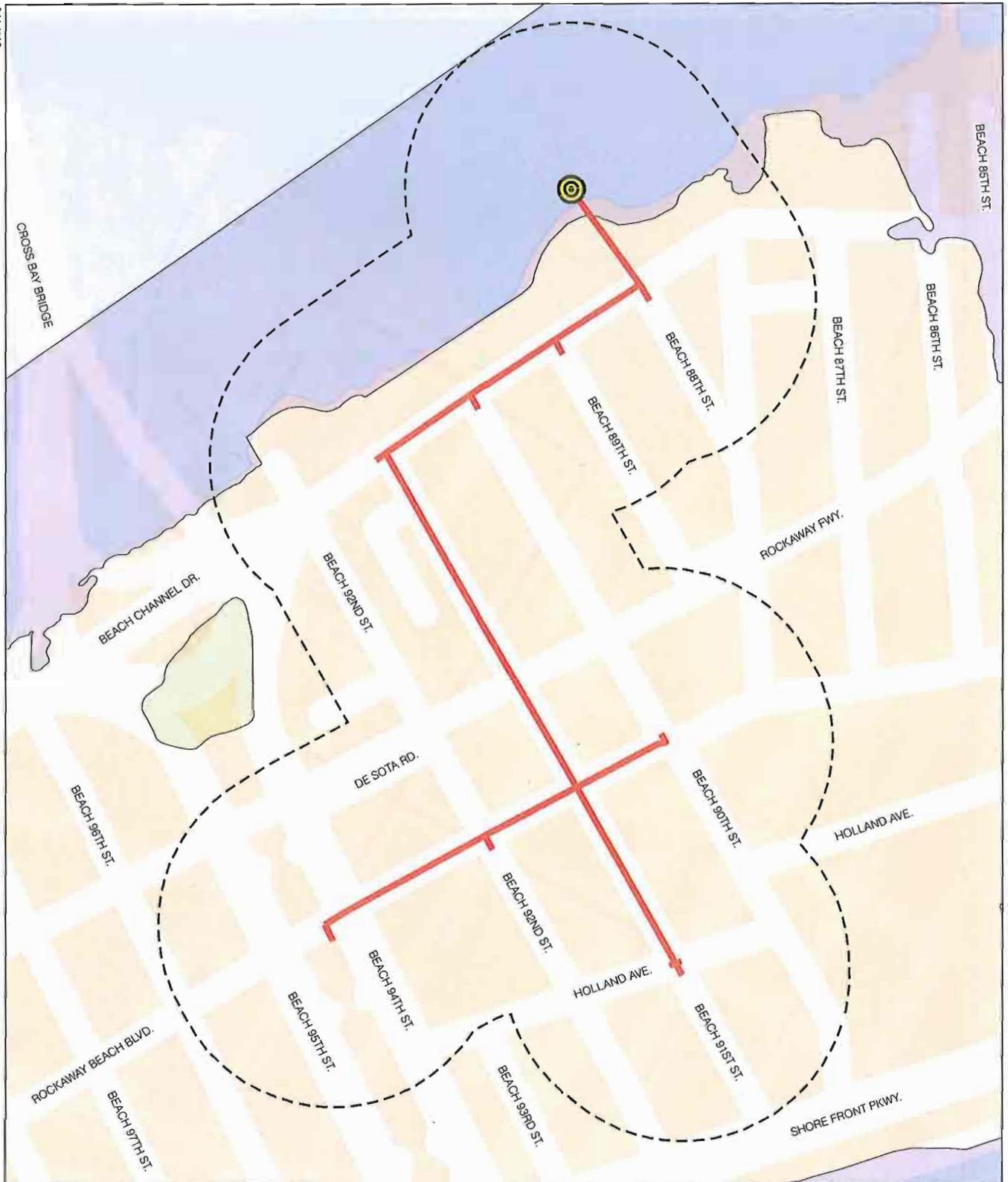


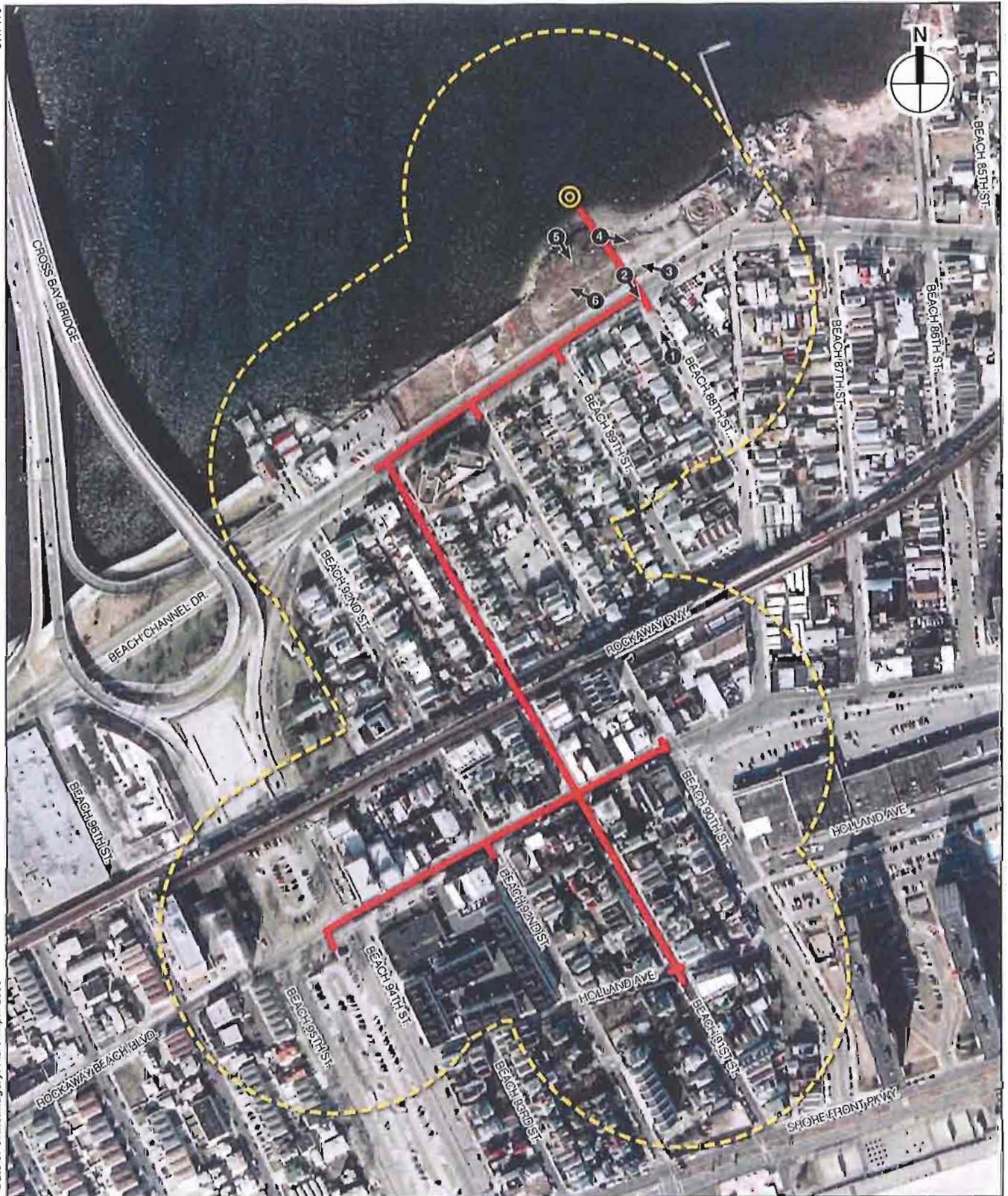
-  *Outfall*
-  *Proposed Storm Sewer*
-  *Study Area Boundary (400-Foot Perimeter)*
-  *Littoral Zone*
-  *Coastal Shoals, Bars, Mudflats*
-  *Intertidal Marsh*

