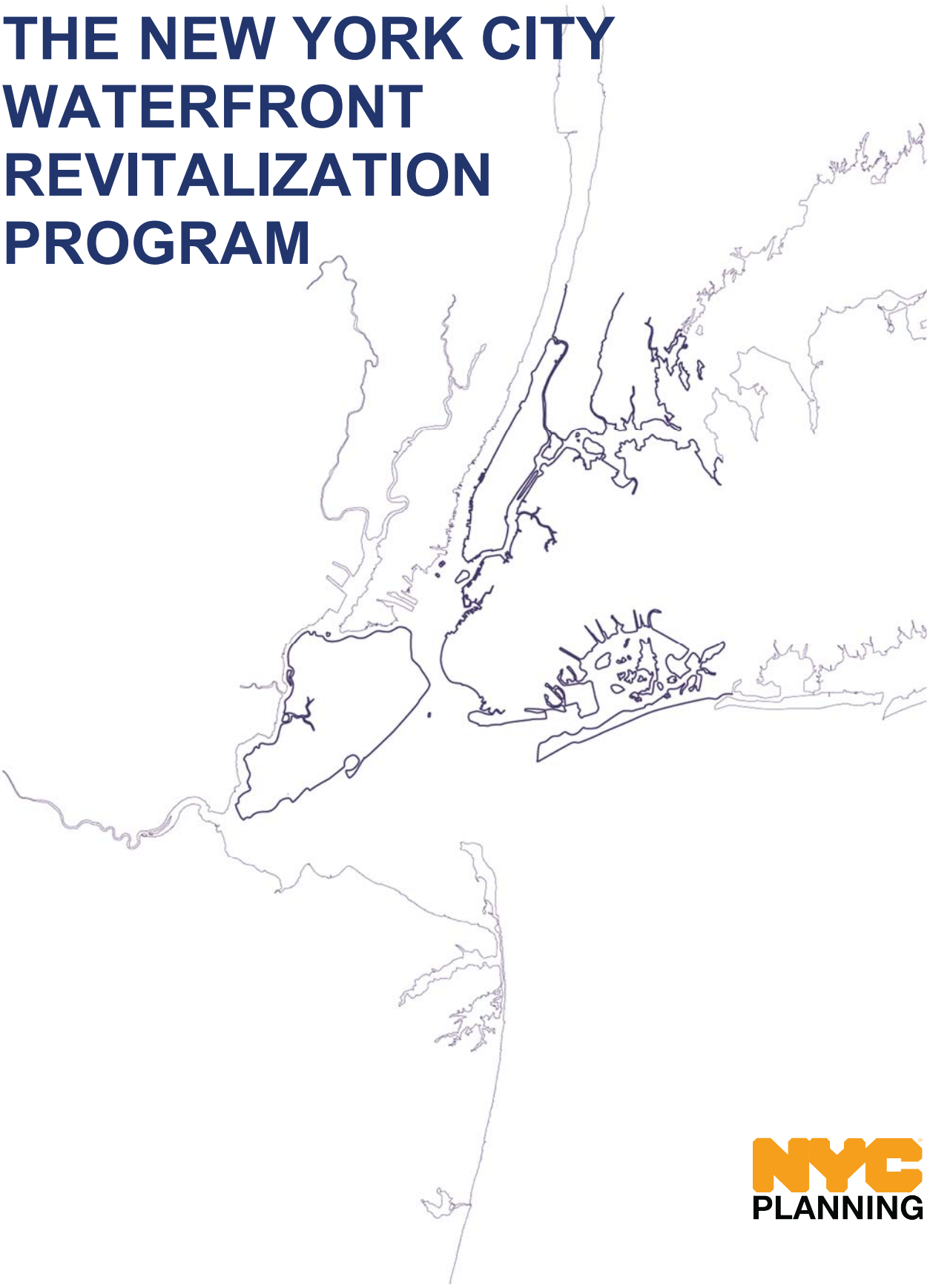
THE NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM



NYC PLANNING

This material was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

As approved by the Council of the City of New York and the NYS Department of State with the concurrence of the U.S. Department of Commerce

Pursuant to Section197-a of the City Charter

STATE OF NEW YORK
DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001
WWW.DOS.NY.GOV

ANDREW M. CUOMO
GOVERNOR

CESAR A. PERALES
SECRETARY OF STATE

February 4, 2016

Honorable Bill de Blasio
Mayor
City of New York
City Hall
New York, NY 10007

Dear Mayor de Blasio:

I am pleased to inform you that I have approved the New York City Waterfront Revitalization Program (WRP) Amendment, pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act. Everyone who participated in the preparation of the WRP Amendment is to be commended for developing a comprehensive management program that promotes the balanced preservation, enhancement, and utilization of valuable waterfront resources along New York Harbor, the Hudson, Bronx, Harlem and East Rivers, the Arthur Kill and Kill Van Kull and all their many tributaries, as well as the Atlantic Ocean.

I am notifying State agencies that I have approved the WRP Amendment and advising them that their activities must be undertaken in a manner consistent, to the maximum extent practicable, with the program.

The approved New York City WRP Amendment will be available on the website of the Department of State, at http://www.dos.ny.gov/opd/programs/WFRevitalization/LWRP_status.html.

If you have any questions, please contact Steve Ridler, the Coastal Program Assistant Manager of the Office of Planning and Development, at (518) 474-6000.

Sincerely,

Cesar A. Perales
Secretary of State

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office for Coastal Management
Silver Spring Metro Center, Building 4
1305 East-West Highway
Silver Spring, Maryland 20910

JUN -9 2016

Steve Ridler
Coastal Program Assistant Manager
Office of Planning and Development
New York Department of State
One Commerce Plaza
99 Washington Avenue
Albany, NY 12231-0001

Dear Mr. Ridler:

Thank you for the New Department of State's March 8, 2016, request that changes to the New York City Local Waterfront Revitalization Program (LWRP) be incorporated into the New York Coastal Management Program. You requested that the changes described below be incorporated as routine program changes (RPCs), pursuant to Coastal Zone Management Act (CZMA) regulations at 15 C.F.R. part 923, subpart H, and the National Oceanic and Atmospheric Administration's (NOAA's) Office for Coastal Management's[1] *Program Change Guidance* (July 1996).

Based on our review of your submission, we concur with the qualifications stated below, that the changes are RPCs. We approve the incorporation of the New York City LWRP including the enforceable policies described therein as qualified as part of the New York Coastal Management Program. Federal Consistency will apply to the approved changes to enforceable policies only after public notice of this approval is published pursuant to 15 C.F.R. § 923.84(b)(4) and the Office for Coastal Management's *Addendum to the July 1996 Program Change Guidance* (November 2013). Please include in the public notice the list of changes and qualifications provided in this letter, and send a copy of the notice to the Office for Coastal Management.

[1] NOAA's Office for Coastal Management was formerly the Office of Ocean and Coastal Resource Management and the Coastal Services Center; these two offices were integrated in September 2014 into the Office for Coastal Management.

Contains Privileged Attorney Client Commnication

CHANGES APPROVED

Name/Description of State or Local Law/Regulation/Policy/Program Authority	State/Local Legal Citation	Date Adopted by State	Date Effective in State
ADDED:			
New York City Local Waterfront Revitalization Program as amended October 30, 2013.	*Part I. Appendices B and D.	02/03/2016	02/03/2016
	Part II, Policies and sub-policies 1-10 (note: the explanatory text included in Part II is not applicable as enforceable policies for CZMA federal consistency review purposes)	10/30/2013	02/03/2016
MODIFIED:			
New York State coastal zone boundary to incorporate new and revised SAMP boundaries and 2013 flood insurance rate maps.	*Part III of New York City Local Waterfront Revitalization Program as amended October 30, 2013.	10/30/2013	
DELETED:			
New York City Local Waterfront Revitalization Program (2002)	New York City Local Waterfront Revitalization Program (2002)		
Changes marked with an asterisk (*) are incorporated into the New York Coastal Management Program, but do not contain enforceable policies that can be used for Federal Consistency.			

QUALIFICATIONS

As a standard qualification applying to all approval of enforceable policies, states may not incorporate enforceable policies by reference. If an approved enforceable policy refers to another statute, regulation, policy, standard, guidance, or other such requirement or document (hereinafter "referenced policy"), the referenced policy itself must be submitted to and approved by the Office for Coastal Management as an enforceable policy in order to be applied under the federal consistency review provisions of the CZMA. Therefore, no referenced policy in these approved enforceable policies may be applied for federal consistency unless that referenced policy has been separately approved by the Office for Coastal Management.

For CZMA review purposes, the enforceable policies of the LWRP are only those enumerated bold-faced policy and sub-policy statements within Part II. The alphabetized text under the policy statements may be used for guidance as to how consistency with the policy can be shown but cannot be used as a basis for a CZMA consistency objection.

For CZMA review purposes, only the New York Department of State (DOS) has the authority to determine the consistency of federal agency actions with the enforceable policies of the New

York City LWRP. DOS may consider local determinations in its findings but must base its decision on the substantive application of the enforceable policies within the LWRP.

Changes to the New York City LWRP maps are approved as changes to the New York State coastal zone boundary. For LWRP boundaries based on preliminary flood insurance rate maps, the state shall request approval of a boundary change to the New York coastal zone whenever the flood insurance rate maps are finalized.

As for listed federal actions subject to CZMA review, only those actions listed by DOS in the New York State Coastal Management Program are subject to review. Appendix A "State and Federal Actions and Programs Which Should Be Undertaken in a Manner Consistent with the LWRP" has no applicability for CZMA review purposes.

The federal CZMA review definitions, standards, procedures and timeframes are governed by the Federal Consistency regulations found at 15 C.F.R. § 930. These provisions are controlling in regards to any ambiguities or inconsistencies found in Appendix C "Guidelines for Notification and Review of Federal Agency and New York State Agency Actions" (for example, the definition of "consistent to the maximum extent practicable)."

PUBLIC AND FEDERAL AGENCY COMMENTS

The Office for Coastal Management received no comments on this RPC submission.

Thank you for your cooperation in this review. Please contact Glynnis Roberts at 240-533-0795, if you have any questions.

Sincerely,

Joelle Gore, Chief
Stewardship Division

THE COUNCIL OF THE CITY OF NEW YORK
RESOLUTION NO. 1999

Resolution approving the decision of the City Planning Commission on Non-ULURP No. N 120213 NPY, for a plan concerning revisions to the New York City Waterfront Revitalization Program which is called "The Revised New York City Waterfront Revitalization Program," Citywide (L.U. No. 922).

By Council Members Comrie and Weprin

WHEREAS, the City Planning Commission filed with the Council on September 13, 2013 its decision dated September 11, 2013 (the "Decision"), on the application submitted by the New York City Department of City Planning, pursuant to Section 197-a of the New York City Charter, regarding a plan concerning revisions to the New York City Waterfront Revitalization Program (the "Plan"). The Plan which is called "The Revised New York City Waterfront Revitalization Program" is being updated to advance the goals and priorities of *Vision 2020: New York City Comprehensive Waterfront Plan,* released by DCP in March 2011, which is intended to establish the City's policies for development and use of the waterfront and provides a mechanism to evaluate local, state and federal discretionary actions in the Coastal Zone for consistency with these policies (Non-ULURP No. N 120213 NPY), City Wide (the "Application");

WHEREAS, the Decision is subject to review and action by the Council pursuant to Section 197-a of the City Charter;

WHEREAS, upon due notice, the Council held a public hearing on the Decision and Application on September 30, 2013;

WHEREAS, the Council has considered the land use implications and other policy issues relating to the Decision and Application; and

WHEREAS, the Council has considered the relevant environmental issues, the negative declaration (CEQR No. 12DCP123Y) issued on March 26, 2012 (the "Negative Declaration");

RESOLVED:

The Council finds that the action described herein will have no significant impact on the environment as set forth in the Negative Declaration.

Pursuant to Section 197-a of the City Charter and on the basis of the Decision and Application, and based on the environmental determination and consideration described in this report, N 120213 NPY, incorporated by reference herein, the Council approves the Decision and

Plan, a copy of which is attached hereto.

Adopted.

Office of the City Clerk, }
The City of New York, } ss.:

I hereby certify that the foregoing is a true copy of a Resolution passed by The Council of The City of New York on October 30, 2013, on file in this office.

.....
City Clerk, Clerk of The Council

Any interested parties and/or agencies desiring to express their views concerning any of the above proposed activities may do so by filing their comments, in writing, no later than 4:30 p.m., 15 days from the date of publication of this notice, or, July 21, 2016.

Comments should be addressed to: Department of State, Office of Planning and Development, One Commerce Plaza, 99 Washington Ave., Albany, NY 12231. (518) 474-6000; Fax (518) 473-2464; Email cr@dos.ny.gov.

This notice is promulgated in accordance with Title 15, Code of Federal Regulations, Part 930.

PUBLIC NOTICE

Department of State
Notice of Routine Program Change Approval
New York State Coastal Management Program
New York City Local Waterfront Revitalization Program

STATEWIDE — Pursuant to 15 CFR 923.84(b)(4), the New York State Department of State (DOS) hereby gives notice that the National Oceanic and Atmospheric Administration's Office for Coastal Management (OCM) concurred on June 9, 2016 on the incorporation of the New York City Waterfront Revitalization Program (LWRP), as amended, into the State's Coastal Management Program as a Routine Program Change. DOS requested OCM's concurrence on this action on February 24, 2016, in a previous notice in the New York State Register, which further described the content of the action.

The amendment to the New York City LWRP was prepared in partnership with DOS and in accordance with the New York State Waterfront Revitalization of Coastal Areas and Inland Waterways Act and the New York State Coastal Management Program. The LWRP is a long-term land and water uses management program for the City's waterfront resources along the New York Harbor; the Hudson, Bronx, Harlem and East Rivers; the Arthur Kill and Kill Van Kull and all their many tributaries; and, the Atlantic Ocean. This amendment serves to update the New York City LWRP approved in 2002 which now is withdrawn, to reflect current conditions including climate change and sea level rise, and address new land and water uses. The LWRP, as amended, incorporates and advances the goals and strategies of Vision 2020: New York City Comprehensive Waterfront Plan to encourage the development of maritime industry while ensuring the protection of the environment; promote recreation at the shoreline and in the water; provide design principles that consider the effects of climate change and sea level rise; and, foster the preservation and restoration of ecologically significant sites.

Pursuant to the New York State Coastal Management Program and Article 42 of the New York State Executive Law, the New York City LWRP amendment was adopted by resolution by the Council of the City of New York on October 30, 2013, and approved by the New York State Secretary of State on February 3, 2016. Federal Consistency with the New York City LWRP applies as of the date of this Notice.

OCM's concurrence includes the following changes to the New York City LWRP:

Name/Description of State or Local Law Regulation/ Policy/Program Authority	State/Local Legal Citation	Date Adopted by State	Date Effective in State
ADDED:			
New York City Waterfront Revitalization Program (LWRP) as amended October 30, 2013	*Part I. Appendices B and D	02/03/2016	02/03/2016
	Section II, Policies and sub-policies 1-10 (note: the explanatory text included in Part II is not applicable as enforceable policies for CZMA federal consistency review purposes)	02/03/2016	02/03/2016
MODIFIED:			
New York State coastal zone boundary to incorporate new and revised SAMP boundaries and 2013 flood insurance rate maps	*Part III of New York City Local Waterfront Revitalization Program as amended October 30, 2013	02/03/2016	02/03/2016
DELETED:			
New York City Local Waterfront Revitalization Program (2002)	New York City Waterfront Local Revitalization Program (2002)		

Changes marked with an asterisk (*) are incorporated into the NEW YORK COASTAL MANAGEMENT PROGRAM, but do not contain enforceable policies that can be used for Federal Consistency.

The New York City Local Waterfront Revitalization Program and letters of local adoption, State approval and Federal concurrence, are available at: www.dos.ny.gov/opd/programs/WFRevitalization/LWRP__status.html, the website of the Department of State. If you have any questions, please contact Renee Parsons, Office of Planning and Development, Department of State, One Commerce Plaza, Suite 1010, Albany, NY 12231, (518) 473-2461.

PUBLIC NOTICE

Department of Taxation and Finance
Tax Law Section 1111 Annual Adjustment
Calculation on the Base Retail Price on Cigarettes

Pursuant to the provisions of section 1111(j)(2) of the Tax Law, the Commissioner of Taxation and Finance is required to give public notice of the base retail price adjustment calculation and the resulting base retail price of cigarettes for purposes of establishing the prepaid sales tax on cigarettes imposed by section 1103 of the Tax Law. Section 1111(j) of the Tax Law provides that the base retail price of cigarettes shall be adjusted each year by a factor based upon the manufacturers' list price for a carton of standard brand cigarettes. The base retail price adjustment factor for the period September 1, 2016, through August 31, 2017, is 1.018. The base retail price adjustment calculation results in a base retail price of cigarettes effective September 1, 2016, as follows:

Package of twenty (20) cigarettes: $10.219 x 1.018 = $10.403

For each additional five (5) cigarettes: $ 2.552 x 1.018 = $2.598

The base retail price is adjusted annually, to take effect the first day of September.

For further information, including rates for previous periods, contact: Ann V. Fiorello, Taxpayer Guidance Division, Department of Taxation and Finance, W.A. Harriman Campus, Albany, NY 12227, (518) 530-4157

PUBLIC NOTICE

Uniform Code Regional Boards of Review

Pursuant to 19 NYCRR 1205, the petitions below have been received by the Department of State for action by the Uniform Code Regional Boards of Review. Unless otherwise indicated, they involve requests for relief from provisions of the New York State Uniform Fire Prevention and Building Code. Persons wishing to review any

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INTRODUCTION

New York City's Waterfront Revitalization Program (WRP), originally adopted in 1982, updated in 2002, and revised herein, is the city's principal Coastal Zone management tool. The guiding principle of the WRP is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing the conflicts among these objectives. A local waterfront revitalization program, such as New York City's, is authorized by New York State's Waterfront Revitalization of Coastal Areas and Inland Waterway Act, which stems from the Federal Coastal Zone Management Act.

Through individual project review, the WRP aims to promote activities appropriate to various waterfront locations. The program is designed to coordinate review of activities and decisions affecting the Coastal Zone, particularly when there are overlapping jurisdictions or multiple agencies responsible for review. To carry out this function, the WRP establishes a set of ten policies for the development and use of the waterfront and provides a framework for evaluating the consistency of activities in the Coastal Zone with those policies. When a proposed local, state, or federal project or discretionary action is located within the Coastal Zone or is likely to affect the policies of the Coastal Zone, a determination of the activity's consistency with the coastal policies contained in the WRP must be made before the action or project can move forward.

The WRP is presented in three parts. The first part contains an explanation of the regulatory and planning context of the program; sets forth the Coastal Zone boundary; describes the applicable standards and processes for the review of local, state, and federal activities for consistency with the program; and includes a discussion of local regulations that are related to the implementation of the program. The second part presents the WRP policies. The last part contains sectional maps delineating the boundaries of New York City's Coastal Zone, as well as maps of the Special Natural Waterfront Areas, the Significant Maritime and Industrial Areas, the Arthur Kill Ecologically Sensitive Maritime and Industrial Area, the Priority Marine Activity Zones, and Recognized Ecological Complexes, to which certain policies refer.

PART I:
PROGRAM DESCRIPTION

COASTAL ZONE REGULATORY FRAMEWORK

16 U.S.C. Federal Coastal Zone Management Act

In recognition of the importance of meeting the challenges of continued growth in the nation's Coastal Zone, Congress enacted the Coastal Zone Management Act (CZMA) on October 27, 1972. The CZMA, administered by the National Oceanic and Atmospheric Administration's (NOAA) Office of Ocean for Coastal Management (OCM), seeks to balance economic development with environmental conservation throughout the nation's Coastal Zone. The overall program objectives of the CZMA include "to preserve, protect, develop, and, where possible, to restore or enhance the resources of the nation's Coastal Zone" and "to encourage and assist the states to exercise effectively their responsibilities in the Coastal Zone through the development and implementation of management programs to achieve wise use of the land and water resources of the Coastal Zone."

The CZMA emphasizes the primacy of state decision making regarding the Coastal Zone. Section 307 of the CZMA (16 USC § 1456), the "federal consistency provision," provides a major incentive for states to join the national coastal management program and is a powerful tool that states use to manage coastal uses and resources and to facilitate cooperation and coordination with federal agencies and among state and local agencies. States with coastal management programs approved by OCM benefit from the CZMA's federal consistency provision, which generally provides that federal agency activities and development projects, activities requiring federal licenses or permits, or activities requiring federal financial assistance, that may have reasonably foreseeable effects on the Coastal Zone must be reviewed for consistency with the approved state management program.

New York State Executive Law Article 42: Waterfront Revitalization of Coastal Areas and Inland Waterway Act

New York State's Waterfront Revitalization of Coastal Areas and Inland Waterway Act (the Waterways Act), previously the Waterfront Revitalization and Coastal Resources Act of 1981, establishes the creation of the State's Coastal Management Program. The implementing regulations of the Waterways Act and New York State's coastal area policies can be found in the Department of State regulations 19 NYCRR Part 600. The Waterways Act designates the Department of State (DOS) as the administrator of New York's Coastal Management Program (CMP). In recognition of the state policy to encourage the revitalization of waterfront areas in a manner consistent with local objectives, the Waterways Act also allows for the creation of optional local government waterfront revitalization programs (LWRP), such as New York City's Waterfront Revitalization Program (WRP), so long as such local programs are found consistent with the State's coastal policies and will achieve the waterfront revitalization purposes of the Waterways Act.

Once a local waterfront revitalization program is approved by the State and concurred with by NOAA's Office of Coastal Management as consistent with the State's coastal policies, the local coastal area management policies contained in an approved LWRP become incorporated into

the State's CMP. Both federal activities that may have a reasonably foreseeable effect on New York City's Coastal Zone and State actions located in the Coastal Zone must be reviewed for consistency with the local coastal area management policies contained in New York City's WRP, as incorporated in the CMP.

New York City's Local Waterfront Revitalization Program

New York City's original Waterfront Revitalization Program was adopted by the New York City Board of Estimate as a local plan in accordance with Section 197-a of the City Charter. The WRP was subsequently approved by DOS for inclusion in the New York State CMP. Thereafter, on September 30, 1982, the U.S. Secretary of Commerce, pursuant to federal regulation, concurred with DOS's request to incorporate the WRP into the New York State CMP The NYC WRP thus became the State's first LWRP. The original WRP incorporated the 44 state coastal policies and explanations contained in the New York State CMP, set forth an additional 12 local coastal policies, and delineated the boundary of the City's Coastal Zone. The WRP charged the City Planning Commission, acting as the City Coastal Commission, and the Department of City Planning, with responsibility for administering the WRP, and provided that local discretionary actions that occur in the Coastal Zone are subject to review and determination of consistency with the local coastal area management policies contained herein.

In 1999, the City Planning Commission revised and streamlined the original WRP with a document entitled *the New Waterfront Revitalization Program*. The New WRP consolidated the 56 city and state policies into ten categories of policies that deal with: (1) residential and commercial redevelopment, (2) water-dependent and industrial uses, (3) commercial and recreational boating, (4) coastal ecological systems; (5) water quality, (6) flooding and erosion, (7) solid waste and hazardous materials, (8) public access, (9) scenic resources, and (10) historical and cultural resources. The ten policies are not presented in order of importance and are numbered only for ease of reference. On October 13, 1999, the New WRP was adopted by the City Council pursuant to the framework set forth in Section 197-a of the City Charter. The New WRP was subsequently approved by DOS for inclusion in the New York State CMP on May 28, 2002, and, pursuant to federal regulations, the U. S. Secretary of Commerce concurred with DOS's request to incorporate the WRP into the New York State CMP.

This update to the WRP does not substantially alter the policies or structure of the program but rather reflects numerous events and waterfront planning efforts that have taken place since the WRP was last updated. Most importantly, these revisions build on and are a direct outcome of *Vision 2020: the New York City Comprehensive Waterfront Plan*, which was released in March of 2011 by the Department of City Planning. As noted above, the framework of Section 197-a of the City Charter was utilized as the vehicle in New York City for the adoption of the original WRP and the New WRP (2002). Accordingly, the 2013 update is also adopted pursuant to the framework set forth in Section 197-a of the City Charter. On October 30, 2013, the New York City Council voted to approve these revisions to the New York City Waterfront Revitalization Program. Upon approval by the New York State Secretary of State, and federal concurrence, these revisions are incorporated into the New York State CMP.

PLANNING CONTEXT FOR THE WRP UPDATES

1992 New York City Comprehensive Waterfront Plan & the 2002 WRP Update
The *1992 New York City Comprehensive Waterfront Plan* was the first citywide comprehensive waterfront plan released by the Department of City Planning. The plan proposed ways to reclaim the shoreline for public access and productive uses and identified four functional categories for waterfront activity: the Natural Waterfront, the Public Waterfront, the Working Waterfront, and the Redeveloping Waterfront. The plan organized the waterfront into 22 specific stretches, or "reaches," and made recommendations for each one. The plan also proposed many important projects that have come to fruition in the years since the report was published, recommended regulatory changes that have since been implemented, and provided a foundation for waterfront planning and policies. The New WRP that was approved in 2002 was largely based on the *1992 New York City Comprehensive Waterfront Plan*.