0 200 500 FEET
SCALE

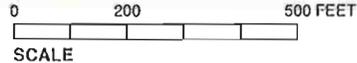
NYSDEC Mapped Tidal Wetlands

Figure C-8





- Proposed Storm Sewer
- - - Study Area Boundary (400-Foot Perimeter)
- Outfall
- Photograph View Direction



Natural Resources Photograph Key
Figure C-10



View from Beach 88th Street facing northwest toward Beach Channel Drive and the unmapped portion of Beach 88th Street. 1



View from shoreline facing southeast toward Beach Channel Drive and Beach 88th Street. 2



View from southeast of unmapped portion of Beach 88th Street. 3



View from west facing east toward shoreline at terminus of Beach 88th Street. 4



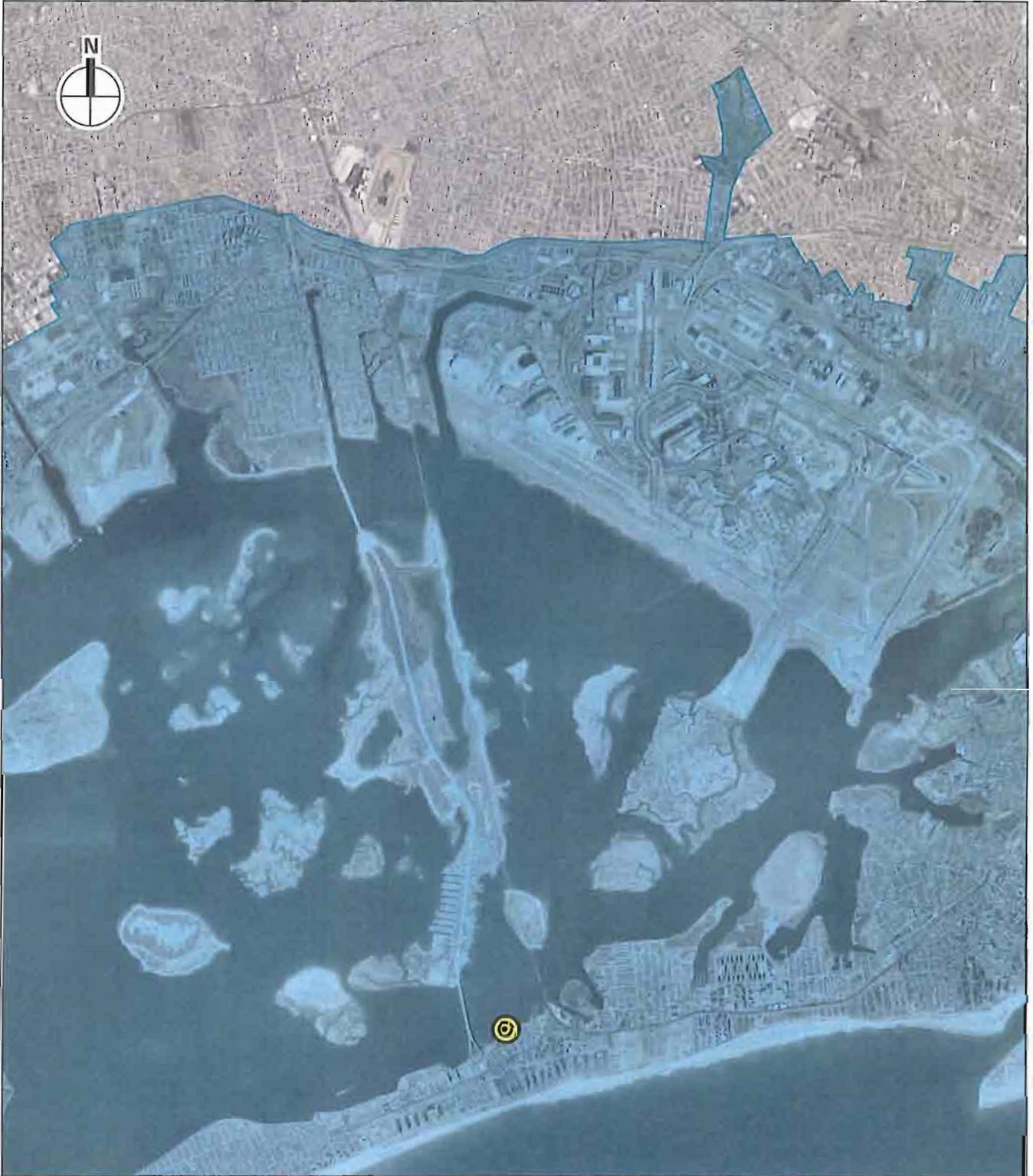
View facing southwest from shoreline. 5



View facing northwest from southeast portion of the site. 6

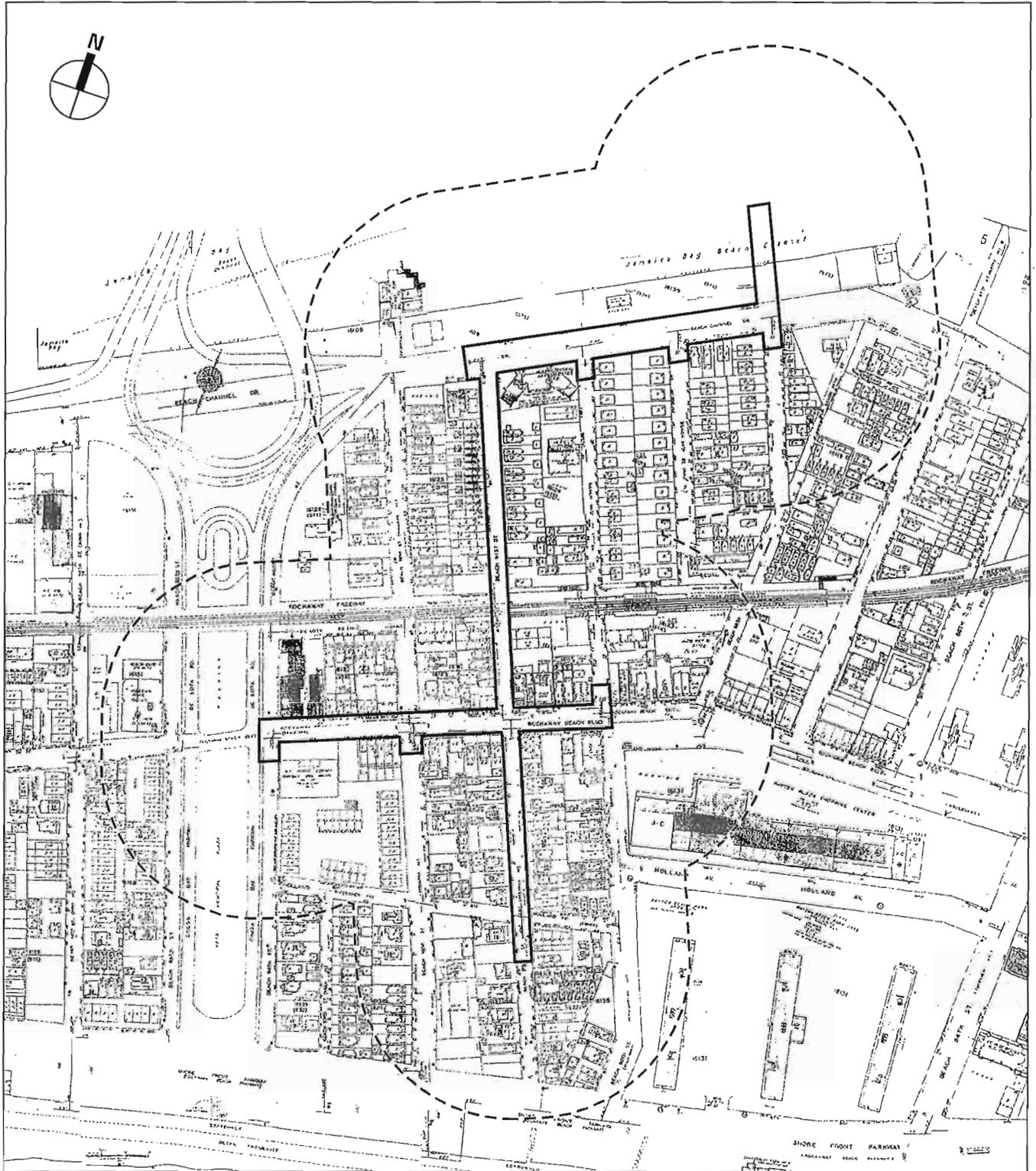
Natural Resource Photographs

Figure C-11c



-  *Outfall*
-  *Coastal Zone*

0 1MILE
SCALE



— Project Area Boundary (Area of Proposed Sewers)

- - - Study Area Boundary (400-Foot Perimeter)

0 200 500 FEET
SCALE

Sanborn Map
Figure C-1

APPENDIX A

**New York City Waterfront Revitalization Program
Consistency Assessment Form**

For Internal Use Only:
Date Received:

WRP no. _____
DOS no. _____

**NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form**

Proposed action subject to CEQR, ULURP, or other Local, State or Federal Agency Discretionary Actions that are situated within New York City's designated Coastal Zone Boundary must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)*. The