***Vision 2020: New York City Comprehensive Waterfront Plan* & updates to the WRP**
As noted above, this update to the WRP builds on and is a direct outcome of numerous waterfront planning efforts since the WRP was last updated, most importantly *Vision 2020: New York City Comprehensive Waterfront Plan*, released in 2011. *Vision 2020* represents an update to the 1992 plan that presents a comprehensive analysis and overall vision for New York City's 520 miles of diverse shoreline, and identifies a strategic framework for the city's waterfront, waterways, and water to achieve this vision. *Vision 2020* provides a framework for improved water quality, more water transport, increased public access to the waterfront, and economic opportunities that will strengthen New York City as a world-class harbor city and make the water part of New Yorkers' everyday lives.

Vision 2020 was the culmination of a year-long, participatory planning process involving multiple agencies and organizations and input from New Yorkers in every borough. The plan is organized around eight goals: expand public access, enliven the waterfront, support the working waterfront, improve water quality, restore the natural waterfront, enhance the Blue Network (the waterways themselves), improve governmental oversight, and increase climate resilience. For each goal, the plan examines the issues and presents numerous citywide policies and strategies to achieve the goal. In addition, the plan includes site-specific strategies to improve the waterfront in all five boroughs.

Over the past several decades, the City has made great strides in connecting New Yorkers with the water's edge. *Vision 2020* seeks to build on these achievements and continue the City's commitment to expanding public access to the waterfront and enlivening the waterfront with a range of attractive uses. As the city continues to grow, the plan envisions new waterfront development to meet housing demand as well as provide jobs, generate new tax revenue, provide new public access opportunities, and offer crucial services for New Yorkers.

Vision 2020 also takes the next step, going beyond the shoreline and establishing policies and strategies for the use of the water itself. For example, *Vision 2020* proposes to increase the use of the waterways for passenger transportation and diverse forms of recreation. The city's waterways provide an efficient means of transporting goods as well. The city's marine cargo terminals and tug and barge operators play an important role in the Port of New York and New Jersey, the third largest port in the country and largest on the East Coast. By expanding the port and supporting the growth of maritime support services, the City will create new jobs and revitalize waterfront industrial neighborhoods.

In addition, *Vision 2020* proposes to use the waterways as part of a larger strategy to make the city more sustainable and resilient. Through innovative stormwater management, the City can improve the ecological health of its water bodies, allowing for safer in-water recreation and increased biodiversity. By protecting and restoring wetlands, beaches, and other natural shorelines, the City can better protect coastal neighborhoods from flooding and storm surges. This revision to the WRP seeks to update the coastal policies in a manner that is consistent with the goals set forth in *Vision 202*0. Updating the WRP is one of the many efforts underway to implement *Vision 2020*.

COASTAL ZONE BOUNDARY

Originally mapped and adopted in 1982, the Coastal Zone Boundary defines the geographic scope of the WRP (maps delineating the boundaries of New York City's Coastal Zone are presented in Part III). Pursuant to federal statute, the boundary encompasses all land and water that imposes a direct and significant impact on coastal waters. The Coastal Zone Boundary extends water-ward to the Westchester, Nassau County, and New Jersey boundaries, as well as to the three-mile territorial limit in the Atlantic Ocean. The boundary extends landward to encompass the following coastal features:

- Staten Island Bluebelts
- Tidal and freshwater wetlands
- Coastal floodplains and Flood Hazard Areas
- Erosion hazard areas
- Coastal Barrier Resources Act Areas
- Steep slopes
- Parks and beaches
- Visual access and views of coastal waters and the harbor
- Historic, archaeological, and cultural sites closely associated with the coast
- Special zoning districts

The Coastal Zone Boundary also includes the following special area designations:

- Significant Maritime and Industrial Areas
- Arthur Kill Ecologically Sensitive Maritime and Industrial Area
- Recognized Ecological Complexes

- Significant Coastal Fish and Wildlife Habitats
- Special Natural Waterfront Areas

In developed areas devoid of these features, the Coastal Zone Boundary is generally defined as the nearest legally mapped street at least 300 feet landward of the Mean High Tide Line. In undeveloped areas devoid of these features, the landward boundary is delineated at the legally mapped street nearest to the first major man-made physical barrier. Exceptions to these guidelines include City Island, Broad Channel Island, and the Rockaway Peninsula, which are included within the Coastal Zone in their entirety. Federal lands and facilities are excluded from the Coastal Zone; however, as discussed in greater detail below, in accordance with federal legislation, Federal activities conducted on Federal lands that may affect the resources within the Coastal Zone may be subject to consistency review with New York City's WRP. Should the federal government dispose of any coastal property, it would be included in the Coastal Zone.

At the time of adoption of the 2013 comprehensive update to the WRP, the incorporation of the FEMA flood plains and flood hazard areas within the Coastal Zone Boundary was based upon the most up-to-date projections available at the time. However, floodplain and flood hazard area projections are informed by constantly evolving understanding of dynamic environmental conditions, and, accordingly, are likely to change based on newly available data and forecasting models over the next several years. In order to ensure on an on-going basis that the City's Coastal Zone Boundary incorporates the most recently delineated floodplain and flood hazard areas, the City Coastal Commission, as the administrator of the WRP, shall update the Coastal Zone Boundary, as necessary, to reflect newly available flood plain projections. Updates made to the Coastal Zone Boundary made by the City Coastal Commission shall not become effective until approved by DOS for inclusion in the New York State CMP and the U.S. Secretary of Commerce concurs with DOS's request to incorporate the updated Coastal Zone boundary into the New York State CMP. Prior to transmitting the updated Coastal Zone Boundary to DOS for approval, the proposed revised Coastal Zone Boundary maps will be transmitted by the City Coastal Commission to each affected Community Board, the Borough Board of any Borough in which more than one Community Board is affected, the Borough President of all affected Boroughs, and the local Council Member(s) of any affected areas, as applicable (the "Reviewing Parties"), for review and comment on the revised boundaries within a forty-five (45) day period. Following receipt of comments from the Reviewing Parties, the City Coastal Commission shall transmit the revised Coastal Zone Boundary, with modifications to the boundaries as necessary to address comments, to DOS for approval.

CONSISTENCY REVIEW PROCESS AND DETERMINATION

The New York City WRP policies and sub-policies (collectively referred to as "policies") presented in Part II of this document consider the economic, environmental, and cultural characteristics of New York City's waterfront. The policies represent a balance between economic development and preservation that will permit beneficial use of and prevent adverse effects on coastal

resources. They also represent the enforceable policies of the New York State Coastal Management Program for projects in the waterfront area that are subject to this WRP. The policies are comprehensive and reflect the City's concerns; and they will be enforced through use of State laws and authorities, and local laws and regulations. The policies are the basis for Federal, State and local consistency determinations for activities affecting the Coastal Zone. While the policies are enforceable as a matter of state and local law, for reviews conducted under the federal Coastal Zone Management Act, the explanatory text for each policy is for explanatory purposes only.

Federal, state and local actions affecting the Coastal Zone are reviewed to assess the consistency of a proposed activity or project with the ten policies set forth in the WRP, while seeking to reconcile the manner in which proposed uses of the waterfront area may at once advance and hinder various policies of the WRP. In accordance with federal regulations, federal agency activities and development projects, activities requiring federal licenses or permits, or activities requiring federal financial assistance that may have reasonably foreseeable effects on the Coastal Zone must be reviewed for consistency with the WRP. Similarly, state agency program actions that are likely to affect the achievement of the policies and purposes of the WRP shall be undertaken in a manner consistent to the maximum extent practicable with its policies. Finally, projects involving local discretionary action that occur in the Coastal Zone are subject to review and determination of consistency with the coastal policies of the WRP. The application of consistency review to federal, state and local actions is discussed in more detail below.

The consistency review process also serves to facilitate coordinated review among local, state and federal agencies that play a role in projects affecting the Coastal Zone. Various federal, state and local agencies, such as the U.S. Army Corps of Engineers, the New York State Department of Environmental Conservation, the Port Authority of New York and New Jersey, New York City's Department of Parks and Recreation, Economic Development Corporation, Department of Buildings, Department of Health, and Department of Environmental Protection all have varying degrees of jurisdiction over New York City's waterfront. The consistency review of a project involving approval or permitting from various agencies at different levels of government ensures that the City's coastal policies are considered by all agencies involved in projects that fall within the Coastal Zone and assists in the early identification of all coastal regulatory requirements and policy considerations that may affect a particular project.

Federal Activity Consistency

The federal consistency provisions of the CZMA require that federal agency activities or development projects—whether performed by or on behalf of a federal agency in the exercise of its statutory responsibilities, and whether proposed inside or outside of the Coastal Zone—which will have a reasonably foreseeable effect on any land or water use or natural resource of the Coastal Zone, shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved state management programs. Similarly, any application for a required federal license or permit to conduct an activity or any application for federal assistance under other federal programs submitted by state and local governments (in or outside of the Coastal Zone), that has a reasonably foreseeable effect on any land or water

use or natural resource of the Coastal Zone, shall be consistent with the enforceable policies of a State's approved program. The federal regulations that implement the consistency provisions of the CZMA are found at 15CFR Part 930 (Federal Consistency with Approved Coastal Management Programs).

The CZMA provides that the enforceable policies of an approved State management program are those State policies which are legally binding through constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions, by which a state exerts control over private and public land and water uses and natural resources in the Coastal Zone. In New York City, the basis for federal consistency review are the enforceable policies, as described above, set forth in New York City's Waterfront Revitalization Program (WRP), which have been approved and incorporated into the State's Coastal Management Program (CMP). In New York State, DOS administers the State's CMP and is responsible for reviewing federal activities, development projects, licensing, permitting and funding that have reasonably foreseeable effects on New York City's Coastal Zone as to their consistency with the enforceable policies of New York City's WRP.

The DOS conducts consistency review for projects involving direct actions by federal agencies, federal permits, or federal funding with the CMP and the NYC WRP. For federal agencies undertaking activities or development projects that have a reasonably foreseeable effect on any land or water use or natural resource of New York City's Coastal Zone shall provide DOS with a consistency determination of the proposed activity with the New York City WRP during the early stages of planning or reassessment of the proposed activity. In the event that DOS objects to a determination of consistency made by a federal agency, such federal agency shall not proceed with the activity over DOS objection unless the federal agency concludes that carrying out the activity in a manner that is consistent to the maximum extent practicable with the enforceable policies of the CMP is prohibited by existing law applicable to the federal agency, or the federal agency has concluded that its proposed action is fully consistent with the enforceable policies of the management program, despite the DOS objection.

Applicants for a license or permit from a federal agency to conduct activities that have reasonable foreseeable effects on any land or water use or natural resources of New York City's Coastal Zone must provide DOS with a consistency certification that the proposed activity complies with and will be conducted in a manner consistent with the CMP.

Similarly, state or local governments applying for federal assistance under federal programs affecting an land or water use or natural resource in New York City's Coastal Zone must submit a copy of their application to DOS for consistency review and shall provide a brief evaluation of the relationship of the proposed activity and any reasonable foreseeable coastal effects to the enforceable policies of the coastal management program. Where DOS objects to an applicant's consistency certification (application for license and permits) or evaluation (application for federal assistance), the federal agency shall not issue the federal license or permit or approve assistance for the activity, unless the Secretary of Commerce finds that the activity requiring a federal license or permit or federal financial assistance is consistent with the objectives or

purposes of the Coastal Zone Management Act, or is necessary in the interest of national security.

DOS is the sole designated State agency responsible for reviewing federal activities, development projects, licensing, permitting and funding actions that have reasonably foreseeable effects on New York City's Coastal Zone. DOS will issue a federal consistency decision using the enforceable policies of New York City's WRP and the federal regulatory procedures and standards at 15 CFR part 930 for an activity located within the City's Coastal Zone. In particular, DOS will review the federal agency activity (permit, license or financial assistance) and an approval would require that the activity be consistent with all the WRP coastal policies. DOS will review direct federal agency activities to determine if the activity is consistent to the "maximum extent practicable" with the WRP coastal policies. In its role in the administration of the WRP and as staff to the City Planning Commission, acting as the City Coastal Commission, the Department of City Planning assists with interagency coordination. The City Coastal Commission will consult with the DOS, as early as possible within DOS's statutory review timeframe, and will issue an advisory letter to evaluate whether the activity will or will not substantially hinder the achievements of any WRP policy. Where the City Coastal Commission concludes that the project will substantially hinder the achievement of the WRP, the City Coastal Commission will advise DOS whether the action has satisfied the following requirements: (1) no reasonable alternatives exist which would permit the action to be taken in a manner that would not substantially hinder the achievement of such policy; (2) the action taken will minimize all adverse effects on such policies to the maximum extent practicable; (3) the action will advance one or more of the other coastal policies; (4) the action will result in an overriding local public benefit. DOS will issue the federal consistency decision within the statutory timeframe for review pursuant to the standards in 15 CFR part 930.

For the list of all federal actions subject to consistency review with New York State's CMP and with New York City's WRP, please see *New York's Listed Federal Actions Table 2, Federal Activities Affecting Land and Water Uses and Natural Resources in the Coastal Zone of New York State*, which can be found in New York State's CMP document and are referenced in this document in *Appendix A: State and Federal Actions and Programs which should be undertaken in a manner consistent with the LWRP* as of the date of publication.

State Action Consistency

Pursuant to the Waterfront Revitalization of Coastal Areas and Inland Waterways Act ("Waterways Act"), state program actions identified by the Secretary of State which are likely to affect the achievement of the policies and purposes of New York City's WRP shall be undertaken in a manner which is consistent to the maximum extent practicable with the WRP. The Secretary of State notifies affected State agencies of those agency actions and programs which are to be undertaken in a manner consistent with NYC's approved WRP (See Appendix A). Consistency determinations of state program actions likely to affect the achievement of the policies and purposes of the WRP are coordinated with the State Environmental Quality Review process.

Where a determination is made pursuant to the State Environmental Quality Review Act (SEQRA) that an action within the Coastal Zone may have a significant effect on the environment, the State agency shall include an assessment of the action's consistency with the applicable WRP policies. Prior to making a final decision on the action that has been the subject of a final EIS, the state agency must make a written finding that the action is consistent to the maximum extent practicable with the WRP. Fulfilling this requirement constitutes a determination of consistency with the coastal management program, as required by the Waterways Act.

Where a determination is made pursuant to SEQRA that an action will not have a significant effect on the environment, at the time of making its decision on the action, the State agency must file with DOS a certification that the action will not substantially hinder the achievement of any of the policies and purposes of the WRP and, whenever practicable, will advance one or more of such policies.

If the action will substantially hinder the achievement of any policy, the State agency may proceed with the action if it certifies instead that the following three requirements are satisfied: (1) no reasonable alternatives exist which would permit the action to be taken in a manner that would not substantially hinder the achievement of such policy; (2) the action taken will minimize all adverse effects on such policies to the maximum extent practicable; and (3) the action will result in an overriding regional or statewide public benefit. Such certification shall constitute a determination that the action is consistent to the maximum extent practicable with New York City's WRP as required by the Waterways Act. Waterways

The relevant State agency will consult with the City Planning Commission, acting as the City Coastal Commission, during the State agency's review of an action for consistency with the New York City WRP. The City Coastal Commission will provide advice and comments in writing to inform the agency's determination. In its role in the administration of the WRP and as staff to the City Planning Commission, acting as the City Coastal Commission, the Department of City Planning assists with interagency coordination. Under circumstances when a state action also involves a federal action, the Department of City Planning will coordinate with DOS for federal consistency review. For more details, see *Appendix C: Guidelines for Notification and Review of Federal Agency and New York State Agency Actions.*

See *Appendix A: State and Federal Actions and Programs which should be undertaken in a manner consistent with the LWRP* for a current official list of State actions which should be undertaken in a manner consistent with the NYC WRP, as of the date of publication. The state regulations that implement the consistency provisions of the Waterfront Revitalization of Coastal Areas and Inland Waterways Act can be found in 19 NYCRR Part 600.

Local Action Consistency

Local discretionary actions located within the Coastal Zone and subject to City Environmental Quality Review (CEQR) are reviewed for consistency with the policies of the WRP. A Consistency Assessment Form (NYC CAF) has been developed by the Department of City Planning to help make a preliminary assessment of a proposed project's potential for inconsistency with the WRP

policies and identify which WRP policies apply to a specific project. The NYC CAF is designed to screen out those policies that would have no bearing on a consistency determination for a proposed project. For any WRP policy, indicated as applicable on the NYC CAF, an assessment of the consistency of the proposed project with the noted policies must be prepared.

The City Planning Commission, acting as the City Coastal Commission, and the Department of City Planning, are responsible for administering the WRP. All local discretionary actions within the Coastal Zone that are subject to CEQR are reviewed for consistency with New York City's coastal policies. This includes the review of actions requiring City Planning Commission approval pursuant ULURP or other provision of the City Charter, as well as projects of other City agencies that do not otherwise require City Planning Commission approval. In evaluating the project's effect on the city's waterfront, the CCC considers the policies set forth in the WRP. Where a project is approved by the City Planning Commission and the project has been found consistent with the policies and intent of the WRP, the City Planning Commission sets forth that the CCC, having reviewed the waterfront aspects of the action, finds that the actions will not substantially hinder the achievement of any WRP policy and hereby determines the action is consistent with WRP policies. Where a project is approved which does not conform to existing waterfront policy, the CCC must decide that the action has satisfied all four of these requirements: (1) no reasonable alternatives exist which would permit the action to be taken in a manner which would not substantially hinder the achievement of such policy; (2) the action taken will minimize all adverse effects on such policies to the maximum extent practicable; (3) the action will advance one or more of the other coastal policies; and (4) the action will result in an overriding local or regional public benefit. Where the CCC finds that an action that does not conform to existing waterfront policy otherwise meets the above requirements, such finding shall constitute a determination that the action is consistent with the WRP.

Pursuant to the State Environmental Quality Review Act (SEQRA), Mayoral Executive Order No. 91 (City Environmental Quality Review) and the CEQR Rules of Procedure, discretionary actions of City agencies are reviewed for impacts on the environment before a final decision to approve the action is made. Under CEQR, a land use analysis considers the proposed project's compliance with, and the effect on, the area's applicable public policies. Accordingly, proposed projects located in New York City's Coastal Zone must be assessed for their consistency with the WRP. As directed by the EAS short/full form if a project is located within the WRP coastal boundaries a project sponsor, or lead agency, as the case may be, must complete a NYC CAF form and provide the same to the Department of City Planning.

Where a project is found to hinder any WRP policy, consideration should be given to any practical means of altering or modifying the project to eliminate the hindrance on the WRP. If reasonable alternatives or modifications to the project that would eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial. In making such a determination of whether a project's hindrance of a policy is substantial, the degree to which the policy will be hindered should be considered. For example, while a proposed new structure that would block a view corridor toward the water may be found to be a hindrance of a WRP policy, it may be found to be an insubstantial

hindrance, depending on the existing width of that view corridor and other circumstances. Where a hindrance to a policy is found to be substantial, those adverse effects related to the policy inconsistency should be mitigated to the extent practicable. Appropriate mitigation measures vary, depending on the particular inconsistency. Moreover, policies that would be advanced by the project should be balanced against those that would be hindered by the project in order to determine if a particular project is appropriate.

Where a project is determined to result in substantial hindrance of a policy or policies of the WRP, an agency's final decision to approve the action may be made where the mitigation measures identified and the balancing of policies that are hindered against those that are advanced are sufficient to enable a finding by such agency, with the concurrence of the CCC, that: (1) no reasonable alternatives exist which would permit the action to be taken in a manner which would not substantially hinder the achievement of such policy; (2) the action taken will minimize all adverse effects on such policies to the maximum extent practicable; (3) the action will advance one or more of the other coastal policies; and (4) the action will result in an overriding local or regional public benefit. Such finding shall constitute a determination that the project is consistent with the WRP.

Consistency Review Considerations and Prioritization of Policies

The policies set forth in the WRP provide general goals for the city's waterfront as a whole and more specific goals for portions of the waterfront that have notable characteristics. Accordingly, the relevance of each applicable policy may vary depending upon the project type and where it is located. A policy is considered applicable to a proposed project if its site, surroundings or the action itself involves activities or conditions that may have reasonably foreseeable effects to the uses or resources of the coastal zone.

The WRP sets forth five types of special area designations: the Special Natural Waterfront Areas (SNWAs), the Significant Maritime and Industrial Areas (SMIAs), the Arthur Kill Ecologically Sensitive Maritime and Industrial Area (ESMIA), the Priority Marine Activity Zones (PMAZs), and the Recognized Ecological Complexes (RECs). Maps depicting the boundaries of all of these area designations are in Part III of this report. Within each of these areas, certain policies set forth in the WRP may be prioritized over other policies. Therefore, some policies may be more or less relevant in a consistency review depending on whether a proposed activity would occur in an area characterized as most appropriate for redevelopment, working waterfront uses, natural resource protection, or public use. For example, public access and habitat protection are less relevant objectives along the working waterfront than they are in the public or natural waterfront areas, while the promotion of water-dependent industry is less relevant than wetlands protection in the natural waterfront areas. When a policy is not applicable or relevant to a proposed project and its location, the policy would not be considered in the project's consistency review.

REGULATIONS AND PROCESSES RELATED TO THE IMPLEMENTATION OF THE PROGRAM

The City of New York is empowered to adopt land use regulations pursuant to the New York State General City Law. Many of the City's controls are contained in its Zoning Resolution, adopted by the City Planning Commission and City Council and administered by the Department of Buildings. A number of other agencies, boards, commissions, elected bodies and Mayoral agencies possess authority to control or influence land use in the waterfront area. For a full list of means of implementing the WRP, see *Appendix B: Local and State Regulations Related to the Implementation of the WRP (by Policy)*.

The City Planning Commission and the Department of City Planning

Management of New York City's WRP is the responsibility of the City Planning Commission, acting as the City Coastal Commission, and the Department of City Planning. The City Planning Commission consists of a Chairperson and twelve members. Members other than the Chair are appointed for a term of five years. The Chairperson is also Director of the Department of City Planning and serves at the pleasure of the Mayor. The major responsibilities of the agency include the review of applications respecting the use, development or improvement of real property subject to ULURP; the promulgation of zoning regulations; and the issuance of an annual Capital Needs Statement.

The Department serves as staff to the Commission in all matters under the Commission's jurisdiction, advises and assists the Mayor and other City agencies in regard to physical planning and public improvement aspects of all matters related to the development of the City, provides professional and technical assistance to community planning boards, and conducts studies and collects data on an ongoing basis to serve as the basis for planning recommendations.

As noted, the Chairperson of the City Planning Commission serves as the Director of the Department of City Planning. The Department, acting as the staff for the City Coastal Commission, has been responsible for the initiation of New York City's WRP throughout the program development and implementation process. The WRP is implemented by the Department of City Planning, acting as staff to the City Coastal Commission. City Charter Section 197-a, has been utilized as the approval process for the WRP in New York City.

Land Use Review

Since 1976, applications for major land use actions, by individuals, groups, businesses, and governmental agencies have been subject to the formal land use review process known as the Uniform Land Use Review Procedure (ULURP), pursuant to Section 197-c of the City Charter. Implementation of the WRP in the ULURP process takes place through the City Planning Commission, acting as the City Coastal Commission, which makes determinations of the consistency of land use proposals with the WRP. Where waterfront issues are raised, the Commission addresses these issues in its reports. Implementation of the WRP through ULURP ensures that the policies and concerns of the WRP are part of the consideration upon which the

Commission makes its decisions. The Department of City Planning advises the Commission and the Community Boards on WRP matters and, during the pre-certification process, ensures that applicants are aware of the WRP.

Zoning Regulations

While the designation of zoning districts (zoning map changes) is subject to ULURP, the adoption of zoning regulations (text) is subject to a slightly different procedure. Upon its own initiative, or upon application, the Commission may adopt a resolution approving new or amended zoning regulations. Following notice and public hearing, the resolution is forwarded to the City Council for adoption, modification or disapproval. The adoption of new zoning to achieve waterfront objectives of encouraging appropriate waterfront proposals and protecting valuable coastal resources is an important means to implement the policies of the WRP. The text of the City Zoning Resolution is revised from time to time to further reflect waterfront revitalization policies, guidelines, and standards.

New York City adopted special zoning regulations applicable to waterfront areas in 1993 (Article 6, Chapter 2 of the Zoning Resolution). These regulations require that most new residential and commercial development that falls within the waterfront area, as defined by the zoning resolution, must provide waterfront public access area and visual corridors and applies design standards for public walkways, upland connections, signage, lighting and other fixtures. The regulations also ensure that the scale of development is appropriate for the waterfront by controlling the height and bulk of waterfront buildings and pier structures. In order to preserve and encourage water-dependent uses, the regulations generally exempt such uses from many of the special waterfront area zoning requirements and allow for floating structures. The City Planning Commission and the City Council may also adopt Waterfront Access Plans to adapt the generic waterfront public access and visual corridor requirements to specific conditions in an area. Where WRP policy goals and the waterfront zoning overlap, the policies reference the zoning. In 2009, the City Planning Commission and the City Council adopted an amendment to the special zoning regulations applying in the waterfront area to allow for more flexibility in the design public waterfront spaces. The updated regulations are designed to ensure that public spaces are inviting and clearly accessible to the public; green the waterfront with plant life including trees, shrubs, and groundcover; include a variety of amenities including seating, table, and features like boat launches or play areas; and incorporate a variety of edge treatments and other landscape elements.

City Environmental Quality Review

As noted above, pursuant to the State Environmental Quality Review Act (SEQRA) and Mayoral Executive Order No. 91 (City Environmental Quality Review or CEQR), and the CEQR Rules of Procedure, discretionary actions of City agencies are reviewed to determine their potential to result in significant impacts on the environment before a final decision to approve the action is made. As described above and set forth in more detail in the City's *CEQR Technical Manual*, the provisions of the WRP are applied by the Department of City Planning and other city agencies when conducting environmental review. Inconsistency with the WRP may result in conditions being attached to proposed actions or in the preparation of an environmental impact statement

addressing waterfront issues. A determination of consistency does not itself authorize or require the issuance of any permit, license, certification, or other approval of any grant, loan, or other funding assistance by the local agency having jurisdiction pursuant to other provisions of law.

Community-Based 197-a Plans

Community-based plans, adopted by the City Planning Commission and the City Council pursuant to Section 197-a of the City Charter, and other local plans addressing conditions and issues within the Coastal Zone—such as the Comprehensive Manhattan Waterfront Plan (1997), the Stuyvesant Cove Plan (1997), the Red Hook Community Plan (1996), the Greenpoint and Williamsburg Waterfront Plans (2002), Andrew Haswell Green Park (2006), West Harlem Piers Park (2009), and Sunset Park (2009)—offer site-specific guidance that complement the WRP policies and continue to be consulted in assessing the consistency of proposed actions with public policy.

Parks Located in the Coastal Zone

Some parks within the Coastal Zone, such as Hudson River Park, are governed by a specific statutory, or regulatory, framework that governs actions within their boundaries. The WRP is intended to be consistent with such requirements and does not supersede them. The development of other parks within the Coastal Zone may be guided by adopted master plans or similar documents. When reviewing projects on such sites for consistency with the WRP, applicants and reviewers should consult such documents, provided they have been previously determined to be consistent with the WRP.

PART II:
THE POLICIES

POLICY ONE

SUPPORT AND FACILITATE COMMERCIAL AND RESIDENTIAL REDEVELOPMENT IN AREAS WELL-SUITED TO SUCH DEVELOPMENT.

Introduction

Development on the waterfront can help meet the housing demand for a growing population as well as provide jobs, generate tax revenue, and offer crucial services for New Yorkers. New York City has demonstrated success in achieving the revitalization of long-derelict waterfront areas with new residential and commercial development. In addition to bringing new activity to the waterfront and creating new housing, the rezoning of waterfront sites for housing and commercial development has created sufficient economic value to support the cleanup of sites that were contaminated by former industrial uses and the provision of new waterfront public access areas, and has facilitated investments in affordable housing.

Many coastal areas offer opportunities for commercial and residential development that would revitalize the waterfront. In certain instances, redevelopment of commercial, community facility, or residential uses on the waterfront should be encouraged where land is vacant or underused, subject to consideration of Policy 2, where applicable, and with consideration of other relevant issues, including the need to provide new infrastructure, to be compatible with natural resources, and to address current and future risks from coastal storms, pursuant to Policy 6.2. In determining whether land is underused, consideration should be given to the specific land use context, existing uses, and the potential for future use of the site, among other factors, as outlined in Policy 1.1 A.

Related Regulations

New activities generated by redevelopment of the Coastal Zone are regulated by local, state, and federal environmental programs. In addition, Article 6 Chapter 2 of the Zoning Resolution establishes special regulations applicable to the waterfront.

1.1 Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

A. Criteria that should be considered to determine areas appropriate for reuse through public and private actions include: compatibility with the continued functioning of the designated Special Natural Waterfront Areas, the Arthur Kill Ecologically Sensitive Maritime and Industrial Area, or Significant Maritime and Industrial Areas, where applicable; the absence of unique or significant natural features or, if present, the potential for compatible development; the presence of substantial vacant or underused land; proximity to existing residential or commercial uses; the potential for strengthening upland residential or commercial areas and for opening up the waterfront to the public;

transportation access; the maritime and industrial jobs potentially displaced or created; and the new opportunities created by redevelopment.

Public actions—such as property disposition, urban renewal plans, and infrastructure provision—should facilitate redevelopment of underused property to promote housing and economic development and enhance the city's tax base, subject to consideration of Policy 2, where applicable.

1.2 Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.

A. Residential, commercial, and other non-industrial projects that comply with Article 6 Chapter 2 of the New York City Zoning Resolution satisfy the consistency requirements for Policy 1.2. If the project is not subject to the Zoning Resolution, the standards of Article 6 Chapter 2 of the Zoning Resolution should be used as guidelines for development and the inclusion of open space, visual access, upland connections, and water-related uses.

1.3 Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.

A. Encourage development at a density compatible with the capacity of surrounding roadways, mass transit, and essential community services such as public schools. Lack of adequate local infrastructure need not preclude development, but it may suggest the need to upgrade or expand inadequate or deteriorated local infrastructure.

1.4 In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.

A. Consider the use of best design practices for residential development that reduce noise, odor, dust, light, vibration, or other effects of existing nearby maritime and industrial uses.

B. New residential development within one block of an SMIA should, where feasible, incorporate measures for disclosure to potential residents that the development is located within one block of an SMIA, and that active industrial uses are present in SMIAs consistent with City policy. In the event that the City Environmental Quality Review conducted for the new residential development determines there may be significant adverse impacts relating to industrial uses—including but not limited to noise, odor, dust, light, and vibration—which cannot be fully mitigated, disclosure should also be made of such impacts.

C. Site plans should be configured, to the extent practicable, to provide buffers between active industrial activities and residential uses.

1.5 Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.

A. Projects should consider potential risks related to coastal flooding to features specific to each project, including, but not limited to, critical electrical and mechanical systems, residential living areas, and public access areas.

POLICY TWO

SUPPORT WATER-DEPENDENT AND INDUSTRIAL USES IN NEW YORK CITY COASTAL AREAS THAT ARE WELL-SUITED TO THEIR CONTINUED OPERATION.

Introduction

New York City's working waterfront is vital to the city's economy. The working waterfront includes airborne and waterborne cargo operations—including containers, roll-on-roll-off, dry and liquid bulk, and heavy lift operations—and passenger transportation. In addition, it includes industrial activity and municipal and public utility services, including energy generation, storage and distribution facilities, and waste management and recycling services. By necessity, the waterfront is home to the marine terminals that are part of the Port of New York and New Jersey—the third biggest port in the country and the largest on the East Coast—as well as the many tugboat and barge operators, marinas, and ship-repair outfits that provide maritime support services to the Port.

The city's maritime businesses are supported by a vast waterfront infrastructure—much of it created at a time when New York was still a manufacturing powerhouse with a sizable export trade. This infrastructure includes the publicly owned marine terminals such as the Hunts Point Terminal in the Bronx, New York Container Terminal in Staten Island, the Red Hook Container Terminal and Bush Terminal in Brooklyn, and the cruise terminals in Manhattan and Brooklyn. There are also many piers, boat tie-ups, and bulkheads throughout the city that support industrial uses. Maintenance of many of these facilities is critical to the efficiency and safety of water-dependent businesses on the working waterfront.

Industrial areas within the city's Coastal Zone contain a wide variety of industrial and commercial uses that support the local and regional economy and provide valuable services for local workers and businesses. Many of these uses are neither water-dependent nor wholly industrial in nature, but nevertheless can support the economic health of an industrial area.

Challenges facing the working waterfront today include promoting more environmentally sustainable business operations along the shore and providing public access where practicable, as described further in Policy 8. In addition, the working waterfront will likely face increasing risks from flooding and storm surges in the future due to climate change. Severe storm events pose potential risks of structural damage, interruption of services and operation, and property loss. In a severe event, hazardous and other industrial materials stored improperly could create environmental hazards and endanger workers, inland residents, and adjacent natural resources. As described further in Policy 6 of the WRP, projects should consider vulnerabilities to and impacts of sea level rise, coastal flooding, and storm surge over their lifespan.

Significant Maritime and Industrial Areas

Working waterfront uses have locational requirements that make portions of the Coastal Zone especially valuable as industrial areas. These areas have been recognized by the designation of the seven Significant Maritime and Industrial Areas (SMIAs): South Bronx, Newtown Creek,

Brooklyn Navy Yard, Red Hook Container Terminal, Sunset Park/Erie Basin, Kill Van Kull, and Staten Island West Shore. (See maps in Part III.) The criteria used to delineate these areas generally include concentrations of M2 and M3 zoned land; suitable hydrographic conditions for maritime-related uses; presence of or potential for intermodal transportation, marine terminal and pier infrastructure; concentrations of water-dependent and industrial activity; relatively good transportation access and proximity to markets; relatively few residents; and availability of publicly owned land. All seven of these areas exhibit combinations of most of these characteristics.

The Arthur Kill Ecologically Sensitive Maritime and Industrial Area

On the northwest waterfront of Staten Island is an area that is particularly well-suited for maritime and industrial uses also possesses significant natural resources and ecological systems. There is no other area within the city's Coastal Zone which presents a similar mix of opportunities and constraints. It is well-suited for a mix of maritime and industrial development, with large tracts of vacant, industrially zoned land, close proximity to the New York Container Terminal, connections to rail and highways, and access to deep water. The area, along with the adjacent SNWA, also includes one of the most extensive concentrations of intact tidal wetlands in the city, rivaled only by Jamaica Bay and East River/Long Island Sound. In addition to tidal wetlands, the area also includes freshwater wetlands, ponds, vernal pools, meadows, grasslands, and woodland pockets. These features provide habitat for a diverse variety of flora and fauna.

Recognizing the need for a balanced relationship between industrial uses and natural resources, this area has been designated an Ecologically Sensitive Maritime and Industrial Area (ESMIA). Many large vacant sites within the ESMIA were historically utilized for industrial uses and are likely in need of remediation. Redevelopment for productive uses presents the opportunity for restoration of adjacent natural resources. Within the ESMIA, activities that support maritime and industrial activity and which are designed to protect and restore natural features and systems are consistent with this policy. Development should avoid disturbing intact wetlands and should concentrate development on degraded inland sites and shorelines that are, or have been in the past, bulkheaded.

Development projects within the ESMIA should utilize sustainable stormwater management, industrial pollution prevention, and other sustainable design strategies to minimize impacts on adjacent resources. Such strategies include but are not limited to vegetated buffers, preservation of hydrological connectivity and natural drainage patterns, use of ecological beneficial edge designs, and minimization of impervious surfaces.

In other areas in or adjacent to the SMIAs where wetlands, RECs, or other significant natural resources are present, development proposals should utilize the principles of and design strategies of ecologically sensitive maritime and industrial development, to the extent practicable.

Policies for the SMIAs and the ESMIA

Within the SMIAs and ESMIA, the goals of the WRP are to support industrial and maritime activity. The policies also support municipal and public utility services and energy generation, in well-suited locations. For projects within SMIAs, Policy 2.1 has priority over all other policies of the WRP. For projects within the ESMIA, Policies 2.2 and 4.2 have priority over all other policies of the WRP. However, all projects should be reviewed with consideration of a site's specific features, its location and all the relevant policies of the WRP.

While the SMIAs and the ESMIA encompass areas best suited for water-dependent uses, they also include much of the city's land zoned for industrial uses. Therefore, the policies of the SMIAs and ESMIA also seek to support the many industrial uses essential to the functioning of the city and the local and regional economy that are not water-dependent and cannot incorporate water-dependent elements. Given the manufacturing zoning and the historic role these areas have played in the city's industrial economy, the largest share of future upland development is likely to be for industrial uses, most of which are as-of-right and therefore not likely to be subject to WRP consistency review.

In some instances, projects that include non-water dependent or non-industrial components can spur investment in waterfront infrastructure, support maritime and industrial uses and contribute to a healthy business environment in the SMIA.

Public investment within the SMIAs and the ESMIA should be targeted to improve transportation access and maritime and industrial operations, with an additional focus on the protection and restoration of natural resources in the ESMIA. Public investment in both the SMIA and ESMIA should integrate sustainable practices, pollution prevention, and climate resilience.

Maintenance dredging is essential to the operation and preservation of working waterfront uses and is consistent with the intent of this policy. The consistency review and determination for such a project should focus on ensuring a beneficial placement method and minimizing impacts on neighboring communities.

Most of the SMIAs and the ESMIA have the site conditions necessary to support the development and expansion of rail freight facilities and intermodal freight movement, in addition to other working waterfront uses. Projects that facilitate, support, or result in the construction and operation of rail freight facilities and intermodal freight transportation support the goals of Policy 2 and the intent of the SMIA or ESMIA designation.

While certain policies are prioritized for projects located within SMIAs and the ESMIA, projects located within those areas must be reviewed for consistency with all other relevant policies in the WRP. For example, while public access is not required for industrial uses, per the Zoning Resolution, the creation of public access areas within SMIAs and the ESMIA is nevertheless encouraged as long as the design of the public areas does not inhibit current or anticipated industrial operations or compromise security or public safety. As per Policy 8, opportunities to incorporate compatible waterfront public access within industrial areas should be considered as part of public and private projects in order to expand public access to waterfront neighborhoods

with limited existing access. For guidance on best practices for designing waterfront public access see Policy 8.6. Public parks, esplanades, piers, and bikeway routes along the industrial waterfront are also not inconsistent with Policy 2 as long as they do not inhibit the efficient operation of maritime and industrial activities or compromise security or public safety. Likewise, as per Policy 4, industrial projects and non-industrial projects located in industrial areas, should use strategies, when practicable, to protect and restore the quality and function of coastal ecological systems. And per Policy 7, to protect public health and safety and natural resources in coastal industrial areas and adjacent communities, best practices for the siting of facilities storing hazardous materials should be utilized to the extent practicable.

Working Waterfront Uses outside the ESMIA or SMIAs

The city's two major airports, by virtue of their location and significance to the local and regional economy, are important waterfront facilities that merit special attention. They are treated as water-dependent uses within the Zoning Resolution. Public actions should ensure that the safety and operational needs of the airports are met while protecting the environmental resources in Jamaica and Flushing Bays to the maximum extent feasible.

Outside the SMIAs or the ESMIA, determination of the suitability of an area for working waterfront uses will depend on the compatibility of these uses with surrounding uses and natural features and an evaluation of the area's long-term best use.

Priority Marine Activity Zones

Areas with a concentration of water-dependent activity or sites that are key nodes in the waterborne transportation network, and which have the infrastructure to support these uses, have been designated as Priority Marine Activity Zones (PMAZs) (see maps in Part III). These shorelines are used for vessel docking, berthing, or tie-up and the shoreline infrastructure, such as bulkheads, docks, piers, and fendering, is designed to support such uses. For purposes of maintaining the city’s waterborne transportation network, actions that affect the design of shoreline structures, in-water structures, and other pieces of infrastructure within the Priority Marine Activity Zones should prioritize designs that accommodate water-dependent uses. In-kind, in-place bulkhead replacement and repair, and replacement of docks or other maritime infrastructure in Priority Marine Activity Zones should be considered maintenance activities and are consistent with Policy 2.

The PMAZs encompass the areas within the seven SMIAs where there is currently a water-dependent industrial use or there is potential for such use given the site and waterway conditions. The PMAZs also include areas outside the SMIAs, such as a portion of the ESMIA, as well as smaller clusters of maritime uses, such as Eastchester, Flushing Bay, and southeast Staten Island. Also included are sites strategic for heavy-lift deliveries.

Related Regulations

Working waterfront uses, regardless of location within or outside an SMIA or the ESMIA, are regulated by other local, state, and national programs with air and water quality standards, as well as requirements for the safe storage and handling of hazardous materials and the

development of emergency preparedness plans. For a list of regulations related to hazardous materials, see Policy 7 of the WRP or Appendix B. In addition, certain City actions pertaining to City uses on the waterfront are subject to the Criteria for Location of City Facilities (The Fair Share Criteria) established by the City Planning Commission pursuant to Section 203 of the New York City Charter.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

A. Promote the development and operation of maritime and industrial uses and measures that support these uses such as dredging for navigation and maintenance purposes. In some instances, projects that include non-water dependent or non-industrial components can spur investment in waterfront infrastructure, support maritime and industrial uses and contribute to a healthy business environment in the SMIA through enabling the adaptive reuse of buildings, the cleanup of brownfield sites, the provision of services, and improvements to upland infrastructure.

B. Actions that would inhibit the safe and efficient operation of the SMIAs as industrial or maritime areas should be avoided.

C. Maintain sufficient manufacturing zoning in SMIAs to permit the industrial and water-dependent uses that are essential to the city's economy and the operation of utilities, energy facilities and city services.

D. Non-water-dependent uses on in-water or over-water structures should be undertaken in accordance with the Zoning Resolution, and those projects undertaken in non-zoned areas should use the standards of the Zoning Resolution as guidance.

E. Promote the development of temporary and permanent maritime hubs to support maritime operations. Maritime hubs are sites which contain some of the following features: tie-up space, removal of bilges, grey water and sludge, refueling, water and electric connections, crew change capacity, proximity to groceries and restaurants, and proximity to transit. A hub could also integrate commercial, recreational, tourist, and/or educational uses within the same complex. Hubs should be located close to active maritime facilities, anchorage, and berthing locations to minimize travel distances.

F. Promote remediation, redevelopment, and re-use of contaminated sites. Explore opportunities for bioremediation.

G. Target public investment to improve transportation access for maritime and industrial operations. Public investment should integrate sustainable practices, pollution prevention, and climate resilience into the design and operation of facilities.

H. Support the construction and operation of rail freight facilities and intermodal freight transportation.

I. Promote the development and operation of working waterfront uses in a manner that protects the health and well-being of surrounding communities, businesses and local workers, and natural resources. In reviewing proposed projects within SMIAs, consideration should be given to suitable hydrologic and site conditions; presence and condition of waterfront infrastructure; appropriate zoning; proximity and access to rail and truck transportation routes; suitable access to markets, customers and delivery networks; adequate and appropriate buffering from surrounding residents; existing development patterns; sustainable stormwater management strategies; ecologically beneficial edge design, industrial pollution prevention; and other best practices for sustainable development. In areas in or adjacent to the SMIAs where wetlands, RECs, or other significant natural resources are present, development should utilize the principles of and design strategies of ecologically sensitive maritime and industrial development, to the extent practicable.

J. Per Policy 3.5, within Priority Marine Activity Zones, in-kind, in-place replacement and repair of bulkheads, docks, piers, wharves and other maritime infrastructure should be considered consistent; actions which would preclude the subsequent use or future adaptation of the shoreline for vessel docking, berthing, or tie-up should be discouraged; and priority should be given towards shoreline design, erosion prevention, and flood control measures that allow for water-dependent uses. For areas outside the Priority Marine Activity Zones, other WRP goals or economic considerations may take precedence over the preservation or improvement of shorefront infrastructure to support waterborne transportation.

K. Prioritize maritime, maritime support, and water-dependent uses when siting municipal facilities and disposing publicly owned property. Discourage the location of non-water-dependent municipal facilities, other than parks, on sites with waterfront access, unless available upland sites are not feasible or appropriate for the intended use.

2.2 Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.

A. Maritime, industrial, and compatible upland development should be sited so to minimize fragmentation and other negative impacts to the coastal ecosystem as described in Policy 4.2 of the WRP. Development proposals should include features related to the preservation and restoration of ecological systems as determined by site-specific considerations.

B. Evaluate site-specific characteristics when determining whether redevelopment or ecological enhancement is most suitable. For instance, sites with extensive wetlands

should consider ecological enhancement, while sites with extensive prior development, fill, and/or contamination should be considered suitable for industrial development. For sites with an existing bulkhead, or those which have been bulkheaded in the past, the maintenance and preservation of the bulkhead and development of maritime and/or water-dependent uses should be considered suitable. In areas without an existing bulkhead, natural shoreline treatments should be considered. Similarly, upland areas beyond wetland boundaries should be considered suitable for development with appropriate buffer zones, while existing wetlands should be preserved and restored.

C. Encourage measures that restore the shoreline infrastructure for water-dependent use on sites which are best suited to support port and other maritime operations and which do not significantly encroach on natural resources.

D. Per Policy 3.5, within Priority Marine Activity Zones, in-kind, in-place replacement and repair of bulkheads, docks, piers, wharves and other maritime infrastructure should be considered consistent; actions which would preclude the subsequent use or future adaptation of the shoreline for vessel docking or tie-up should be discouraged; and priority should be given towards shoreline design, erosion prevention, and flood-control measures that allow for continuation of water-dependent uses. For areas outside the Priority Marine Activity Zones, other WRP goals, or economic considerations, may take precedence over the preservation or improvement of shorefront infrastructure to support waterborne transportation.

E. Promote the development of temporary and permanent maritime hubs to support maritime operations (see description in 2.1.D).

F. Promote the development and operation of industrial uses in a manner that protects the health and well-being of surrounding communities, businesses and local workers, and natural resources. In reviewing proposed projects within the ESMIA, consideration should be given to suitable hydrologic and site conditions; presence and condition of waterfront infrastructure; appropriate zoning; proximity and access to rail and truck transportation routes; suitable access to markets, customers and delivery networks; adequate and appropriate buffering from surrounding residents; and existing development patterns.

G. Support the construction and operation of rail freight facilities and intermodal freight transportation.

H. Target public investment to improve transportation access for maritime and industrial operations and the protection and restoration of natural resources. Public investment should also be used to support emergency preparedness planning, and the integration of sustainable practices, pollution prevention, and climate resilience into the design and operation of facilities.

I. Utilize stormwater management, industrial pollution prevention, and sustainable development best practices, such as the Staten Island Bluebelt program and other leading industry methods, in the development of maritime and industrial sites so as to promote the preservation and restoration of significant natural resources. Other potential design strategies include, but are not limited to, the use of vegetated buffers, preservation of hydrological connectivity and natural drainage patterns, minimization of impervious surfaces, and ecologically beneficial edge designs.

J. For the planning and design of projects with disturbance over 1 acre—except for maintenance to existing facilities (including in-kind replacement of structures)—a natural resources assessment should be prepared whether or not the project meets the threshold criteria described in Chapter 11, Section 200 of the CEQR Technical Manual. The assessment methodology laid out in Chapter 11, Section 300 of the CEQR Technical Manual should be used as the basis for preparing the natural resources assessment. This assessment should be used to guide site layout and design

K. Where practicable, remediate and restore wetland and other ecological complexes into a connected network so as to improve their survival as natural, self-regulating systems.

L. Promote remediation, redevelopment, and re-use of contaminated sites. Explore opportunities for bioremediation.

M. Encourage the creation of mitigation strategies, such as banking or in-lieu fee programs, in order to further the development of maritime or industrial uses and the preservation, remediation, or restoration of key sites.

2.3 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.

A. Criteria to determine areas appropriate for working waterfront uses outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area include suitable hydrologic and site conditions; presence and condition of waterfront infrastructure; appropriate zoning; proximity and access to rail and truck transportation routes; suitable access to markets, customers and delivery networks; adequate and appropriate buffering from surrounding residents; and existing development patterns.

B. Promote the development and operation of working waterfront uses in a manner that protects the health and well-being of surrounding communities, businesses and local workers, and natural resources. In reviewing proposed projects, consideration should be given to suitable hydrologic and site conditions; presence and condition of waterfront infrastructure; appropriate zoning; proximity and access to rail and truck transportation routes; suitable access to markets, customers and delivery networks; adequate and appropriate buffering from surrounding residents; existing development patterns;

sustainable stormwater management strategies; ecologically beneficial edge design, industrial pollution prevention; and other best practices for sustainable development.

C. Through continuation of existing zoning regulations and other means, support continuation of industrial uses in those areas outside SMIAs that are well-located relative to customers and delivery networks and adequately buffered from surrounding residences.

D. Permit heliports and other aviation facilities in areas well-situated to serve demand and where impacts on surrounding uses can be minimized.

E. Support improvements to airport operations, passenger and freight access, and cargo-handling facilities.

F. Promote the development of temporary and permanent maritime hubs to support maritime operations (see description in 2.1.D)

G. Promote remediation, redevelopment, and re-use of contaminated sites. Explore opportunities for bioremediation.

2.4 Provide infrastructure improvements necessary to support working waterfront uses.

A. Identify and implement public transportation improvements necessary to provide adequate truck access to working waterfront areas.

B. Maintain and improve intermodal and rail freight facilities where feasible.

C. Maintain and improve shorefront and navigational infrastructure in Priority Marine Activity Zones.

D. Maintain safe navigation and channel depths necessary to accommodate port and other maritime activities, including off-shore channels used to access New York City's waterways and coast.