WRP was adopted as a 197-a Plan by the Council of the City of New York on October 13, 1999, and approved in coordination with local, state and Federal laws and regulations, including the State's Coastal Management Program (Executive Law, Article 42) and the Federal Coastal Zone Management Act of 1972 (P.L. 92-583). As a result of these approvals, state and federal discretionary actions within the city's coastal zone must be consistent to the maximum extent practicable with the WRP policies and the city must be given the opportunity to comment on all state and federal projects within its coastal zone.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, other State Agency or the New York City Department of City Planning in its review of the applicant's certification of consistency.

A. APPLICANT

1. Name: **James Garin, New York City Department of Environmental Protection**

Address: **59-17 Junction Blvd., Flushing, NY 11373**

3. Telephone: **(718) 595-5505**

Fax:

E-mail Address: **garinj@dep.nyc.gov**

4. Project site owner: **City of New York**

B. PROPOSED ACTIVITY

1. Brief description of activity: **The proposed capital project involves the construction of a new outfall into Jamaica Bay, installation of new storm sewers, relocation of sanitary sewers and water mains, and wetland restoration in the Hammels section of Far Rockaway, Queens.**

2. Purpose of activity: **The proposed storm sewer system and outfall are necessary to improve drainage and to reduce street flooding in the area.**

3. Location of activity: **The proposed outfall would be located along the shores of Jamaica Bay in the Hammels section of Queens, terminating into Beach Channel Drive from Beach 88th Street (Block 16109, Lot 70).
Borough: **Queens****

Street Address or Site Description: **See above.**

Proposed Activity Cont'd

4. If a federal or state permit or license was issued or is required for the proposed activity, identify the permit type(s), the authorizing agency and provide the application or permit number(s), if known: **New York State Department of Environmental Conservation (NYSDEC) 401 Water Quality Certification, NYSDEC Tidal Wetlands Permit, NYSDEC State Pollution Discharge Elimination System (SPDES) permit for a new outfall, SPDES General Permit GP-0-10-001 for activities during construction**

5. Is federal or state funding being used to finance the project? If so, please identify the funding source(s). **No**

6. Will the proposed project result in any large physical change to a site within the coastal area that will require the preparation of an environmental impact statement? **Yes** **No**
 If yes, identify Lead Agency: _____

7. Identify City discretionary actions, such as zoning amendment or adoption of an urban renewal plan, required for the proposed project.
The proposed capital project is a discretionary action undertaken by the New York City Department of Environmental Protection and the New York City Department of Design and Construction.