E. Site port facilities in locations with hydrologic and hydraulic conditions most suited to the vessels.

F. Dredged material must be placed using an approved method at an approved site. Priority for the placement of dredged materials should be given to beneficial uses, such as wetland creation, water quality improvements, beach nourishment, or port redevelopment.

G. Maintain bridges over waterways to support transportation connections. Ensure clearance and safe vessel passage of navigation channels.

2.5 Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.

A. Projects should consider potential risks relating to coastal flooding to features specific to each project, including but not limited to bulkheads, piers, docks, and other pieces of maritime infrastructure; shoreline erosion control structures; critical electrical and mechanical systems; temporary and long-term waste storage areas; fuel storage tanks; and hazardous material storage.

POLICY THREE

PROMOTE USE OF NEW YORK CITY'S WATERWAYS FOR COMMERCIAL AND RECREATIONAL BOATING AND WATER-DEPENDENT TRANSPORTATION.

Introduction

Waterborne activity, both for transportation and recreation, contributes to the economy and quality of life within New York City. The intent of this policy is to promote a wide range of uses on the water, mitigate potential conflicts between various users, and encourage shoreline designs that allow for these uses.

These activities include in-water recreation, which includes swimming, surfing, kayaking, canoeing, rowing and other forms of human-powered boating. There are also other forms of recreation, such as sailing, small motorized crafts, and commercial recreational uses such as excursion boats and fishing party boats. Such activities are compatible with many residential and commercial uses and can locate throughout the waterfront where market and site conditions permit. Maritime centers—such as City Island, Sheepshead Bay, and Great Kills—support concentrations of commercial and recreational boating, as well as other commercial uses. In areas that support concentrations of commercial and recreational boating maritime uses, maintenance activities for these uses have priority over other activities and are generally consistent with this policy of the WRP.

In addition to being a recreational resource, the waterways are important elements of the city's transportation network. This includes passenger transportation—such as ferries, water taxis and cruise ships—and freight transportation, including containers, dry and liquid bulk, break bulk, and heavy construction materials.

Areas with a concentration of water-dependent activity or sites that are key nodes in the waterborne transportation network, and that have the infrastructure to support these uses, have been designated as Priority Marine Activity Zones (see maps in Part III). These shorelines are used for vessel docking, berthing, or tie-up, and the shoreline infrastructure, such as bulkheads, docks, piers, and fendering, is designed to support such uses. In reviewing actions located within these zones, sub-policy 3.5 should be considered the priority policy. For purposes of maintaining the city's waterborne transportation network, actions relating to the design of shoreline structures, in-water structures, and other pieces of infrastructure within the Priority Marine Activity Zones should prioritize designs that accommodate water-dependent uses. In-kind, in-place bulkhead replacement and repair, and replacement of docks or other maritime infrastructure in Priority Marine Activity Zones should be considered maintenance activities and are consistent with Policy 3.

The PMAZs encompass much of the seven Significant Maritime Industrial Areas, as well as smaller clusters of maritime uses, such as Eastchester, Flushing Bay, and southeast Staten Island.

Also included are cruise terminals, ferry landings, large commercial marinas, sites strategic for heavy lift deliveries, and sites strategic for maritime emergency evacuation.

The PMAZs are limited to those areas of the city with a concentration of water-dependent uses and areas that are critical to the city's waterborne transportation network. The development and maintenance of maritime infrastructure in areas outside PMAZs is consistent with this policy, though the design of shoreline structures outside these zones should prioritize other factors beyond marine access, such as wave attenuation and ecological benefits.

In some areas of the city's Coastal Zone, other regulations and special conditions, including the presence of designated historic in-water structures, must be considered that may preclude the ability to provide water-dependent transportation infrastructure on a site.

3.1 Support and encourage in-water recreational activities in suitable locations.

A. Support the provision of launches and platforms for human-powered boating in suitable locations. Criteria for determining a location's suitability should include:
    - adjacent upland and in-water uses;
    - avoidance of U.S. Coast Guard-designated safety and security zones and sensitive ecological areas;
    - health and safety factors including larger vessel traffic, water quality, and presence of detritus;
    - upland attributes including destination and attractions, proximity to parks, boat storage, and proximity to public restrooms;
    - water quality and conditions, including bacterial levels, strength of current, wave and wake action, and water depth;
    - upland transportation including proximity to bike networks and greenways, proximity to mass transit, parking facilities, and on-street parking;
    - community support and need;
    - local business support and opportunities for public/private partnership.

B. At access points for human-powered boating where safety hazards are high, potential safety hazards should be minimized through:
    - operational measures to secure the facility to avoid unmonitored use;
    - appropriate training of users;
    - safety measures to avoid conflicts with commercial vessels, including communication with maritime industrial users;
    - safety measures for avoiding exposure to contaminated water and sediments.

C. Consider public health and safety concerns and the creation of additional public benefit, such as the activation of a public park, in the use of any public funding for recreational boat access points. Additional guidelines developed by the City of New York should be consulted when utilizing public funding or publicly owned land for recreational boat access.

D. Encourage the design of piers and docks to accommodate multiple water-dependent uses. Potential uses may include recreational boating (motorized and human-powered), tie-up for historic and educational ships, and passenger ferries.

E. Incorporate, where feasible and appropriate, safety features on bulkheads and seawalls to allow emergency access from the waterway onto land. These features should not promote entry into the water where conditions may not be appropriate for recreation.

3.2 Support and encourage recreational, educational and commercial boating in New York City's maritime centers.

A. Maintain manufacturing or commercial zoning that permits commercial boat operations, such as commercial excursion boats, nonprofit educational and historic ships, tall ships, large sailing vessels, historic military vessels, historic tug boats, and other large vessels.

B. Develop upland properties in a manner compatible with continued maritime use of the waterfront and that takes advantage of their proximity to the waterfront.

C. Permit maintenance and repair measures that support commercial and recreational boating, including maintenance dredging.

D. Maintain channel depths necessary to accommodate port activity.

E. Reduce potential navigation hazards by minimizing obstruction in coastal waters, managing congestion in harbors and channels, and mediating conflicts among water users.

F. Incorporate consideration of climate change and sea level rise into the planning and design of fixed and floating structures, pursuant to WRP Policy 6.2. Projects should consider resiliency strategies such as increasing piling count and height, replacing deteriorated pilings, installing steel hurricane straps on piers, and replacing lighter floating docks with heavy-duty, modular articulating docks, more robust wave screens, floating breakwaters, and icebreaker systems.

3.3 Minimize conflicts between recreational boating and commercial ship operations.

A. Site recreational boating facilities, particularly those serving vessels with limited power and maneuverability, in waters without heavy concentrations of maritime and industrial, ferry, and commercial vessel activity.

B. Design facilities for recreational vessels so as to protect against strong currents, heavy waves, and wake action. Site mooring or docking facilities for recreational boats in areas

where there is adequate natural protection or where structurally adequate and environmentally sound protection can be created.

C. Ensure marina and boating facility designs are built to accommodate and withstand large wakes and surge in high-traffic areas.

D. In high-traffic waterways, consider designs of in-water and shoreline structures that minimize waves and wakes.

3.4 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

A. Provide means to prevent spillage of petroleum products at refueling stations and to clean up when spillage occurs.

B. Minimize runoff from boat yards and service areas to prevent petroleum products, paints, solvents, and other substances harmful to the environment from entering the aquatic environment.

C. Limit discharge of vessel waste into waterways by providing adequate pumpout facilities.

D. Minimize the potential for erosion impacts from new or existing marinas on surrounding natural shorelines, particularly within the Special Natural Waterfront Areas.

E. Consider designs of in-water and shoreline structures that protect and promote intertidal and marine biodiversity.

3.5 In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses

A. In-kind, in-place replacement and repair of bulkheads, docks, piers, wharves, and other maritime infrastructure should be considered consistent with Policy 3.5.

B. Discourage actions which would preclude the subsequent use or future adaptation of the shoreline for vessel docking, berthing, or tie-up.

C. Priority should be given towards shoreline design, erosion prevention, and flood-control measures that allow for continuation of water-dependent uses.

POLICY FOUR

PROTECT AND RESTORE THE QUALITY AND FUNCTION OF ECOLOGICAL SYSTEMS WITHIN THE NEW YORK CITY COASTAL AREA.

Introduction

The coastal ecosystem within New York City is composed of all the migratory and resident wildlife and the diverse vegetation that inhabit the open waters, embayments, rivers, tidal creeks, tidal and freshwater wetlands, coastal lowlands, beaches, offshore islands and adjacent uplands. This ecosystem was once highly ecologically productive, but industrialization and urbanization have resulted in degraded environmental conditions including lost or impaired habitat, poor water quality, and sediment contamination. The parallel goals of this policy are to avoid or minimize any adverse primary or secondary impacts to the coastal ecosystem and to restore ecological systems and habitat where practicable. Impairment to the terrestrial and aquatic habitat areas, functions, and other elements of this ecosystem results from outright physical loss of elements (primary impact), degradation of these elements caused over time by actions within or adjacent to a community (a secondary impact), as well as functional loss caused by the introduction of uses that are disruptive to certain wildlife or plant species. Unavoidable adverse impacts from a proposed project should be minimized and mitigated to the extent practicable.

This policy seeks the protection and, where appropriate, restoration of specific designated natural resources, including state and federal regulated tidal and freshwater wetlands, designated Significant Coastal Fish and Wildlife Habitats, vulnerable plants and animals, rare ecological communities, and natural ecological communities. Many of these resources are presently protected as public parklands, including designated Forever Wild Preserves. The goal of restoration should be to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. The *Hudson Raritan Estuary Comprehensive Restoration Plan* and its Target Ecosystem Characteristics is a useful framework for habitat enhancement objectives. Furthermore, this policy recognizes the importance of maintaining contiguous natural areas to ensure the viability of the natural communities within them. Fragmentation of ecosystems can lead to loss of species that need large expanses or access to several types of habitats in which to breed or feed.

Special Natural Waterfront Areas

The *New York City Comprehensive Waterfront Plan* recognizes large concentrations of important natural coastal features by designating three Special Natural Waterfront Areas (SNWAs): Northwestern Staten Island Harbor Herons Area, Jamaica Bay, and East River Long Island Sound area, which includes a major part of Flushing Bay. (See maps in Part III.) The SNWAs are large areas with significant open spaces and concentrations of the natural resources including wetlands, habitats, and buffer areas described above. Each of the SNWAs has a combination of important coastal ecosystem features, many of which are recognized and protected in a variety of regulatory programs, including the Significant Coastal Fish and Wildlife Habitats, Coastal

Erosion Hazards Areas, and Tidal and Freshwater Wetlands. This policy is applicable to any project proposed within the SNWAs and is the primary policy to be considered. Public investment within the SNWAs should focus on habitat protection and improvement and should not encourage activities that interfere with the habitat functions of the area. Acquisition of sites for habitat protection and actions to restore ecological functions are presumed consistent with the goals of this policy. Further fragmentation or loss of habitat areas within the SNWAs should be avoided and could be the basis for a determination of inconsistency with the WRP.

The Arthur Kill Ecologically Sensitive Maritime and Industrial Area

On the northwest waterfront of Staten Island, land that is particularly well-suited for maritime and industrial uses also possesses significant natural resources and ecological systems. There is no other area within the city's Coastal Zone which presents a similar mix of opportunities and constraints. The area is well-suited for a mix of maritime and industrial development, with large tracts of vacant, industrially zoned land, close proximity to the New York Container Terminal, connections to rail and highways, and access to deep water. The area, along with the adjacent SNWA, also includes one of the most extensive concentrations of intact tidal wetlands in the city, rivaled only by Jamaica Bay and East River/Long Island Sound. In addition to tidal wetlands, the area also includes freshwater wetlands, ponds, vernal pools, meadows, grasslands, and woodland pockets. These features provide habitat for a diverse variety of flora and fauna.

Recognizing the need for a balanced relationship between industrial uses and natural resources, this area has been designated as an Ecologically Sensitive Maritime and Industrial Area (ESMIA). Many large vacant sites within the ESMIA were historically utilized for industrial uses and are likely in need of remediation. Redevelopment for productive uses presents the opportunity for restoration of adjacent natural resources. Within the ESMIA, activities which support maritime and industrial activity and which are designed to protect and restore natural features and systems are consistent with this policy. Development should avoid disturbing intact wetlands and should concentrate development on degraded inland sites and shorelines which are, or have been in the past, bulkheaded.

Development projects within the ESMIA should utilize sustainable stormwater management, industrial pollution prevention, and other sustainable design strategies to minimize impacts on adjacent resources. Such strategies include, but are not limited to, vegetated buffers, preservation of hydrological connectivity and natural drainage patterns, use of ecological beneficial edge designs, and minimization of impervious surfaces.

In other areas in or adjacent to the SMIAs where wetlands, RECs, or other significant natural resources are present, development proposals should utilize the principles of and design strategies of ecologically sensitive maritime and industrial development, to the extent practicable.

Recognized Ecological Complexes

This policy also recognizes the presence of other ecological complexes where clusters of valuable natural features are somewhat more fragmented than those in the SNWAs and are

often interspersed with developed sites. Referred to herein as Recognized Ecological Complexes (RECs), many of these sites are within protected parkland or areas designated as Forever Wild Preserves. The designation of these sites was based on priority acquisition or restoration list from science-based plans and reports—including the Hudson Raritan Estuary Comprehensive Restoration Plan from the U.S. Army Corps of Engineers; the Buffer the Bay, Buffer the Bay Revisited, and An Islanded Nature reports from the Trust for Public Land and NYC Audubon; the Natural Areas Initiative by NYC Audubon; the New York State Open Space Conservation Plan; the Jamaica Bay Watershed Protection Plan; the Bronx River Intermunicipal Watershed Protection Plan, and the Comprehensive Conservation and Management Plan from the U.S. Environmental Protection Agency PA/ NY-NJ Harbor Estuary Program. Some of these sites are substantially environmentally deteriorated and require an active approach to restoration. Projects located within a Recognized Ecological Complex (as indicated in the maps in Part III) should consider further investigation into the exact locations of natural resources in these sites and should consider means to promote their preservation, restoration, and/or remediation.

Related Regulations

Guidance for activities in and adjacent to tidal and freshwater wetlands is provided by State and Federal wetlands laws, including the NYS Freshwater Wetlands Act, the NYS Tidal Wetlands Act, and NYS Stream Protection Act, as well as the Federal Water Pollution Control Act (Clean Water Act) Section 401 Water Quality Certification, and the Federal Water Resources Development Act, or their successors.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.

A. Avoid activities that may cause or cumulatively contribute to permanent adverse changes to the ecological systems and their natural processes. When avoidance is not possible, minimize the impacts of the project to the extent feasible and mitigate any physical loss or degradation of ecological elements. Use mitigation measures that are likely to result in the least environmentally damaging feasible alternative.

B. Avoid fragmentation of natural ecological communities and maintain corridors to facilitate the free exchange of biological resources within and among these communities. Protect those sites which have been identified as key to maintaining habitat connections within ecological systems.

C. To the extent practicable, remediate and restore ecological systems so as to ensure their continued existence as natural, self-regulating systems.

D. Utilize stormwater management best practices, industrial pollution prevention, and other sustainable development strategies to reduce impacts of development on natural resources. Potential design strategies include, but are not limited to, the use of

vegetated buffers, preservation of hydrological connectivity and natural drainage patterns, and minimization of impervious surfaces.

E. Protect non-invasive plants from excessive loss or disturbance, and encourage greater quantity and diversity of non-invasive plants to the extent practicable. Select plants that are resilient to current and future changes in climate. Avoid use of invasive plants except in ornamental gardens, as collector specimens, or for erosion control, filtration, or phytoremediation, provided that it is not feasible to use non-invasive species to perform the same functions. Avoid use of non-indigenous plants that are invasive species likely to alter existing natural community composition. Where destruction or significant impairment of non-invasive plants cannot be avoided, the potential impacts of land use or development should be minimized and any resulting losses of non-invasive plants mitigated to the extent practicable.

F. For the planning and design of projects with disturbance over 1 acre—except for maintenance to existing facilities (including in-kind replacement of structures)—a natural resources assessment should be prepared whether or not the project meets the threshold criteria described in Chapter 11, Section 200 of the CEQR Technical Manual. This assessment should be used to guide site layout and design. The assessment methodology laid out in Chapter 11, Section 300 of the CEQR Technical Manual should be used as the basis for preparing the natural resources assessment.

G. Target public investment towards habitat protection and improvement. Avoid public investment which would interfere with the habitat functions of the area. Pursue acquisition of sites for habitat protection.

4.2 Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.

A. Avoid activities that may cause or cumulatively contribute to permanent adverse changes to the ecological systems and their natural processes. When avoidance is not possible, minimize the impacts of the project to the extent feasible and mitigate any physical loss or degradation of ecological elements. Use mitigation measures that are likely to result in the least environmentally damaging feasible alternative.

B. Avoid fragmentation of natural ecological communities and maintain corridors to facilitate the free exchange of biological resources within and among these communities. Protect those sites which have been identified as key to maintaining habitat connections within ecological systems.

C. To the extent practicable, remediate and restore ecological systems so as to ensure their continued existence as natural, self-regulating systems.

D. Utilize stormwater management best practices, industrial pollution prevention, and other sustainable development strategies to reduce impacts of development on natural resources. Potential design strategies include, but are not limited to, the use of vegetated buffers, preservation of hydrological connectivity and natural drainage patterns, minimization of impervious surfaces, and ecologically beneficial edge designs.

E. Protect non-invasive plants from excessive loss or disturbance and encourage greater quantity and diversity of non-invasive plants to the extent practicable. Select plants that are resilient to current and future changes in climate. Avoid use of invasive plants except in ornamental gardens, as collector specimens, or for erosion control, filtration, or phytoremediation, provided that it is not feasible to use non-invasive species to perform the same functions. Avoid use of non-indigenous plants that are invasive species likely to alter existing natural community composition. Where destruction or significant impairment of non-invasive plants cannot be avoided, the potential impacts of land use or development should be minimized and any resulting losses of non-invasive plants mitigated to the extent practicable.

F. Development proposals in the ESMIA should include features relating to the preservation and restoration of ecological systems as determined by site-specific considerations.

G. Site-specific characteristics should be considered when determining whether redevelopment or ecological enhancement should be considered most suitable. For instance, sites with extensive wetlands should consider ecological enhancement, while sites with extensive prior development, fill, and/or contamination should be considered suitable for industrial development. For sites with an existing bulkhead, or those which have been bulkheaded in the past, the maintenance and preservation of the bulkhead and development of maritime and/or water-dependent uses should be considered suitable. In areas without an existing bulkhead, natural shoreline treatments should be considered. Similarly, upland areas beyond wetland boundaries should be considered suitable for development, while existing wetlands should be preserved and restored. In areas in or adjacent to the SMIAs where wetlands, RECs, or other significant natural resources are present, development utilize the principles of and design strategies of ecologically sensitive maritime and industrial development, to the extent practicable.

H. For the planning and design of projects with disturbance over 1 acre—except for maintenance to existing facilities (including in-kind replacement of structures)—a natural resources assessment should be prepared whether or not the project meets the threshold criteria described in Chapter 11, Section 200 of the CEQR Technical Manual. This assessment should be used to guide site layout and design. The assessment methodology laid out in Chapter 11, Section 300 of the CEQR Technical Manual should be used as the basis for preparing the natural resources assessment.

I. Target public investment to improve transportation access for maritime and industrial operations and the protection and restoration of natural resources. Public investment

should also be used to support emergency preparedness planning and the integration of sustainable practices, pollution prevention, and climate resilience into the design and operation of facilities.

4.3 Protect designated Significant Coastal Fish and Wildlife Habitats.

A. Protect designated Significant Coastal Fish and Wildlife Habitats from land or water uses or development which would:
    - Destroy habitat values associated with the designated habitat through direct physical alteration, disturbance, or pollution, or indirect effects of actions that would result in a loss of habitat; or
    - Significantly impair the viability of the designated habitat beyond the tolerance range of important fish or wildlife species which rely on the habitat values within the designated area through: degradation of existing habitat elements, change in environmental conditions, functional loss of habitat values, or adverse alteration of physical, biological, or chemical characteristics.

B. Where destruction or significant impairment of habitat values cannot be avoided, the potential impacts of land use or development should be minimized and any resulting losses of habitat mitigated to the extent practicable.

C. Protect non-invasive plants from excessive loss or disturbance and encourage greater quantity and diversity of indigenous plants to the extent practicable. Select plants that are resilient to current and future changes in climate. Avoid use of invasive plants except in ornamental gardens, as collector specimens, or for erosion control and filtration, or phytoremediation, provided that it is not feasible to use non-invasive species to perform the same functions. Avoid use of non-indigenous plants that are invasive species likely to alter existing natural community composition. Where destruction or significant impairment of non-invasive plants cannot be avoided, the potential impacts of land use or development should be minimized and any resulting losses of non-invasive plants mitigated to the extent practicable.

4.4 Identify, remediate and restore ecological functions within Recognized Ecological Complexes.

A. Projects located within a Recognized Ecological Complex should consider the following:
    - Further identification of natural resources through consulting relevant science-based plans and studies listed in the introduction to Policy 4.
    - The use of design features to incorporate restoration objectives, as identified in the relevant science-based plans and studies listed in the introduction to Policy 4.
    - Remediation, protection, and restoration of ecological complexes so as to ensure their continued existence as natural, self-regulating systems.

4.5 Protect and restore tidal and freshwater wetlands.

A. Prevent the net loss of wetlands by: (1) avoiding the draining of, placement of fill in or excavation of wetlands; (2) minimizing adverse impacts resulting from unavoidable draining, fill, excavation or other activities; or (3) providing mitigation for any adverse impacts which may remain after all appropriate and practicable minimization measures have been taken. These are presented in order of descending preference with (1) being the most effective and preferred option.

B. Maintain or create resilient vegetative buffers between wetlands and nearby uses to protect the wetland's character, quality, values, and functions. Buffers should be designed and maintained to preserve hydrologic balance within the wetland and between the wetland and surrounding upland area. The adequacy of the buffer width and composition is determined by: (1) the potential for adverse effects associated with the proposed or existing use; (2) the nature and importance of the wetland and its benefits to the ecological complex; (3) the direction and flow of surface water between a use and the wetland; and (4) the necessity to achieve and maintain a high filtration efficiency or surface runoff as determined by vegetative cover type, soil characteristics, and slope of land. In all cases, the buffer must not be less than that required by state law. If site constraints do not allow sufficient buffer width, consider other management measures or design alternatives to preserve or achieve hydrologic balance.

C. In the SNWAs, ESMIA, and Recognized Ecological Complexes, restore tidal wetlands and freshwater wetlands wherever practicable to foster their continued existence as natural, self-regulating systems. As site conditions require, wetlands restoration efforts should include reconstruction of lost physical conditions to maximize wetlands values, adjustment of altered chemical characteristics, reintroduction of indigenous flora to emulate natural conditions, and enhancement of adjacent areas to provide natural buffers to wetlands.

D. Promote restoration of City-owned wetlands.

E. To address unavoidable impacts, encourage the creation of wetland mitigation strategies, such as banking or in-lieu fee programs, in order to further the preservation, remediation or restoration of key sites.

4.6 In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.

A. When appropriate and practicable, projects should be designed to:
    - Restore and protect roosting, nesting, and foraging habitat for long-legged wading bird on islands.

- Create and restore coastal and maritime forests.
- Create and improve functionally related habitat for aquatic species, including but not limited to oysters, mussels, eelgrass, fish, and crab.
- Create and restore shorelines, shallows, and intertidal areas.
- Reconnect freshwater streams and inland habitats.

B. Ecosystem restoration should include clear and specific short- and long-term goals and success criteria. Design should include consideration of site-specific hydrology, wave and surface flow, light conditions, and soil characteristics. When practicable, monitor the results of restoration projects to advance the science and practice of restoration methods.

C. Incorporate consideration of climate change and sea level rise into the planning and design of restoration projects, pursuant to WRP Policy 6.2. Projects should consider potential risks to features specific to each project, including but not limited to plant selection, topography, and hydrological connections.

D. Consider designs for shorelines and in-water structures that promote ecological functioning. For instance, avoid smooth vertical surfaces and use materials that support marine life.

4.7 Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.

A. Avoid harming vulnerable fish and wildlife species, which are those listed in regulation 6 NYCRR Part 182.5 as Endangered Species, Threatened and Special Concern Species, and the habitat of listed species during all stages of their life cycles.

B. Protect vulnerable plant species, which are those listed in regulation 6 NYCRR Part 193.3 as Endangered Species, Threatened Species, Exploitable Vulnerable Species and Rare Species, and the habitats of listed species necessary to their survival.

C. Protect rare ecological communities, which include those that qualify for a Heritage State Rank of S 1, S2, S3 or an Element Occurrence Rank of A (ECL 11-0539).

4.8 Maintain and protect living aquatic resources.

A. Promote sustainable commercial and recreational use of living aquatic resources and efforts to restore fish and shellfish populations. The scale and method of harvest should be appropriate for the resources and the physical characteristics of the harvest area. Promote harvesting of shellfish stock for depuration and for relays by nearshore hand harvesters.

B. Protect native stocks and maintain sustainable populations of indigenous fish and wildlife species and other aquatic living resources, including shellfish. Protect spawning grounds, habitats, and water quality to preserve aquatic resources.

C. Artificial stocking should only be undertaken when it will not result in loss of the genetic integrity of native populations. Prevent the introduction of non-indigenous species into natural environments unless it is part of an approved pest-control program.

D. Protect native stocks from potential adverse biological impacts due to aquaculture. Provide leases of state-owned underwater lands for aquaculture only in areas that are not significant shellfish-producing areas or that are not supporting significant shellfish hand harvesting.

POLICY FIVE

PROTECT AND IMPROVE WATER QUALITY IN THE NEW YORK CITY COASTAL AREA.

Introduction

The purpose of Policy 5 is to protect the quality and quantity of water in the New York City Coastal Zone. Quality considerations include management of pollution from both point and non-point sources. Nonpoint pollution often occurs as a result of rainfall or snowmelt moving over the ground towards waterways. As the runoff moves, it picks up and carries away pollutants which are then deposited into creeks, wetlands, and coastal waters. Given their proximity to waterways, sites within the Coastal Zone are more likely to generate nonpoint pollution. Quantity considerations include approaches for ensuring that wetlands and natural areas receive sufficient quantities of water to sustain or improve their functioning, which in turn will preserve and maintain water quality.

Throughout the 19th and much of the 20th centuries, widespread waterfront industry and an inadequate municipal sewer system degraded the quality of New York's waterways through the direct discharge of pollutants into the water. However, in recent decades, thanks to the investment of billions of dollars in new and upgraded infrastructure by New York City, 95% of New York Harbor meets water quality standards for boating, while 14 miles of public beaches offer access to clean, swimmable water.

Nevertheless, New York still faces a number of challenges to restoring its aquatic ecosystems and making its waters safe and accessible for human recreation. First, substantial filling and dredging operations have significantly altered the bathymetry of many waterbodies, leading to reduced tidal flushing and circulation. Second, water released from wastewater treatment plants contains high levels of nutrients such as nitrogen, which can lead to eutrophic conditions and seasonal algal glooms. Third, during heavy rains, so as to not overburden the capacity of sewage treatment plants and create sewer back-ups into homes and businesses, regulators release a dilute mixture of sanitary water with mostly stormwater—referred to as combined sewer overflows (CSOs)—into surrounding waterways. Though their frequency and volume have decreased considerably in recent decades in large part due to the City's infrastructure investment upgrade program, CSOs still contribute to New York's water pollution. In addition, New York's legacy of industrialization continues to impair its water quality, as, even today, residual contaminants in sediments erode aquatic ecosystems. Finally, over the course of the development of the New York City region, coastal wetlands—which serve as both vital habitats and natural water filtration systems—have been reduced to about a tenth of their original land coverage, further limiting water quality and marine biodiversity.

Policy 5 aims to promote New York's water quality through infrastructure improvements, innovative greening strategies, and promoting and enhancing biodiversity and ecological function. This includes investments in cost-effective "grey infrastructure" improvements, such as capacity increases at wastewater treatment plants or the construction of new detention facilities

and pumping stations, as well as sustainable "green infrastructure," such as blue roofs for stormwater catchment or porous pavement and enhanced tree pits for stormwater absorption. This also includes restoring aquatic and adjacent upland ecosystems.

Related Regulations
Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) requires coastal states with approved coastal zone management programs to address nonpoint pollution impacting or threatening coastal waters. All projects that involve discharges to waterbodies are subject to state and local water quality standards and regulations. Specific nonpoint pollution management measures are presented in Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (U.S. EPA, 840-B-92-002).

The discharge of wastewater into surface or groundwater is regulated by the NYS Dept. of Environmental Conservation under the State Pollutant Discharge Elimination System (SPDES). As part of the SPDES permitting process, a Stormwater Pollution Prevention Plan (SWPPP) must be developed for construction areas greater than one acre in separate sewer or direct discharge areas, which are common along the waterfront. The SWPPP must outline and describe stormwater controls for during and post-construction.

5.1 Manage direct or indirect discharges to waterbodies.

A. Minimize the negative impacts to fish and wildlife habitats caused by artificial input of large quantities of freshwater into tidal or brackish waterbodies and enhance freshwater inputs when it can be demonstrated that there will be ecological benefits.

B. Minimize the negative impacts to fish and wildlife habitats caused by effluent discharge that result in thermal changes from steam generating, heating, air conditioning, and industrial facilities.

C. Limit discharge of vessel wastewaters into waterways by providing adequate pumpout facilities.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

A. Use sustainable stormwater management strategies, such as green infrastructure, use of permeable surfaces, on-site detention, and the preservation and enhancement of vegetation, wetlands, and ecosystems to minimize nonpoint discharge into coastal waters of excess nutrients, organics, eroded soils, and pollutants, and to control stormwater runoff from roadways and other developed areas.

B. Minimize nonpoint source pollution of coastal waters using the following approaches listed in order of priority: (1) avoid pollution by limiting sources; or (2) reduce pollutant loads to recipient waters by managing unavoidable sources.

C. Limit sources of atmospheric deposition of pollutants to New York City waterbodies and streams, particularly from nitrogen sources, which may deteriorate water quality or impair aquatic habitats.

D. As described in WRP Policy 7.1, use accepted best management practices to prevent the run-off of pollutants and potentially contaminated sediment into waterways.

5.3 Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.

A. Undertake dredging in coastal waters and dredge placement in a manner that meets state and federal dredging permit requirements, protects significant coastal fish and wildlife habitats, natural protective features, wetlands and aquatic resources, and, where feasible, maintains and is consistent with the ecological resources.

B. Ensure that excavation and fill operations are protective of the environment and meet state standards for physical factors, such as pH, dissolved oxygen, dissolved solids, nutrients, odor, color and turbidity; health factors such as pathogens, chemical contaminants, and toxicity; and aesthetic factors such as oils, floatables, refuse, and suspended solids.

C. Minimize potential negative impacts on aquatic life during excavation or placement of fill by using appropriate and effective containment methods, clean fill material, and appropriate scheduling of operation.

5.4 Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.

A. Determination by the state of coastal water classifications and water quality standards should be based in part on the upland land use policies and on the existing and intended waterfront functions.

B. Minimize disturbance of streams including their beds and banks. Prevent erosion of soil, increased turbidity, and irregular variation in velocity, temperature, and level of water.

C. Maintain the viability of small streams and wetlands by protecting the quantity of water that feeds these areas.

5.5 Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.

A. The following strategies should be considered as potential means to protect and improve water quality:

- Upgrade wastewater treatment plants to achieve secondary treatment standards.
- Upgrade treatment plants to reduce nitrogen discharges.
- Complete cost-effective grey infrastructure projects to reduce CSOs and improve water quality.
- Construct necessary sewer system improvements to support current residents and future growth, and optimize the existing system.
- Replace combined sewers with separate storm and/or sanitary sewers to enhance capacity in combined sewer systems.
- Encourage in-water pilot projects, such as mollusks and submerged aquatic vegetation, to filter water pollutants.
- Utilize dredging and the placement of dredged material in tributaries to remove accumulated sediments, related odors, improve circulation, and improve aesthetics for surrounding communities.
- Construct sediment and floatables control at discharge points including outfalls.
- Install instream aeration and destratification facilities in tributaries with low dissolved oxygen levels.
- Replace bulkheads and rip-rap with soft shorelines and terracing of bulkheads for maximum ecological value.

POLICY SIX

MINIMIZE LOSS OF LIFE, STRUCTURES, INFRASTRUCTURE, AND NATURAL RESOURCES CAUSED BY FLOODING AND EROSION, AND INCREASE RESILIENCE TO FUTURE CONDITIONS CREATED BY CLIMATE CHANGE.

Introduction

This policy aims to reduce flooding and erosion hazards in order to protect life, structures, infrastructure, and natural resources. Much of New York City's social, economic, cultural, and natural resources are located in coastal areas that have risks from flooding and erosion. Storms such as Hurricanes Irene and Sandy have shed light on vulnerabilities facing waterfront communities that exist in the City today, and that are likely to increase due to climate change and sea level rise in the future. These risks should be identified and adaptive measures to manage these risks incorporated to the extent appropriate or practicable. In addition, new projects in coastal areas should be planned and designed to reduce risks posed by current and future coastal hazards and encourage the efficient use of public funding.

Climate Resilience

Climate change, a result of global greenhouse gas emissions, is expected to cause sea levels to rise, which will increase the risks of coastal flooding, storm surges, and erosion to New York City's Coastal Zone. The New York City Panel on Climate Change (NPCC), a group of leading climate change scientists and legal, insurance, and risk-management experts, was convened by the City to develop New York City-specific climate change projections.

These types of long-term projections necessarily include a degree of uncertainty regarding the rate and magnitude of sea level rise. Appendix D contains the latest projections for climate change. The NPCC may periodically issue updated climate change projections based on new data or analysis. While projections will continue to be refined in the future, current projections are useful for present planning purposes. It is anticipated that further adaptive actions can be taken in the future, when more refined projections become available. The intent of this policy is to facilitate decision-making in the present that can reduce existing and near-term risks without impeding the ability to take more informed adaptive actions in the future.

New York City is pursuing many initiatives to reduce greenhouse gas emissions. Following Hurricane Sandy, the Mayor's Special Initiative for Rebuilding and Resiliency identified ways to increase the resilience of the city's built and natural environments. Resilience is understood as the ability of systems and structures to withstand and recover quickly and independently from regionally characteristic and severe climate events. Because certain risks are unavoidable, a resilience strategy should not seek to eliminate all risks. Instead, public and private actors must identify and manage risks, take steps to minimize danger to lives and damage to property and natural systems from flooding and storms, and limit disruptions from storm events and the recovery time after such events. Building resilience will require actions not only by government, but also by utilities, private property owners, local residents, community-based organizations, local community groups, and businesses. Building resilience will also require regional

coordination of public and private entities to develop plans that address region-wide issues and strategies.

Climate Resilience Strategies

Techniques to manage risks posed by flooding and erosion include the use of hard shoreline protection structures (such as bulkheads, revetments, flood gates, levees, or other permanent or temporary barriers), soft shoreline protection strategies (such as beach nourishment, vegetative plantings, or the creation or enhancement of wetlands, barrier islands, or reefs), the raising of land or the placement of fill to elevate projects above flood levels, the use of structures designed to resist or accommodate flooding, and/or non-structural measures such as the relocation of existing uses and restrictions on future uses. The study of how to assess and manage future climate risks is evolving, and many innovative strategies should be further studied and examined through pilot projects to increase the options available to address climate change.

The appropriate techniques for a given project depend on case-by-case considerations, including site-specific vulnerabilities and risks, impacts on adjacent sites and communities, wave and current action, density and land use, proximity of infrastructure, scale, and project life cycle, as well as consideration of all other relevant policies of the WRP. In addition, the costs and benefits of incorporating the resilience strategy, and the costs and benefits of the project as a whole, should be taken into consideration in determining an appropriate resilience strategy. When practicable, strategies to address flooding and erosion should advance the other goals of the WRP. For instance, a well-designed flood and storm surge protection project could also include public access and intertidal habitat.

Depending on the location of a specific site, existing/proposed uses, and the nature of a given project, the priorities of different policies should influence the decision for which strategies to employ. For instance, measures that protect or adapt existing uses and structures (without retreat or relocation) are most likely to be appropriate for the developed areas of New York City's Coastal Zone where significant existing private and public investments—including development; infrastructure and parkland; and regionally significant economic, social, and cultural activity—make retreat impractical and undesirable.

Shoreline Design

Natural shorelines—such as beaches, wetlands, and dunes—protect inland areas from flooding and storm surges and provide stormwater filtration, ecosystem habitat, and recreation. When practicable, nearshore areas and riparian edges should be preserved, restored, and enhanced to protect significant public infrastructure investment and reduce coastal hazard impacts. Barrier landforms that protect significant public investment or natural resources should be maintained or restored. The benefits of erosion and flooding control structures should be balanced against the impacts upon adjacent properties and to the waterbody as a whole, which can include increased erosion, aesthetic impairments, loss of public recreational resources, loss of habitats, and water quality degradation.

It is a goal of this policy to employ measures most suited to the use and condition of differing locations in order to avoid haphazard use of structural measures that can exacerbate erosion. Maritime infrastructure—such as bulkheads, piers, and docks—and other shoreline treatments that support water-dependent uses are essential to the function of both Significant Maritime and Industrial Areas (SMIAs) and Priority Marine Activity Zones (PMAZs). Within these areas, designs for flood and erosion protection that preserve the usability of the shoreline for maritime activity should have precedence over other designs. Within the Special Natural Waterfront Areas (SNWAs), protection of the natural shoreline and ecologically beneficial shoreline treatments have priority over other erosion and flood control methods. Within the Arthur Kill ESMIA, specific site characteristics and uses should determine which erosion and flood control methods are most appropriate. For instance, for projects that include water-dependent uses on previously bulkheaded sites, the maintenance and replacement of bulkheads or other shoreline protective measures typically takes precedence. For sites with no existing bulkhead and where there has been limited disturbance to wetlands, natural shoreline measures should have precedence. Hybrid shoreline treatments—such as tiered sea walls with marsh plantings, which integrate benefits of both hard and soft shorelines—should be employed in place of hard shoreline strategies when practicable. In addition, the use of materials and structures that promote intertidal and aquatic habitat with valuable ecosystem services should be utilized when practicable. See figure 6.1 for illustrative examples of some shoreline flooding and erosion strategies.

FIGURE 1: Illustrative examples of Shoreline Design

Marsh | Sand | Rip-rap or revetment | Bulkhead | Hybrid

Related Regulations and Programs

Guidance for construction and renovation of residential and non-residential structures in identified flood hazard areas is found within the floodplain management statutes and regulations, including New York City Administrative Code, Title 28, Article 10: General Limitations on Occupancy and Construction within Special Flood Hazard Areas, §27-316 and §27:317 (often referred to as Local Law 33 of 1988). Guidance for activities in identified erosion hazard areas is contained within the New York State Coastal Erosion Hazard Area statutes and regulations. Compliance and coordination with emergency preparedness plans is another important means of minimizing loss due to coastal hazards. The New York City Office of Emergency Management maintains plans to respond to specific events, including a Coastal Storm Plan.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.

A. Where shoreline protection is necessary to protect development, it should incorporate climate change projections into its design, pursuant to Policy 6.2.

B. Shoreline protection can be structural, natural, or a hybrid. An appropriate form of shoreline protection should protect public health and safety while minimizing impacts on ecosystems and public access.

C. Development and other investments of private and public funds should be located and designed in a manner that minimizes or eliminates potential risks from flooding and other coastal hazards with minimal impacts on ecological resources and public access. If feasible, locating non-water-dependent development and structures away from flooding and erosion hazards is the most effective means of achieving this option.

D. Design projects so that they do not adversely affect adjacent shorelines or properties by exacerbating flooding or erosion.

E. Maximize the flooding and erosion protective capacities of natural shoreline features while minimizing interference with natural coastal processes to avoid adverse effects on the shoreline. Generally, protection, maintenance, and restoration of natural coastal processes and shoreline features are preferred over use of structural measures, unless hardened shoreline treatments are necessary (as described in 6.1.F). Shoreline treatments that provide for ecological function, including hybrid approaches, are preferred within the SNWAs, sites with natural resources within the ESMIA, and Recognized Ecological Complexes.

F. In SNWAs, RECs, sites with natural resources in the ESMIA, and wherever else achievable, use salt-water-tolerant plantings and other non-structural measures that have a reasonable probability of managing flooding and erosion based on site characteristics including wave action, exposure, geometry and sediment composition. Plantings should also be used to increase protective capacities of natural protective features at every opportunity and in combination with other types of measures. Use plantings alone to control erosion in areas where the potential success rate for vegetative methods is high.

G. Use hardened shoreline treatments (concrete, steel, vinyl, etc) where hazard avoidance using non-structural measures is not practicable, and provide mitigation where structural measures will increase severity of the hazard to surrounding public and private property. Allow use of hard structural measures within the SMIAs and Priority Marine Activity Zones where such measures will either support the maintenance or development of infrastructure for water-dependent uses or will support industrial uses. In areas with extensive use of hard structural measures, protect upland development and investment

by supporting efforts to close gaps in the hardened shoreline, repair breaches, and maintain the structure.

6.2 Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.

A. In the planning and design of all projects—except for the maintenance or in-kind, in-place replacement of existing facilities—identify the potential vulnerabilities of the project to the effects of sea level rise, coastal flooding, and storm surge over its usable life and the general consequences to the project of these types of events. This analysis should be conducted by an architect, engineer or other qualified professional. For projects with a usable lifespan beyond the timeframe of any available projections, the furthest projection by the New York City Panel on Climate Change shall be used. The scope of the analysis should take into account the nature of the action subject to consistency review, as well as the size and location of the project, and must examine, as applicable:
    - Current conditions and the projected conditions with sea level rise and climate change.
    - Features of the project likely to be vulnerable to temporary flooding, frequent inundation, wave action, or erosion. Vulnerable features may include, for example, residential living areas, workplace areas, public access areas, plants and materials, critical electrical and mechanical systems, temporary and long-term waste storage areas, fuel storage tanks, energy generators, hazardous materials storage, or maritime infrastructure.
    - The general consequences of temporary flooding, frequent inundation, wave action, or erosion with respect to such vulnerable features.
    - The best available flood zones as established by FEMA, any associated base flood elevation, and the range of the projected future flood elevations based on sea level rise projections, as available.

B. Identify and incorporate design techniques in projects that address the potential vulnerabilities and consequences identified and/or enhance the capacity to incorporate adaptive techniques in the future. Climate resilience techniques shall aim to protect health and well-being, minimize damage to systems and natural resources, prevent loss of property, and, to the extent practicable, promote economic growth and provide additional benefits such as provision of public space or intertidal habitat. The appropriate techniques for a given project depend on case-by-case considerations, including such factors as the project's lifespan, the costs, benefits and feasibility of incorporating a technique, and the potential adverse or positive effects of the techniques on ecological health, public health, urban design, economic activity, and public space. To the extent that potential techniques are identified but not incorporated, an explanation shall be provided as to why incorporating such techniques are not

appropriate or practicable for the given project, or how the project may be adapted to incorporate such measures in the future. The following are examples of potential techniques to be considered and incorporated into project design, as appropriate:

- Features which increase the project's ability to withstand sea level rise, coastal flooding and storm surge.
- Openings that allow the flood waters to enter and leave without causing disruption.
- Opportunities to elevate, encase, or design electrical and mechanical equipment to be submersible.
- Use of flood- and salt-water-resistant materials.
- Elevation of structures and usable space within a project to an appropriate design flood elevation that reduces risk with minimal impacts on public space and urban design. The selection of an appropriate design flood elevation shall consider projections of climate risks, the lifespan of the project, and specific risks associated with the project.
- The raising of land or the placement of fill to elevate projects above projected future flood levels.
- Selection of plantings suited to the current and projected future climate including selection of salt-water-tolerant species.
- Securing, elevating, or locating outside of the flood zones hazardous materials, temporary and long term waste storage areas, and/or fuel storage tanks to protect against the impacts of flooding and wave action due to storm surge.
- Incorporation of structural and non-structural shoreline treatments to attenuate waves and protect inland areas from coastal flooding.
- Incorporation of design features that allow projects to be adapted on an ongoing basis in response to changing climate projections and conditions

C. Where opportunities exist, new structures directly on waterfront sites should incorporate site features to reduce the impacts of flooding, storm surge and wave action on inland structures and uses.

6.3 Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.

A. Implement public structural flood and erosion control projects when public economic and environmental benefits exceed public economic and environmental costs. Factors that may be considered in determining public benefit attributable to flood or erosion control measures include economic benefits derived from protection of water-dependent commerce and public infrastructure, protection or enhancement of significant natural resources, or protection of public open space and recreation facilities, or enhancement of the public realm through multifunctional coastal protection design.

B. Give priority to actions that protect public health and safety, mitigate flooding and erosion problems caused by past public actions, protect areas of intensive development,

protect substantial public investment, and incorporate multi-functional designs that enhance natural habitats and public open space.

C. Incorporate dunes into beach nourishment projects. The design of dunes should consider the incorporation of vegetated dunes, reinforced dunes with hardened cores, and double-dune systems consisting of primary and secondary dunes.

6.4 Protect and preserve non-renewable sources of sand for beach nourishment.

A. Protect sources of beach nourishment sands from excessive depletion. Weigh proposals to excavate sand from publicly owned lands against future public needs for the sand.

B. Protect sources of beach nourishment sand from exposure to toxic and hazardous materials.

POLICY SEVEN

MINIMIZE ENVIRONMENTAL DEGRADATION AND NEGATIVE IMPACTS ON PUBLIC HEALTH FROM SOLID WASTE, TOXIC POLLUTANTS, HAZARDOUS MATERIALS, AND INDUSTRIAL MATERIALS THAT MAY POSE RISKS TO THE ENVIRONMENT AND PUBLIC HEALTH AND SAFETY.

Introduction

The disposal of solid waste (residential, industrial and commercial waste, demolition and construction debris, and sludges from water pollution control or resource recovery facilities) can affect the use and quality of the city's waterways and coastal lands. Among the concerns associated with the disposal and treatment of solid wastes and hazardous materials are the environmental damage caused by illegal dumping and the potential for contamination of water resources and coastal habitat areas, filling of wetlands and littoral areas, atmospheric loading, and degradation of scenic resources in the Coastal Zone. Hazardous materials and toxic substances can contaminate soils and pollute waterways, if not stored, transported, and used properly. This contamination can lead to environmental degradation and create public safety risks. The open storage of some bulk or aggregate materials can also pose risks to the environment and the public health and safety if they are released into the surrounding area in the event of a coastal storm or flooding. The proper handling, storage, disposal and transport of these materials, and impacts on public health, are important in all areas of the Coastal Zone.

The storage, handling, transfer and disposal of solid wastes, hazardous materials and toxic substances must comply with all applicable local, state and federal regulatory and permitting requirements. Review of projects for consistency with WRP policies serves to ensure that all requirements stemming from the variety of applicable environmental regulations which are overseen and implemented by various agencies at all levels of government are identified and adhered to and that the project is undertaken in a systematic and coordinated fashion.

Related Regulations

Projects involving the handling, management, transportation, or discharge of solid wastes and hazardous materials need to comply with the applicable state and local laws or their successors unless preempted by federal law. Solid wastes are those materials defined under ECL 27-0701 and 6 NYCRR Part 360-1.2. Hazardous wastes are those materials defined under ECL 27 -0901 and 6 NYCRR Part 371. Substances hazardous to the environment are defined under ECL 37-0103. Toxic pollutants are defined under ECL 17-0105. Radioactive materials are defined under 6 NYCRR Part 380. Pesticides are those substances defined under ECL 330101 and 6 NYCRR Part 325.1.

Under ECL 17-10, "Control of the Bulk Storage of Petroleum," underground and aboveground petroleum storage tanks must be registered with NYS DEC and meet handling and storage requirements established by DEC (see 6NYCRR 612-614).

The regulations set forth in 6NYCRR 612-614 also apply to major oil storage facilities. Under Article 12 of the Navigation Law, "Oil Spill Prevention, Control and Compensation Act," major oil storage facilities must also obtain an operating license from NYS DEC and implement a spill prevention plan (see 6NYCRR Parts 610 and 611).

Under ECL 37 and ECL 40, NYS DEC regulates the sale, storage, and handling of all substances covered by the Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), and Federal Toxic Substances Control Act (FTSCA). The regulations are implemented through the Chemical Bulk Storage Regulations (see 6NYCRR Parts 595-599).

The discharge of wastewater into surface or groundwater is regulated by the NYS Dept. of Environmental Conservation under the State Pollutant Discharge Elimination System (SPDES). As part of the SPDES permitting process, a Stormwater Pollution Prevention Plan (SWPPP) must be developed for construction areas greater than one acre in separate sewer or direct discharge areas, which are common along the waterfront. The SWPPP must outline and describe stormwater controls for during and post-construction.

Pursuant to the NYC Community Right to Know Law, facilities where extremely hazardous materials or regulated toxic substances are present at or above federally determined levels are required to prepare and submit a Risk Management Plan to the NYC Department of Environmental Protection.

Under ECL 27-14, NYS DEC oversees the State's Brownfield Cleanup Program. The requirements for soil cleanup objectives are contained 6NYCRR Part 375-6. Additional Brownfield assistance programs include the NYS Department of State's Brownfield Opportunity Areas Program and the NYC Mayor's Office of Environmental Remediation's NYC Brownfield Cleanup Program.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.

A. Prevent release of toxic pollutants, radioactive materials, or substances hazardous to the environment that would have a deleterious effect on fish and wildlife and human resources. Limit discharges of persistent bioaccumulating and toxic substances. Minimize resuspension of toxic pollutants and hazardous substances and wastes and reentry of bioaccumulative substances into the food chain for existing environmental sources. Limit use of pesticides, herbicides, insecticides, and fertilizers and to prevent direct or indirect entry into waterways.

B. Remediate inactive hazardous waste disposal sites and brownfields to ensure that the public health and the waters, wetlands, and habitats are protected. Utilize best practices

during the remediation process to ensure safe containment of contaminants in the event of a coastal storm.