C. COASTAL ASSESSMENT

The following questions represent, in a broad sense, the policy of the WRP. The number in the parentheses after each question indicated the policy or policies that are the focus of the question. A detailed explanation of the Waterfront Revitalization Program and its policies are contained in the publication the *New York City Waterfront Revitalization Program*.

Check either "Yes" or "No" for each of the following questions. Once the checklist is completed, assess how the proposed project affects the policy or standards indicated in "()" after each question with a Yes response. Explain how the action is consistent with the goals of the policy or standard.

Location Questions:		Yes	No
1.	Is the project site on the waterfront or at the water's edge?	<input checked="" type="checkbox"/>	_____
2.	Does the proposed project require a waterfront site?	<input checked="" type="checkbox"/>	_____
3.	Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land underwater, or coastal waters?	<input checked="" type="checkbox"/>	_____

Policy Questions:		Yes	No
--------------------------	--	------------	-----------

The following questions represent, in a broad sense, the policies of the WRP. Numbers in parentheses after each question indicates the policy or policies addressed by the question. The new Waterfront Revitalization Program offers detailed explanations of the policies, including criteria for consistency determinations.

Check either "Yes" or "No" for each of the following questions. For all "yes" responses, provide an attachment assessing the effects of the proposed activity on the relevant policies or standards. Explain how the action would be consistent with the goals of those policies and standards.

4.	Will the proposed project result in revitalization or redevelopment of a deteriorated or under-used waterfront site? (1)	_____	<input checked="" type="checkbox"/>
5.	Is the project site appropriate for residential or commercial redevelopment? (1.1)	_____	<input checked="" type="checkbox"/>
6.	Will the action result in a change in scale or character of a neighborhood? (1.2)	_____	<input checked="" type="checkbox"/>
7.	Will the proposed activity require provision of new public services or infrastructure in undeveloped or sparsely populated sections of the coastal area? (1.3)	_____	<input checked="" type="checkbox"/>

Policy Questions cont'd:		Yes	No
8.	Is the action located in one of the designated Significant Maritime and Industrial Areas (SMIA): South Bronx, Newtown Creek, Brooklyn Navy Yard, Red Hook, Sunset Park, or Staten Island? (2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	Are there any waterfront structures, such as piers, docks, bulkheads or wharves, located on the project sites? (2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.	Would the action involve the siting or construction of a facility essential to the generation or transmission of energy, or a natural gas facility, or would it develop new energy resources? (2.1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.	Does the action involve the siting of a working waterfront use outside of a SMIA? (2.2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12.	Does the proposed project involve infrastructure improvement, such as construction or repair of piers, docks, or bulkheads? (2.3, 3.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13.	Would the action involve mining, dredging, or dredge disposal, or placement of dredged or fill materials in coastal waters? (2.3, 3.1, 4, 5.3, 6.3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14.	Would the action be located in a commercial or recreational boating center, such as City Island, Sheepshead Bay or Great Kills or an area devoted to water-dependent transportation? (3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15.	Would the proposed project have an adverse effect upon the land or water uses within a commercial or recreation boating center or water-dependent transportation center? (3.1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16.	Would the proposed project create any conflicts between commercial and recreational boating? (3.2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17.	Does the proposed project involve any boating activity that would have an impact on the aquatic environment or surrounding land and water uses? (3.3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18.	Is the action located in one of the designated Special Natural Waterfront Areas (SNWA): Long Island Sound-East River, Jamaica Bay, or Northwest Staten Island? (4 and 9.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19.	Is the project site in or adjacent to a Significant Coastal Fish and Wildlife Habitats? (4.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20.	Is the site located within or adjacent to a Recognized Ecological Complex: South Shore of Staten Island or Riverdale Natural Area District? (4.1 and 9.2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21.	Would the action involve any activity in or near a tidal or freshwater wetland? (4.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22.	Does the project site contain a rare ecological community or would the proposed project affect a vulnerable plant, fish, or wildlife species? (4.3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23.	Would the action have any effects on commercial or recreational use of fish resources? (4.4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24.	Would the proposed project in any way affect the water quality classification of nearby waters or be unable to be consistent with that classification? (5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25.	Would the action result in any direct or indirect discharges, including toxins, hazardous substances, or other pollutants, effluent, or waste, into any waterbody? (5.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26.	Would the action result in the draining of stormwater runoff or sewer overflows into coastal waters? (5.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
27.	Will any activity associated with the project generate nonpoint source pollution? (5.2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Policy Questions cont'd:

	Yes	No
28. Would the action cause violations of the National or State air quality standards? (5.2)	_____	✓ _____
29. Would the action result in significant amounts of acid rain precursors (nitrates and sulfates)? (5.2C)	_____	✓ _____
30. Will the project involve the excavation or placing of fill in or near navigable waters, marshes, estuaries, tidal marshes or other wetlands? (5.3)	✓ _____	_____
31. Would the proposed action have any effects on surface or ground water supplies? (5.4)	_____	✓ _____
32. Would the action result in any activities within a Federally designated flood hazard area or State designated erosion hazards area? (6)	✓ _____	_____
33. Would the action result in any construction activities that would lead to erosion? (6)	_____	✓ _____
34. Would the action involve construction or reconstruction of flood or erosion control structure? (6.1)	✓ _____	_____
35. Would the action involve any new or increased activity on or near any beach, dune, barrier island, or bluff? (6.1)	_____	✓ _____
36. Does the proposed project involve use of public funds for flood prevention or erosion control? (6.2)	✓ _____	_____
37. Would the proposed project affect a non-renewable source of sand? (6.3)	_____	✓ _____
38. Would the action result in shipping, handling, or storing of solid wastes; hazardous materials, or other pollutants? (7)	_____	✓ _____
39. Would the action affect any sites that have been used as landfills? (7.1)	_____	✓ _____
40. Would the action result in development of a site that may contain contamination or has a history of underground fuel tanks, oil spills, or other form or petroleum product use or storage? (7.2)	_____	✓ _____
41. Will the proposed activity result in any transport, storage, treatment, or disposal of solid wastes or hazardous materials, or the siting of a solid or hazardous waste facility? (7.3)	_____	✓ _____
42. Would the action result in a reduction of existing or required access to or along coastal waters, public access areas, or public parks or open spaces? (8)	_____	✓ _____
43. Will the proposed project affect or be located in, on, or adjacent to any federal, state, or city park or other land in public ownership protected for open space preservation? (8)	✓ _____	_____
44. Would the action result in the provision of open space without the provision for its maintenance? (8.1)	_____	✓ _____
45. Would the action result in any development along the shoreline but NOT include new water enhanced or water dependent recreational space? (8.2)	_____	✓ _____
46. Will the proposed project impede visual access to coastal lands, waters and open space? (8.3)	_____	✓ _____
47. Does the proposed project involve publically owned or acquired land that could accommodate waterfront open space or recreation? (8.4)	✓ _____	_____
48. Does the project site involve lands or waters held in public trust by the state or city? (8.5)	✓ _____	_____
49. Would the action affect natural or built resources that contribute to the scenic quality of a coastal area? (9)	_____	✓ _____

Policy Questions cont'd:

		Yes	No
50.	Does the site currently include elements that degrade the area's scenic quality or block views to the water? (9.1)	<u>✓</u>	<u> </u>
51.	Would the proposed action have a significant adverse impact on historic, archeological, or cultural resources? (10)	<u> </u>	<u>✓</u>
52.	Will the proposed activity affect or be located in, on, or adjacent to an historic resource listed on the National or State Register of Historic Places, or designated as a landmark by the City of New York? (10)	<u> </u>	<u>✓</u>

D. CERTIFICATION

The applicant must certify that the proposed activity is consistent with New York City's Waterfront Revitalization Program, pursuant to the New York State Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If the certification can be made, complete this section.

"The proposed activity complies with New York State's Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent Name: James Garin

Address: 59-17 Junction Blvd., Flushing, NY 11373

Telephone (718) 595-5501

Applicant/Agent Signature: James Garin, P.E. Date: 8/3/10