C. To the extent required by NYC Community Right to Know Law and local and state water quality improvement programs, integrate consideration of pollution prevention, good housekeeping and control of hazardous wastes, toxic pollutants, and substances hazardous to the environment into the planning and design of any facility using such materials.

D. Use accepted best design and management practices, including industrial pollution prevention, for the siting of hazardous materials, toxic pollutants, and other materials that may pose risks to the environment and public health and safety. Use best site design practices to prevent the runoff of pollutants and potentially contaminated sediment into waterways. The NYS Dept. of Environmental Conservation's New York State Stormwater Management Design Manual should be used as a reference.

E. Provide adequate wastewater collection facilities to the extent practicable to prevent direct discharge of treated sewage by vessels into the waterways.

F. Pursuant to WRP Policy 6.2, incorporate consideration of climate change and sea level rise into the planning and design of projects which involve the siting of materials storage which may pose risks to public health and the environment. Projects should consider potential risks to features specific to each project, including but not limited to temporary and long-term waste storage areas, fuel storage tanks, and hazardous material storage.

7.2 Prevent and remediate discharge of petroleum products.

A. Minimize negative impacts from potential oil spills by the appropriate siting of petroleum off-loading facilities and use of best practices.

B. Follow best practices for the prevention and control of petroleum discharges from any major petroleum-related facility. Clean up and remove any petroleum discharge in accordance with the guidelines contained in the *New York State Water Quality Accident Contingency Plan and Handbook*.

C. Follow approved methods for handling and storage and use approved design and maintenance principles for storage facilities to prevent discharges of petroleum products.

7.3 Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

A. Use routes and methods for transporting solid waste and hazardous materials that protect the coastal environment and the safety and general welfare of the public.

B. Site and design solid and hazardous waste facilities so that they will not adversely affect protected natural areas, including Significant Coastal Fish and Wildlife Habitats, habitats and wetlands critical to vulnerable species, rare ecological communities, surface waters, and aquifer recharge areas.

C. Give priority to waterborne transport of waste materials and substances when siting solid and hazardous waste facilities within the coastal area where practical and economically feasible.

POLICY EIGHT

PROVIDE PUBLIC ACCESS TO, FROM, AND ALONG NEW YORK CITY'S COASTAL WATERS.

Introduction

The intent of Policy 8 is to improve the connectivity and continuity of public access along the waterfront. This entails providing both physical and visual public access in a manner that balances the interests of public and private waterfront use. Public open spaces along the waterfront can transform neighborhoods, turning previously inaccessible lands into vibrant community gathering areas and greenways that provide recreational opportunities, promote non-vehicular modes of transportation, and foster economic growth. The public access provisions of the city's waterfront zoning regulations, adopted in 1993 and updated in 2009, implement this policy for actions subject to zoning. These zoning regulations establish public access requirements for most new residential and commercial development including standards for the size and configuration of shorefront public open spaces, requirements for visual and physical connections to the upland, and design guidelines for the treatment of public spaces. The 2009 update improved the design standards for waterfront public access areas by allowing for greater design flexibility and variability.

Pursuant to the Zoning Resolution, access is not required where it would be either incompatible with the principal use of the site or inappropriate for the scale of development. The regulations provide for the adoption of Waterfront Access Plans to tailor the requirements to local conditions. Compliance with the requirements of the Special Regulations Applying in the Waterfront Areas of the Zoning Resolution (Article 6, Chapter 2) will generally satisfy this policy. If the project is not subject to zoning, the principles elaborated in Policy 8.6 should be used as guidance for the design of public access.

Although waterfront zoning regulations do not require public access in connection with industrial development, there are often appropriate opportunities for physical or visual access along the working waterfront. Where there is no identified risk to public health and safety or to industrial operations, this policy would encourage public parks, public piers, and/or greenway routes along the industrial waterfront as well as viewing areas, street end access points, visitor centers, and site tour programming. Projects on public land or using public funds should provide some form of public access, unless there is no safe or practicable way of doing so.

This policy also presents standards for public lands, public facilities contiguous to the shoreline, and underwater lands (public trust lands). These standards are intended to preserve existing access to the shoreline provided by facilities such as public parks, beaches, marinas, piers, streets, highways; as well as existing easements on privately owned land and to encourage public access improvements as a component of public projects.

8.1 Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.

A. Protect, maintain, and enhance infrastructure, including roadways, greenways, piers, and shoreline protection structures, which support public access and recreation facilities.

B. Maintain in good repair existing public access areas to ensure public safety and enhance enjoyment.

C. Provide wayfinding from upland areas to waterfront public spaces and from one waterfront public space to another.

8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

A. Encourage the development and maintenance of high quality public spaces in appropriate locations, particularly those that would facilitate the connection of existing waterfront public access spaces and allow continuous access along the shore.

B. All development on the shoreline, including industrial development, that receives public financial assistance, or is on publicly owned land, should, to the extent practicable, provide some form of public access, unless one of the following criteria is demonstrated:
   - Public access would be inconsistent with the functional and operational needs of the proposed facility and would create risk to public safety and/or security. For instance, public access would not be consistent within Federal Port security zones.
   - Public areas would not be safely accessible from upland areas and other public access areas.

C. In SNWAs, the ESMIA, and Recognized Ecological Complexes, provide public access, interpretive signage, and recreation compatible with the preservation of natural resources. To minimize negative environmental impacts and avoid habitat impairment, use methods and structures including but not limited to: boardwalks, catwalks, nature trails with permeable surfaces, and barriers to vehicles such as bollards and berms. Protection of the natural resource may take priority over public access, if both cannot be accommodated on the project site. Where physical access cannot be accommodated, provide visual access to coastal resources.

D. When public access cannot be included as a component of a public project, site and design the project in a manner that does not preclude the future development of public access.

E. Encourage the development of public access within private development in industrially zoned areas where there is no identified risk to public health and safety or to industrial operations. In areas where industrial land limits upland communities' access to the water, limited public access points and street-end parks located within or adjacent to the seaward termination of public streets may be compatible with the nearby industrial uses.

Where waterfront public access would endanger public health or safety, alternative strategies to provide public access should be encouraged including access points or public overlooks that visually connect people to maritime activity. Additional alternative forms of public access that can be explored include visitor centers, programming and guided tours or temporary access.

F. Encourage use of waterfront sites for temporary public events and activities when compatible and appropriate.

8.3 Provide visual access to the waterfront where physically practical.

A. Preserve existing visual access in the development of waterfront public lands and facilities. Minimize reduction of existing visual access caused by the scale, design, and location of public projects in areas such as streets, parks, bridges, and highways. Preserve visual corridors provided or defined by mapped streets (open or improved) that terminate at the shoreline or within the waterfront block.
B. For sites where physical public access is unfeasible, visual access should be provided to the extent practicable.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

A. When reviewing actions relating to the use of publicly owned land or the acquisition of waterfront property for the provision of public access, give priority to locations identified in published plans including, but not limited to State Open Space Acquisition Plan Priority Sites; New York City Greenway Priority Routes; and adopted Waterfront Access Plans; or a location which meets one or more of the following criteria:

- Sites with potential for waterfront-enhancing, water-related, or water- dependent uses or recreation (passive or active, along the shore, on piers, or in the water);
- Sites within proposed greenway and blueway (boating) routes that would link public waterfront access points, the foreshore, nearshore surface waters, and public parks and open spaces;
- Sites within a waterfront area with less than 2.5 acres of open space per 1000 residents (the areas identified in the CEQR Technical manual as underserved should be the basis of this determination), or where there is a gap in public access along the shoreline of 0.25 miles or more;
- Sites that would enhance natural resources and habitats;
- Sites that would improve access to public lands, buffer public lands from incompatible uses, or consolidate or connect existing public lands;
- Sites listed as local Historic Landmarks or listed on the State and National Register of Historic Places;
- Sites with scenic resource value as identified in local special district regulations

8.5 Preserve the public interest in and use of lands and waters held in public trust by the State and City.

A. Limit grants, easements, permits, or lesser interest in lands underwater to those instances where there would be no overall adverse effect on the public interest in public trust lands.

B. Limit the transfer of interest in public trust lands to the minimum necessary.

C. Require documentation of ownership, riparian interest, or other legal right where such interests or rights are not readily apparent prior to approving private use of public trust lands under water.

D. Limit grants in fee of underwater lands to exceptional circumstances.

E. Retain a public interest in the transfer of interest in underwater lands which will be adequate to preserve appropriate public access, recreational opportunities, and other public trust purposes.

F. Avoid substantial loss of public interest in public trust lands by the cumulative impact of individual conveyances.

G. Re-establish public trust interests where appropriate in existing grants not used in accordance with the terms of the grant or the public trust doctrine.

H. Ensure that the exercise of riparian interests remains protective of and does not obstruct or impede the public's rights to access public trust resources. Where a substantial obstruction or impediment to public trust resources cannot be avoided, adequate mitigation should be provided to compensate for the loss of access.

8.6 Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.

The following principles should be applied as appropriate and to the extent practicable.

A. Access Principles:
- Provide opportunities for the public to get to the water's edge.
- Make open spaces and upland connections inviting; Entrances to open spaces in particular should clearly convey that the public is welcome.
- Consider varying the relationship between walkways and the waterfront edge, especially in areas where plantings can be installed next to the water.
- Connect shoreline path systems.
- Provide access to upland path systems and amenities.

- Use landscape design to improve the relationship between elevated ground floors and the grade of waterfront public spaces in flood zones, through features such as terracing, tiered pathways and berms.

B. Amenities Principles:
    - Provide a sufficient quantity and variety of seating that complies with ADA regulations. Offer amenities and activities appropriate to the program, site, and context.
    - Install lighting that is appropriate to the program, site, and context. Lighting installed should be adequate for public safety.
    - Employ fences and sea rails that are as transparent as possible; design seating so top rails are not at the eye level of those seated.
    - Provide views of the water from lawn areas, unobstructed by benches or trees, to the greatest extent practicable.
    - Consider a varied landscape design vocabulary, including edge treatments, as appropriate to the program, site, and context.
    - Incorporate or reference significant historic features or natural conditions associated with the site, where appropriate.
    - Comply with City policies that discourage the use of tropical hard woods; encourage the use of sustainable and renewable materials.
    - Provide an appropriate balance of both sunny and shaded spaces.
C. Environment Principles:
    - Promote the greening of the waterfront with a variety of plant material for aesthetic and ecological benefit.
    - Use water- and salt-tolerant plantings in areas subject to flooding and salt spray.
    - Maximize water-absorption functions of planted areas.
    - Preserve and enhance natural shoreline edges.
    - Design shoreline edges that foster a rich marine habitat.
    - Design sites that anticipate the effects of climate change, such as sea level rise, storm surges, wave action, erosion, and daily tidal flooding.
D. Water Access Principles:
    - Consider opportunities for connections between land and water, including opportunities for water recreation.
    - Consider water-dependent and water-enhancing uses at the water's edge such as fishing sites, boat launches, and get downs to the water where appropriate.
    - In the design of the spaces, encourage the experience of the land from the water and the water from the land. Treat the edge as a zone of exchange, not separation.
    - Consider dock construction and tie-up space for recreational, educational, commercial or law enforcement and emergency response vessels—as appropriate to the context—on piers, platforms, and bulkheaded shorelines provided it does not compromise security or public safety. Provide ladders, life safety apparatus such as floating devices, or other means of safely accessing the water or watercraft on such sites.
    - Consider opportunities to incorporate upland storage for recreational boats.

POLICY NINE

PROTECT SCENIC RESOURCES THAT CONTRIBUTE TO THE VISUAL QUALITY OF THE NEW YORK CITY COASTAL AREA.

Introduction

The intent of Policy 9 is to prevent the impairment of natural and manmade scenic resources in the coastal area. High-quality coastal landscapes may consist of waterbodies, landforms, vegetation and components of the built environment such as buildings, highways, bridges, piers, working waterfront structures, port infrastructure, and other structures representative of a highly urban, nationally significant, and ecologically diverse metropolitan area. In New York City, visual quality and scenic resources are recognized and protected through historic preservation, natural resource protection, parks and open space planning and acquisition, zoning special districts, waterfront zoning (Article 6, Chapter 2 of the Zoning Resolution) controls on over-water development, areas for public viewing, and urban design standards that shape new development.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

A. Ensure that new buildings and other structures are compatible with and add interest to existing scenic elements, such as landmarks, maritime industry, recreational boating facilities, natural features, topography, landforms, and the botanic environment. Among the measures that may be considered are grouping or orienting structures to preserve open space and maximize views to and from the coast and incorporating sound existing structures into development where harmonious with their surroundings.

B. Where feasible and practicable, provide views of visually interesting elements of water-dependent uses.

C. New development should be compatible with the scenic elements defining the character of the area. The New York City Zoning Resolution provides standards for waterfront landscaping.

D. Preserve existing vegetation or establish new vegetation where necessary to enhance scenic quality.

E. Minimize introduction of uses that would be discordant with existing scenic elements, and screen unattractive aspects of uses that detract from the visual quality of nearby public parks and waterfront open spaces.

F. Provide public viewing at and interpretive signage of industrial uses where compatible and appropriate.

9.2 Protect and enhance scenic values associated with natural resources.

A. In the SNWAs and Recognized Ecological Complexes, avoid structures or activities that interrupt landscapes, including introduction of discordant elements such as intrusive artificial light sources, fragmentation of and structural intrusion into open space areas, and changes to the continuity and configuration of natural shorelines and associated vegetation.

B. In SNWAs and Recognized Ecological Complexes, design new development to complement the scenic character of natural resources. Minimize and screen discordant elements which cannot be inconspicuously located.

C. Provide interpretive signage of ecologically significant resources and sites.

D. Off-shore activities that would significantly obstruct or interrupt views of open waters from public vantage points on land should be avoided, while taking into consideration the potential benefits of the project. When avoidance is not possible, minimize obstruction or interruption to the extent practicable. Key considerations in the assessment of consistency with this policy may include whether the obstruction would be permanent, seasonal, or temporary; how many viewers would be affected; whether the view is unique or whether similar views exist at other locations.

POLICY TEN

PROTECT, PRESERVE, AND ENHANCE RESOURCES SIGNIFICANT TO THE HISTORICAL, ARCHAEOLOGICAL, ARCHITECTURAL, AND CULTURAL LEGACY OF THE NEW YORK CITY COASTAL AREA.

Introduction

Archaeological sites and historic structures are tangible links to the past generations, events and cultures associated with New York City's coastal area. The intent of this policy is to protect, preserve, and revitalize those historic, archaeological, and cultural resources that have a coastal relationship or significance. Architectural resources generally include historically, culturally, or architecturally significant buildings, structures, objects, sites, and districts. They also may include infrastructure such as bridges, canals, piers, wharves, and railroad transfer bridges that may be wholly or partially visible above ground. Archaeological resources are physical remains, usually subsurface, of the prehistoric, Native American, and historic periods—such as burials, foundations, artifacts, wells, and privies. As a general rule, archaeological resources do not include 20th- and 21st-century artifacts.

The New York City Landmarks Preservation Commission (LPC) is charged with identifying and designating landmarks and historic districts and regulating any changes to designated structures. There are nearly 500 New York City Landmarks and about 30 historic districts within the city's Coastal Zone. The state and national historic registers are the official lists of buildings, structures, districts, objects, and sites significant in the history, architecture, archeology, engineering, and culture of New York and the nation. Registered properties and properties determined eligible for the registers receive a measure of protection from the effects of projects that are sponsored, licensed, or assisted by the state or federal governments through a notice, review, and consultation process. Listing also makes properties eligible for federal and state tax credits for historic rehabilitation, but it does not place any restrictions on private owners of properties.

Related Regulations

All projects involving historic and archaeological resources need to comply with national, state, and local laws and regulations regarding designated historical resources, specifically New York City Administrative Code §25-303, as well as those pertaining to the discovery, investigation, and recovery of archaeological resources.

10.1 Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.

A. Protect historic resources to the extent practicable, including those structures, landscapes, districts, areas, sites, vessels, or underwater structures that are listed or designated as follows:

- Any historic resource in a federal, state, or city park established, solely or in part, to protect and preserve the resource;
- Any resource listed on, or formally determined eligible for inclusion on, the National and/or State Register of Historic Places, or contained within a district listed on, or formally determined eligible for listing on, the State and/or National Register of Historic Places;
- Any resource designated as a New York City Landmark, Interior Landmark, Scenic Landmark or properties within a designated New York City Historic District;
- Resources calendared for consideration as one of the above by Landmarks Preservation Commission;
- National Historic Landmarks; and
- Resources not identified by one of the programs listed above, but that meet their eligibility requirements (for eligibility requirements see Chapter 9 of the CEQR technical manual)

B. Protect resources, including those not listed or identified in 10.1 A, which are related to the historical use and development of the waterfront, including ships, shipwrecks, lighthouses and other aids to maritime navigation, points of entry and embarkation, and structures related to the defense of the Port of New York.

C. Foster efficient and compatible adaptive re-use of historic resources to maximize retention of their historic character and minimize their alteration.

D. Promote public awareness of New York's waterfront through educational and cultural facilities, events, and programming.

E. Facilitate public programming of historic resources through such measures as provision of tie-up space for historic vessels.

10.2 Protect and preserve archaeological resources and artifacts.

A. Minimize potential adverse impacts to significant archaeological resources by redesigning the project, reducing the direct impacts on the resource, or recovering data prior to construction.

B. Conduct a cultural resource investigation when an action is proposed on an archaeological site, fossil bed, or in an area identified as potentially sensitive for archaeological resources.

PART III: MAPS

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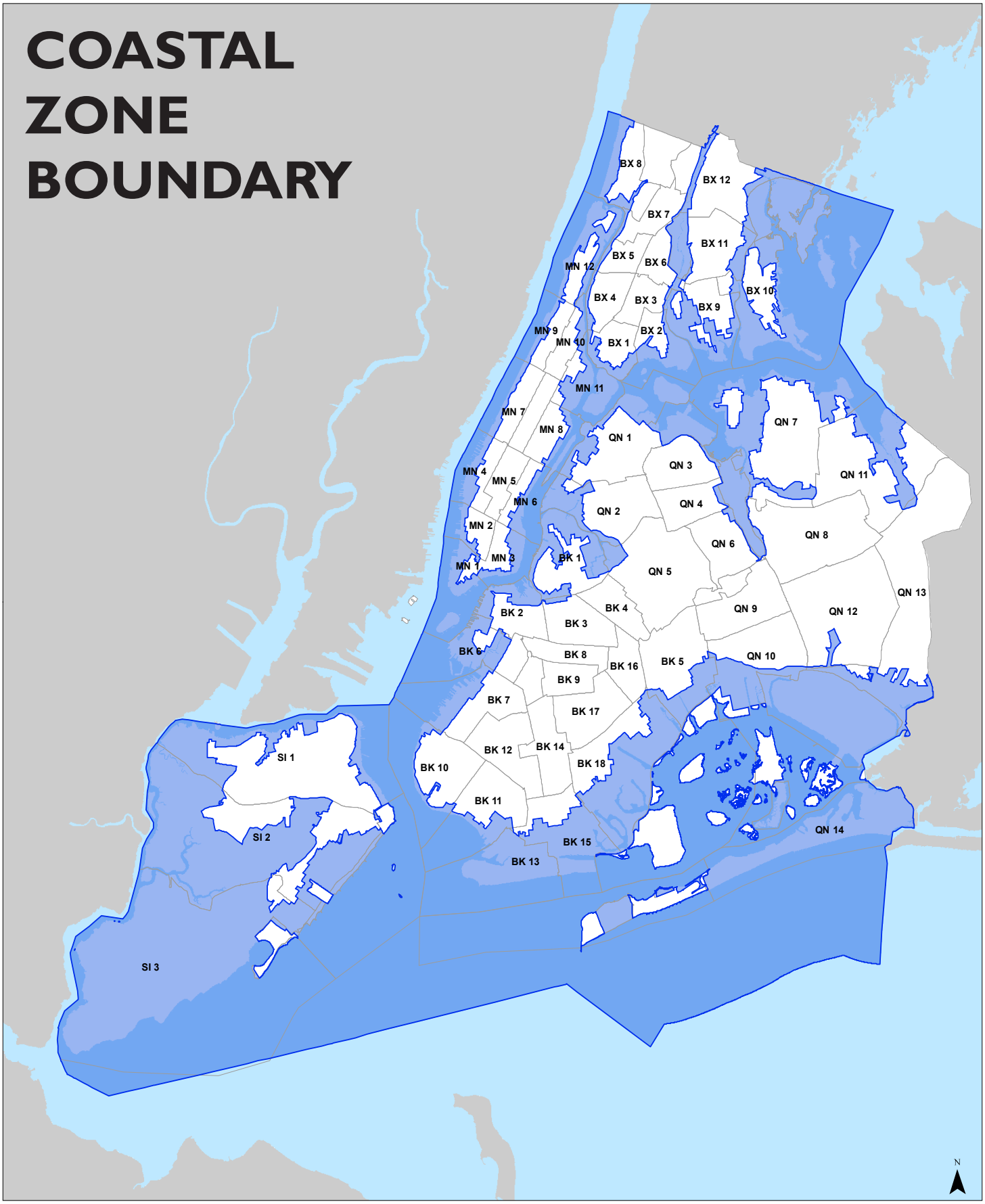
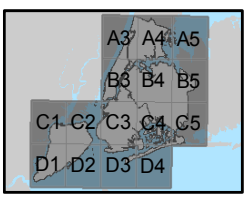
COASTAL ZONE BOUNDARY



Coastal Zone Boundary

Coastal Zone Boundary

Community District Boundary



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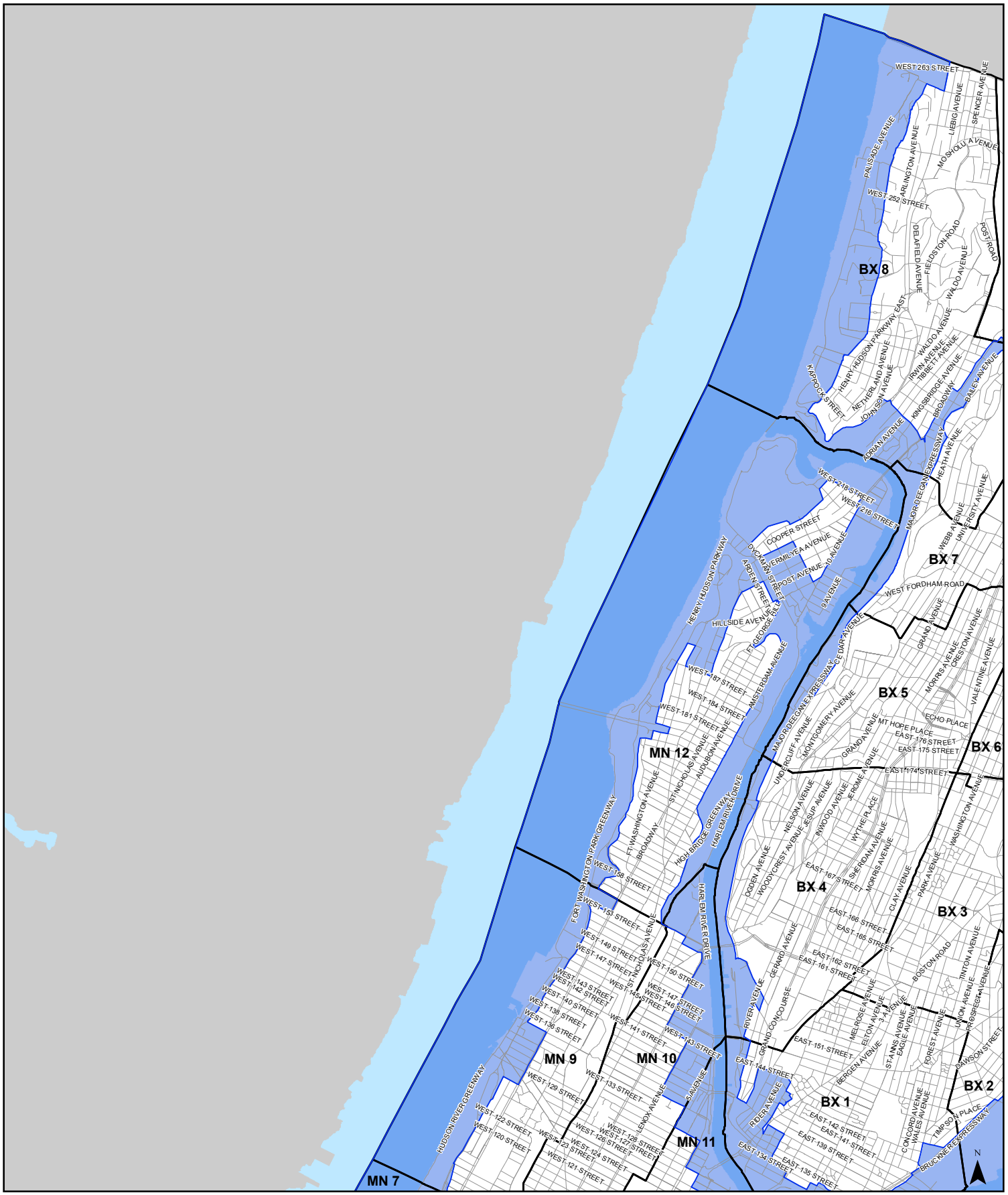

Coastal Zone Boundary

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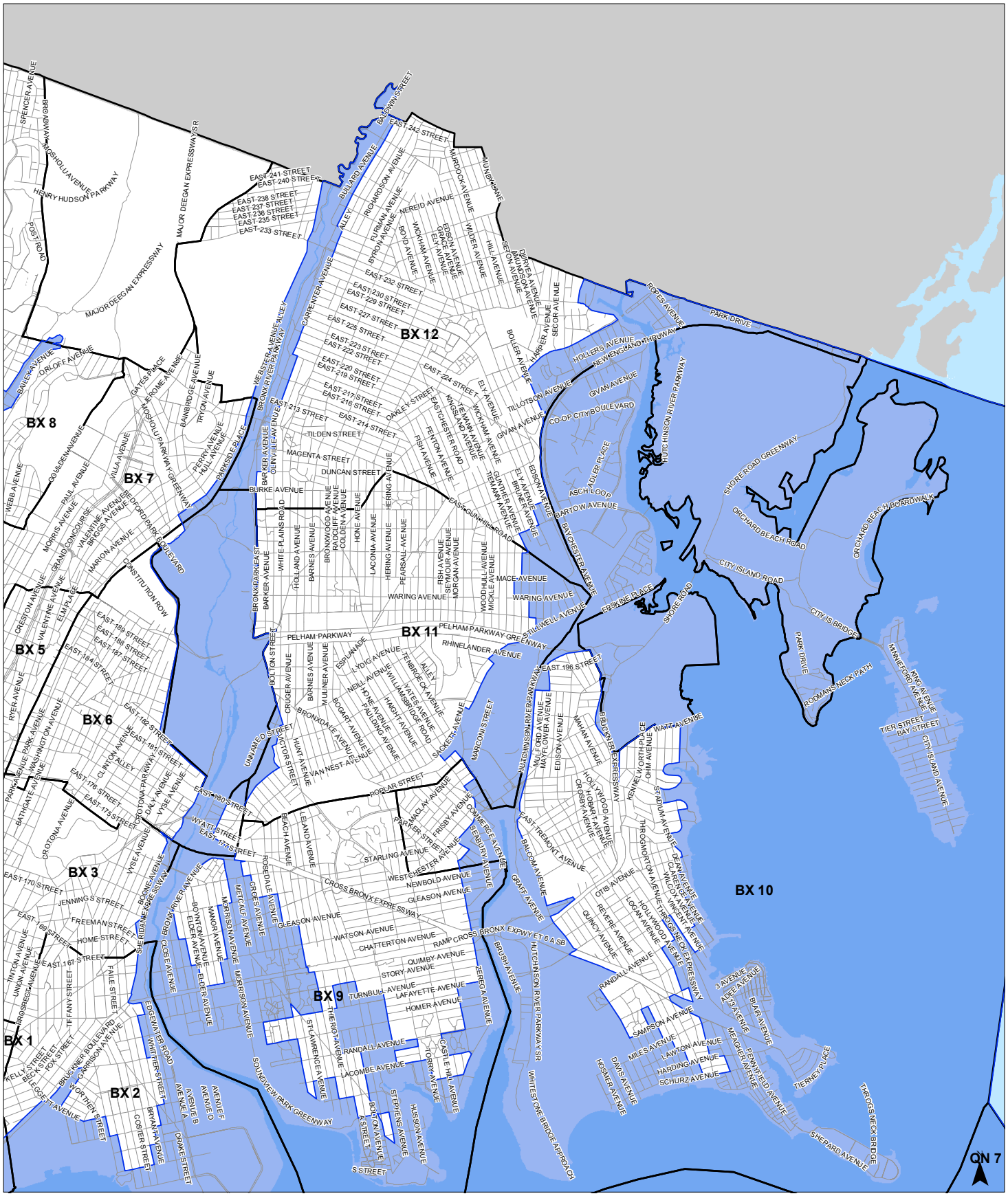

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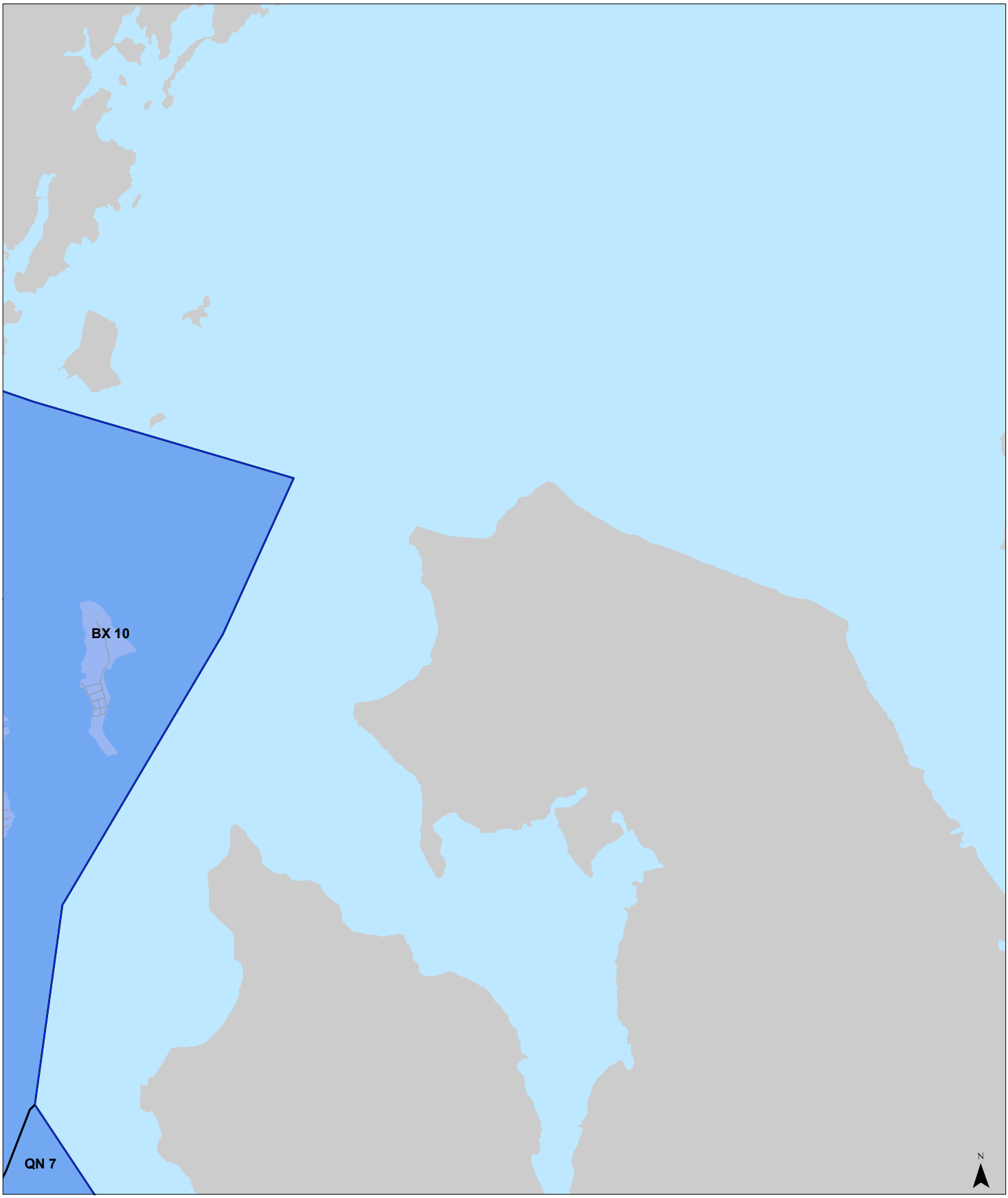

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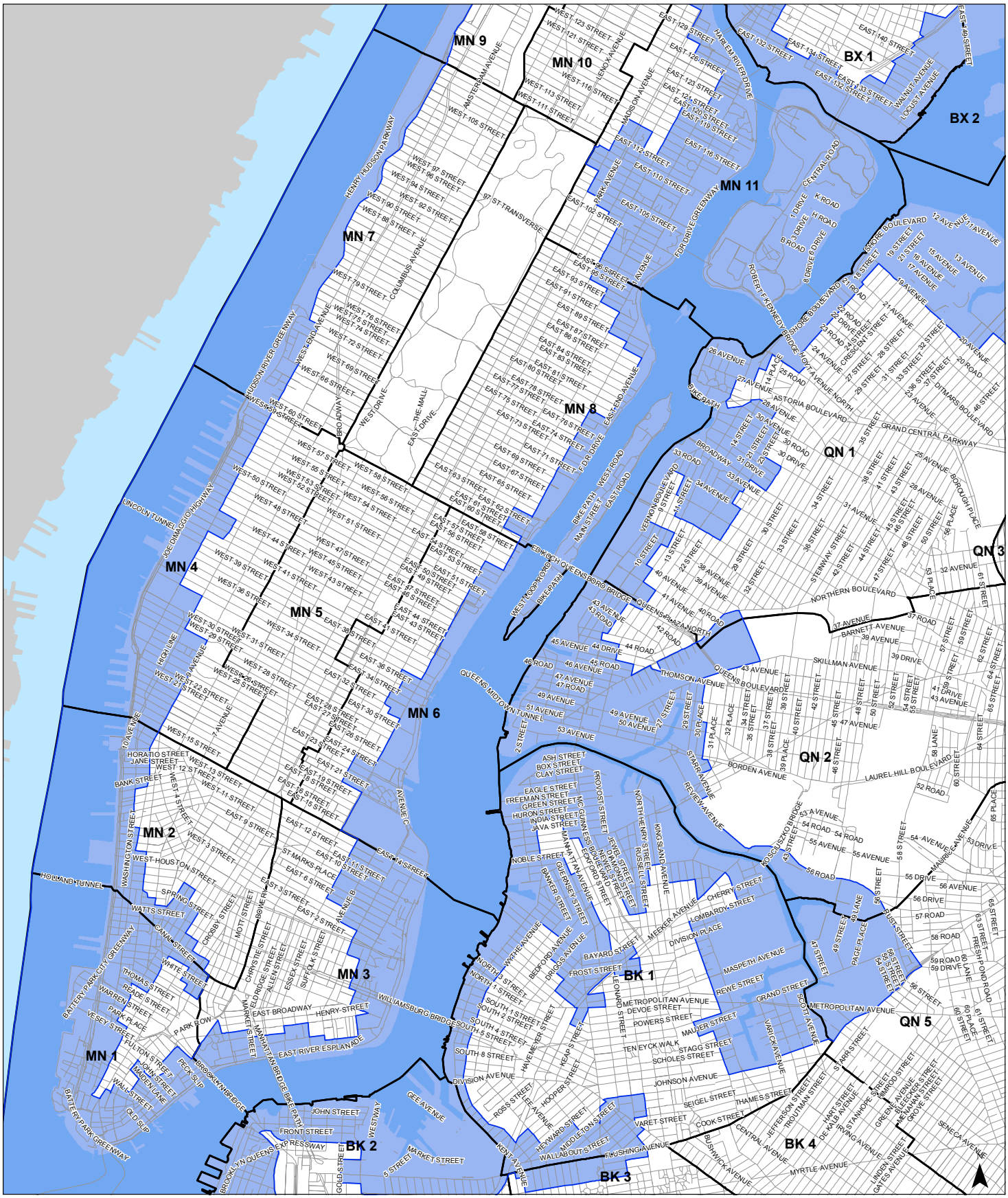

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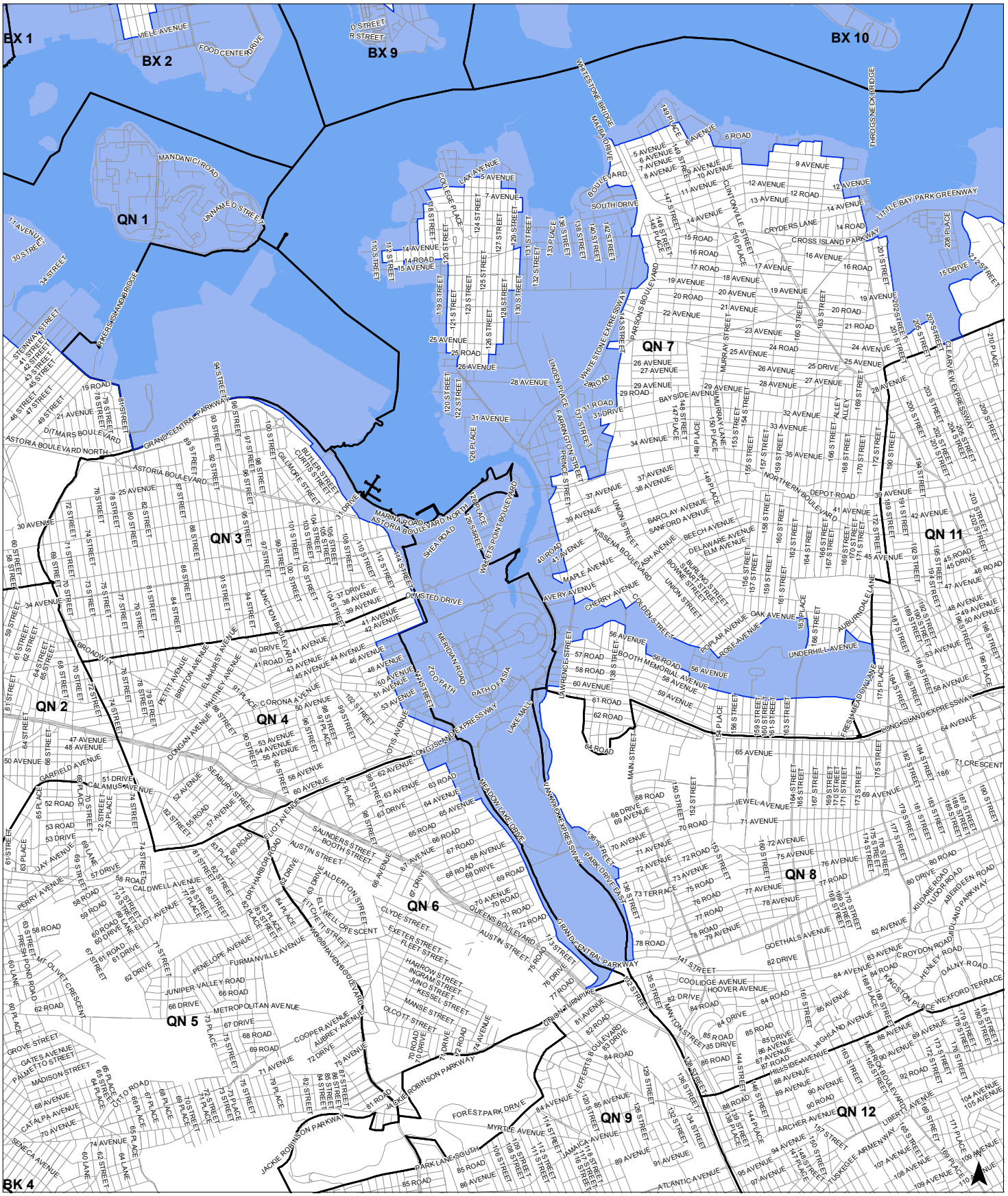
Community District Boundary



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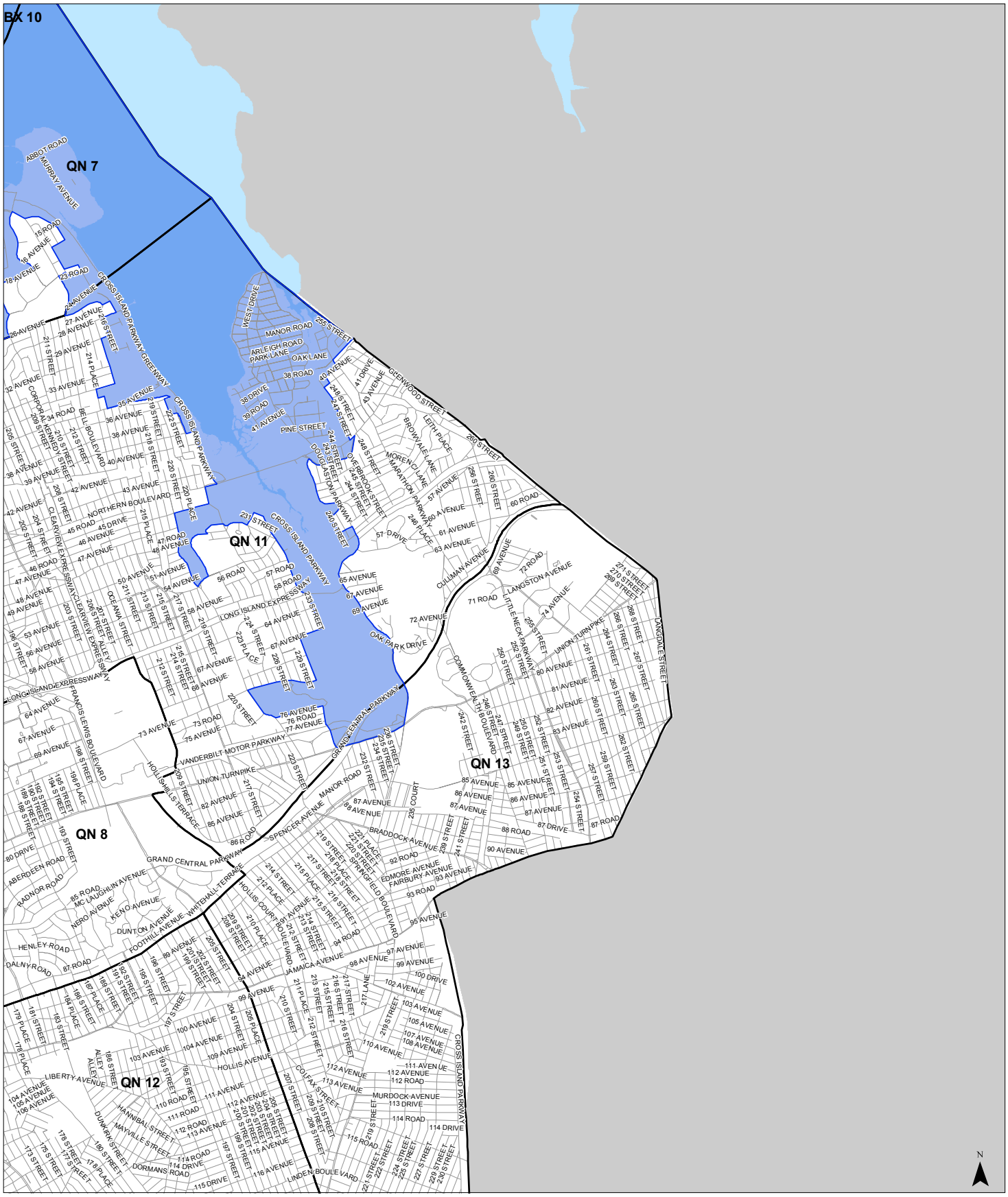

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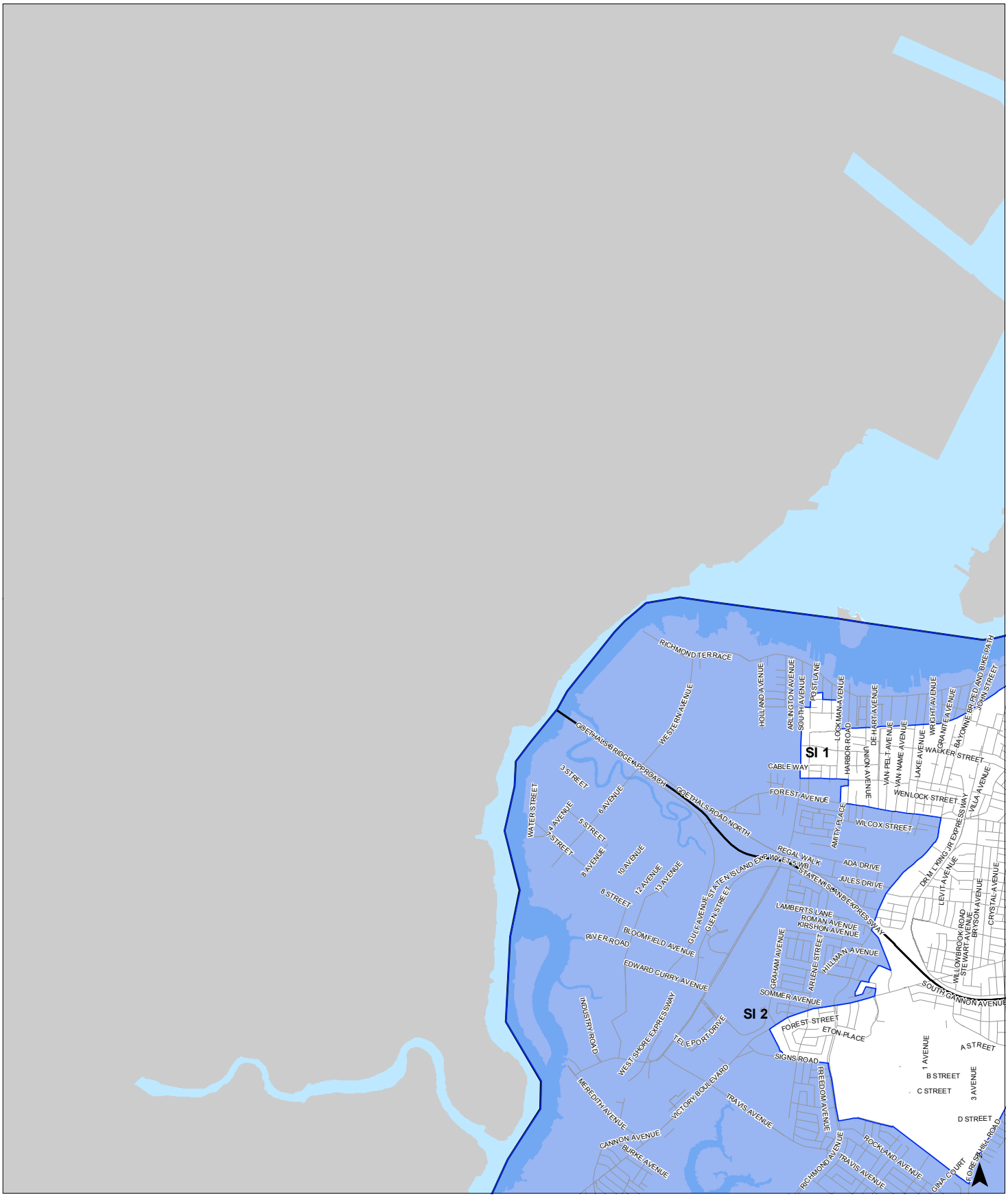

Coastal Zone Boundary

Coastal Zone Boundary

Community District Boundary

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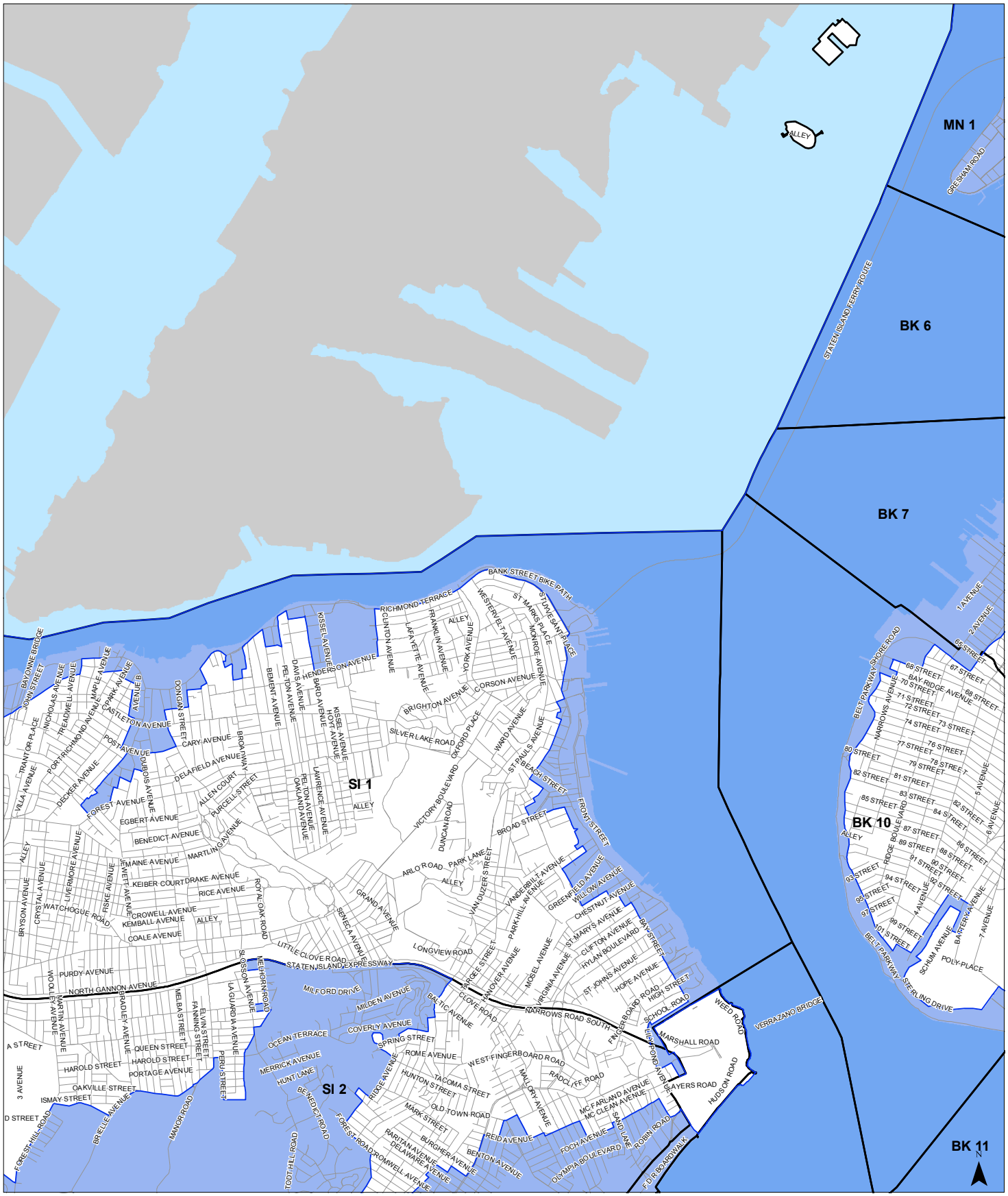
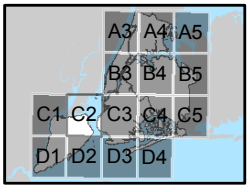


Coastal Zone Boundary

Coastal Zone Boundary

Community District Boundary



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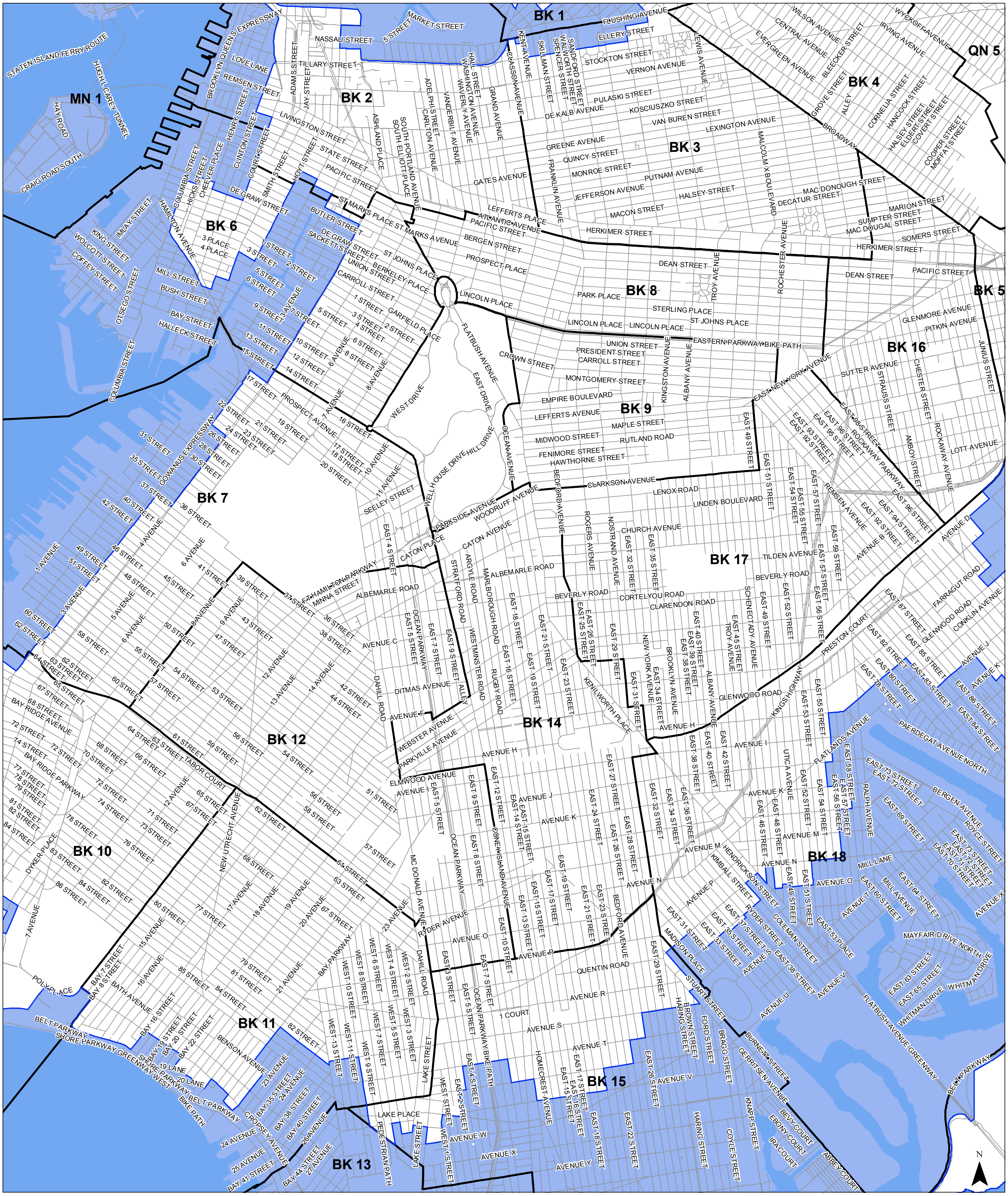

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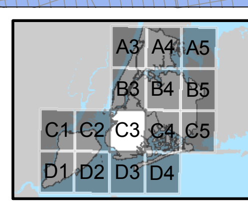

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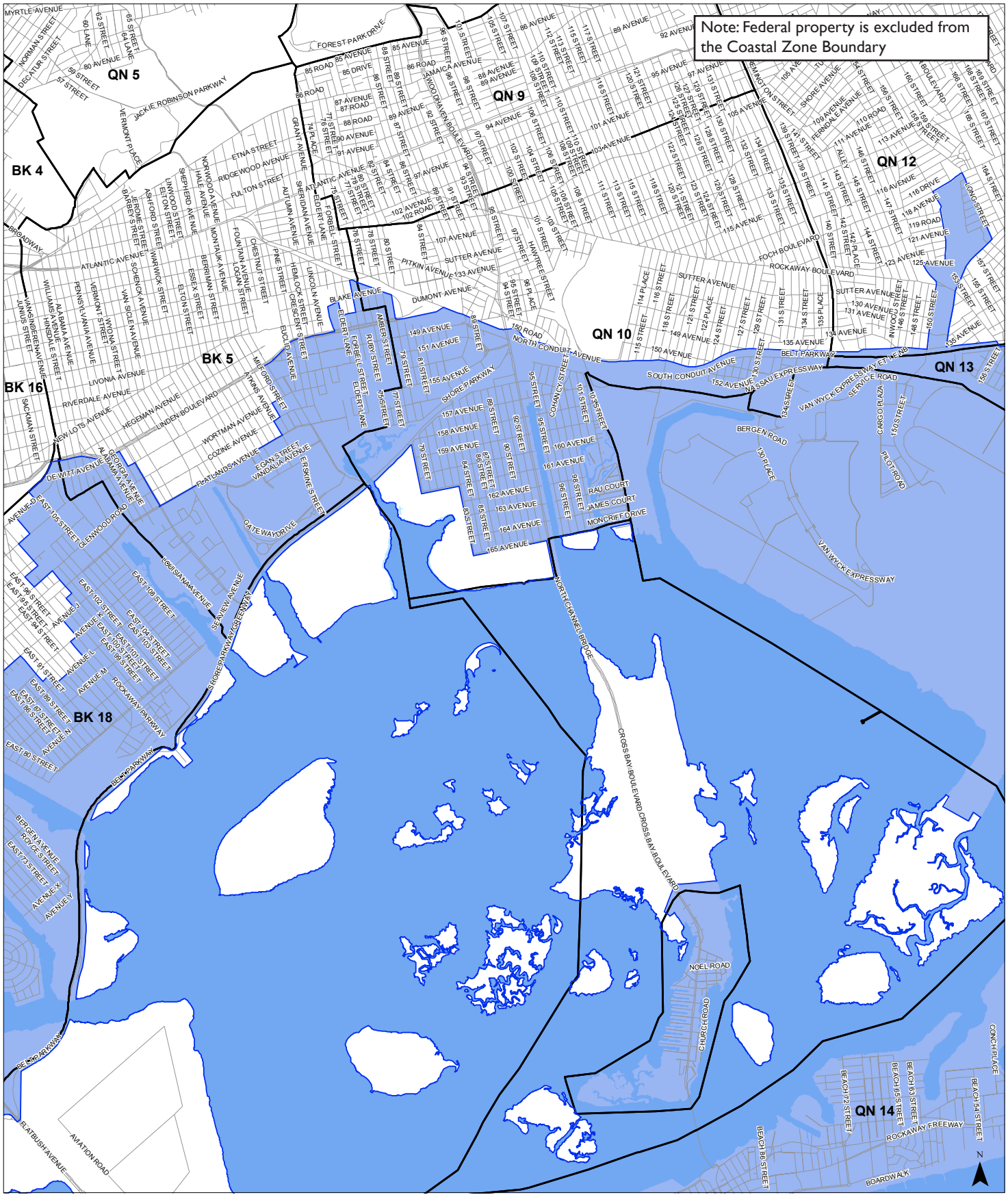

Coastal Zone Boundary

Coastal Zone Boundary

Community District Boundary

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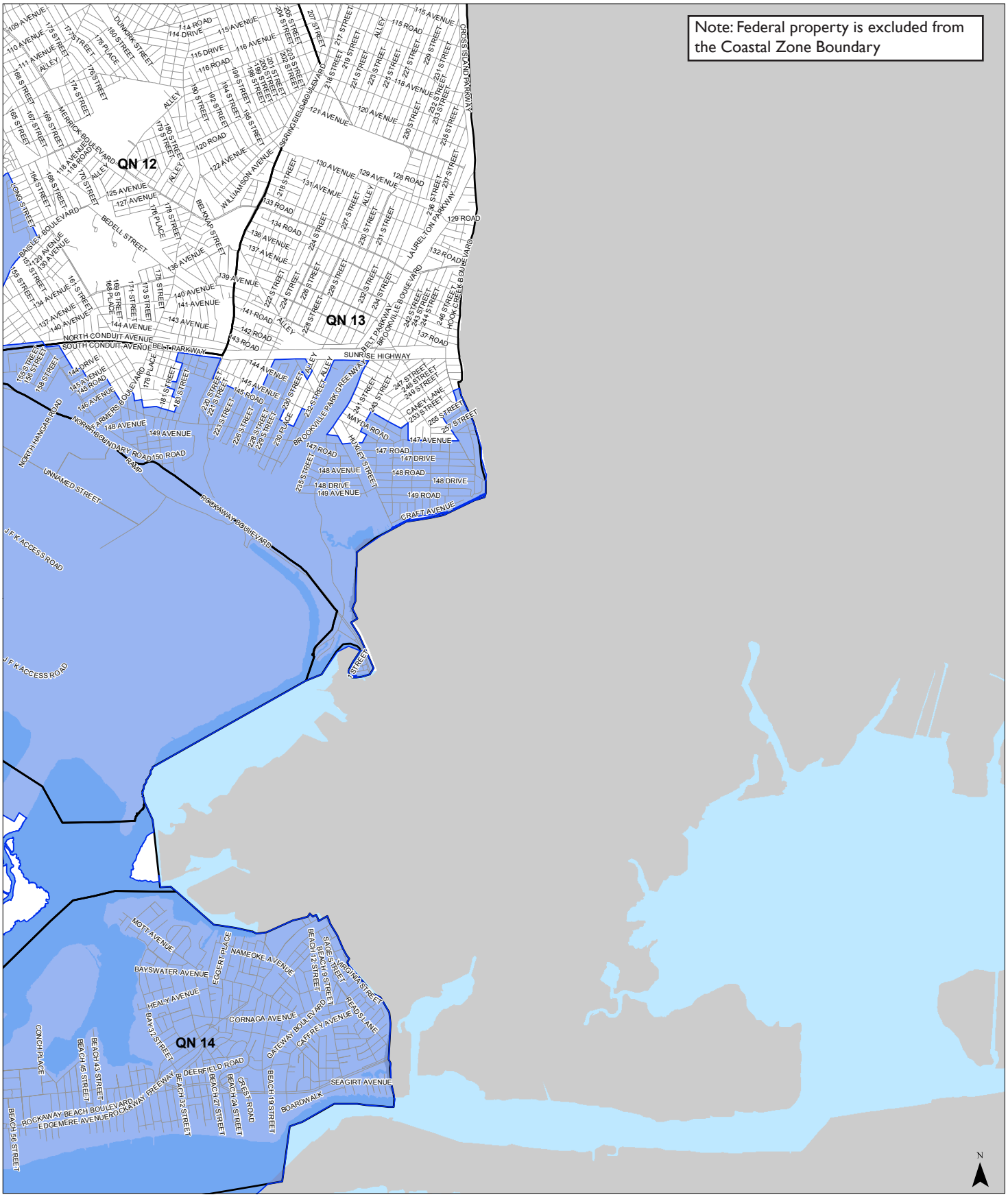

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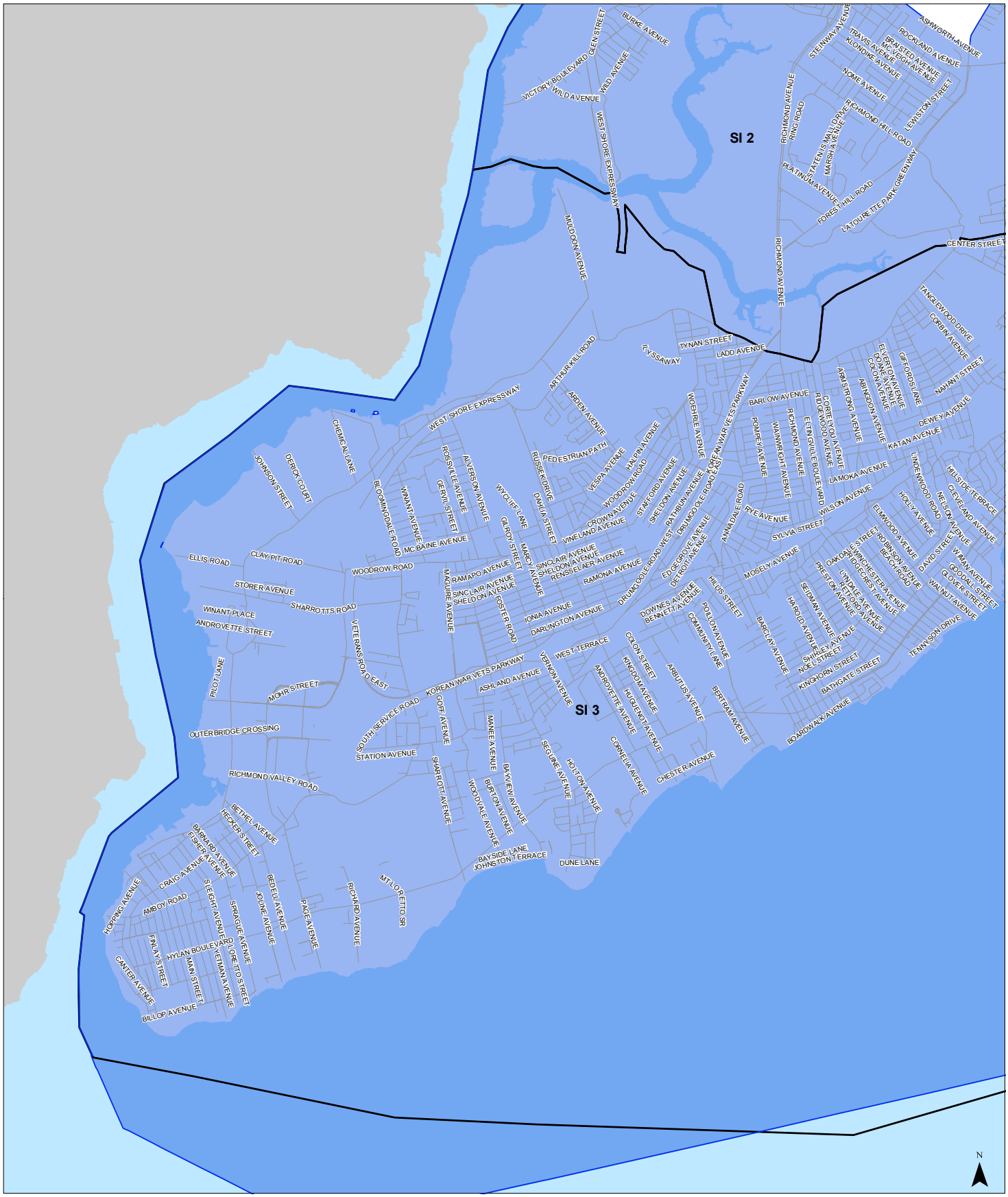

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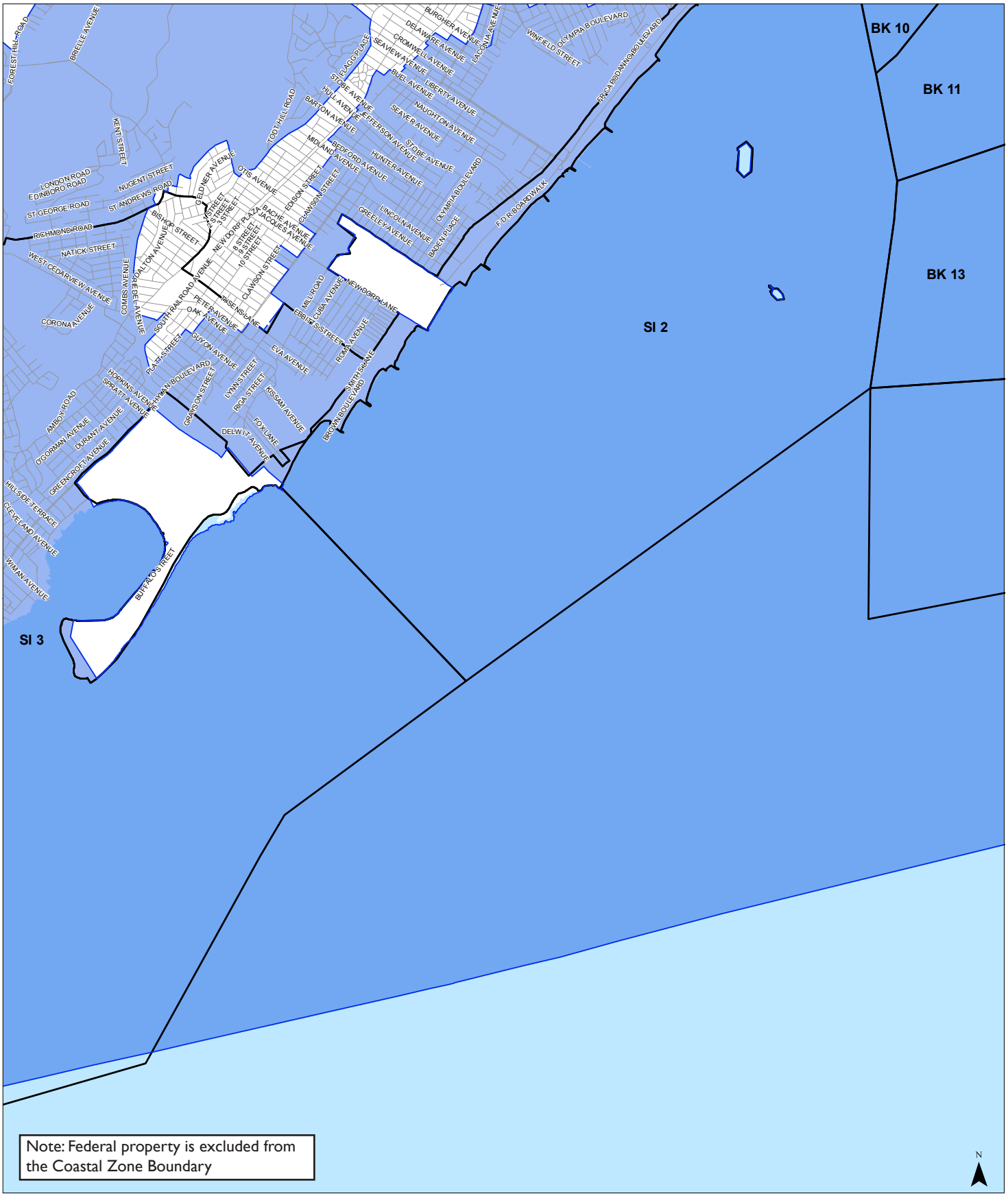
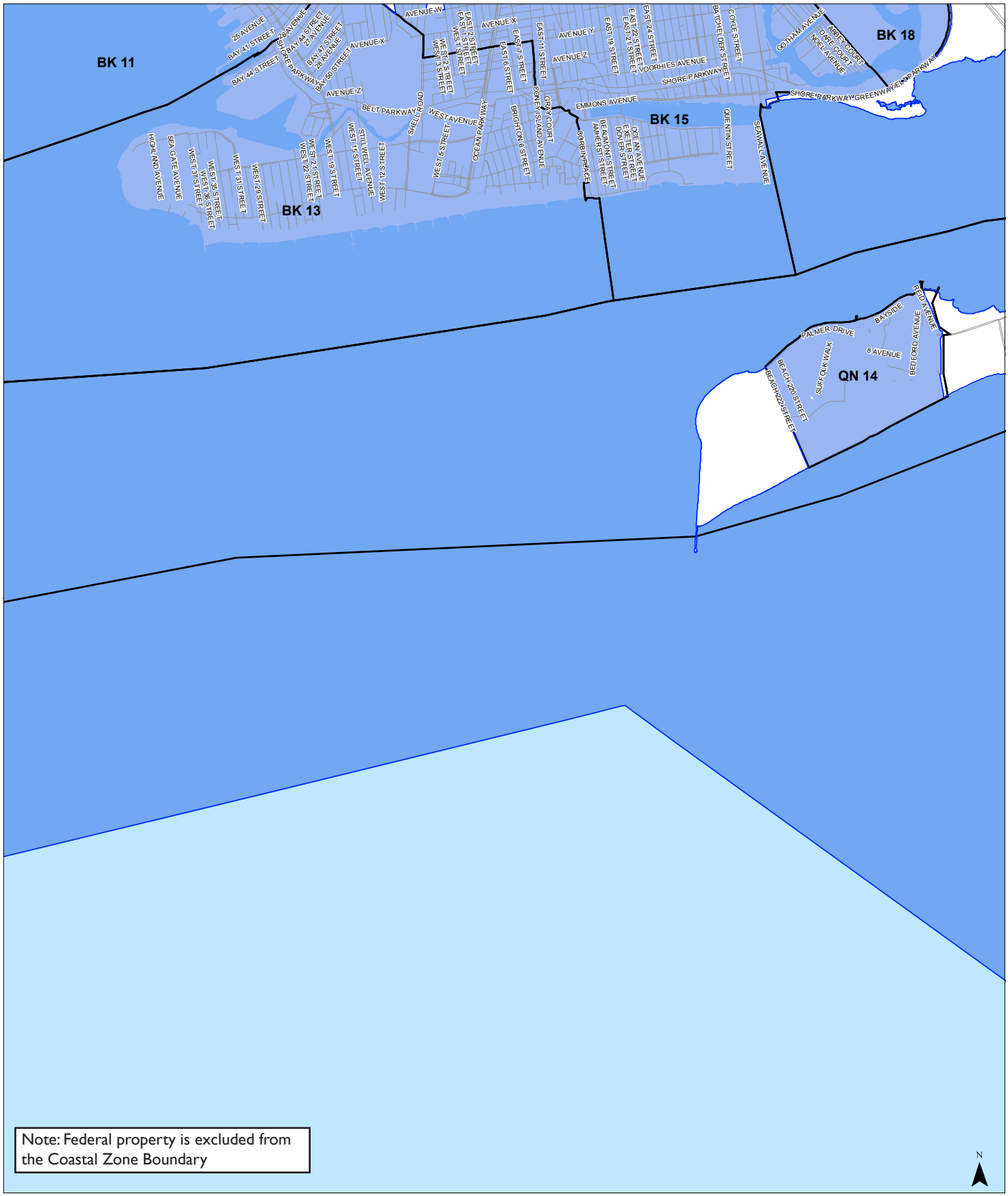
Coastal Zone Boundary

Community District Boundary

D1



Coastal Zone Boundary



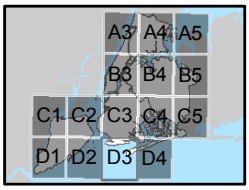
Note: Federal property is excluded from the Coastal Zone Boundary

N

Coastal Zone Boundary

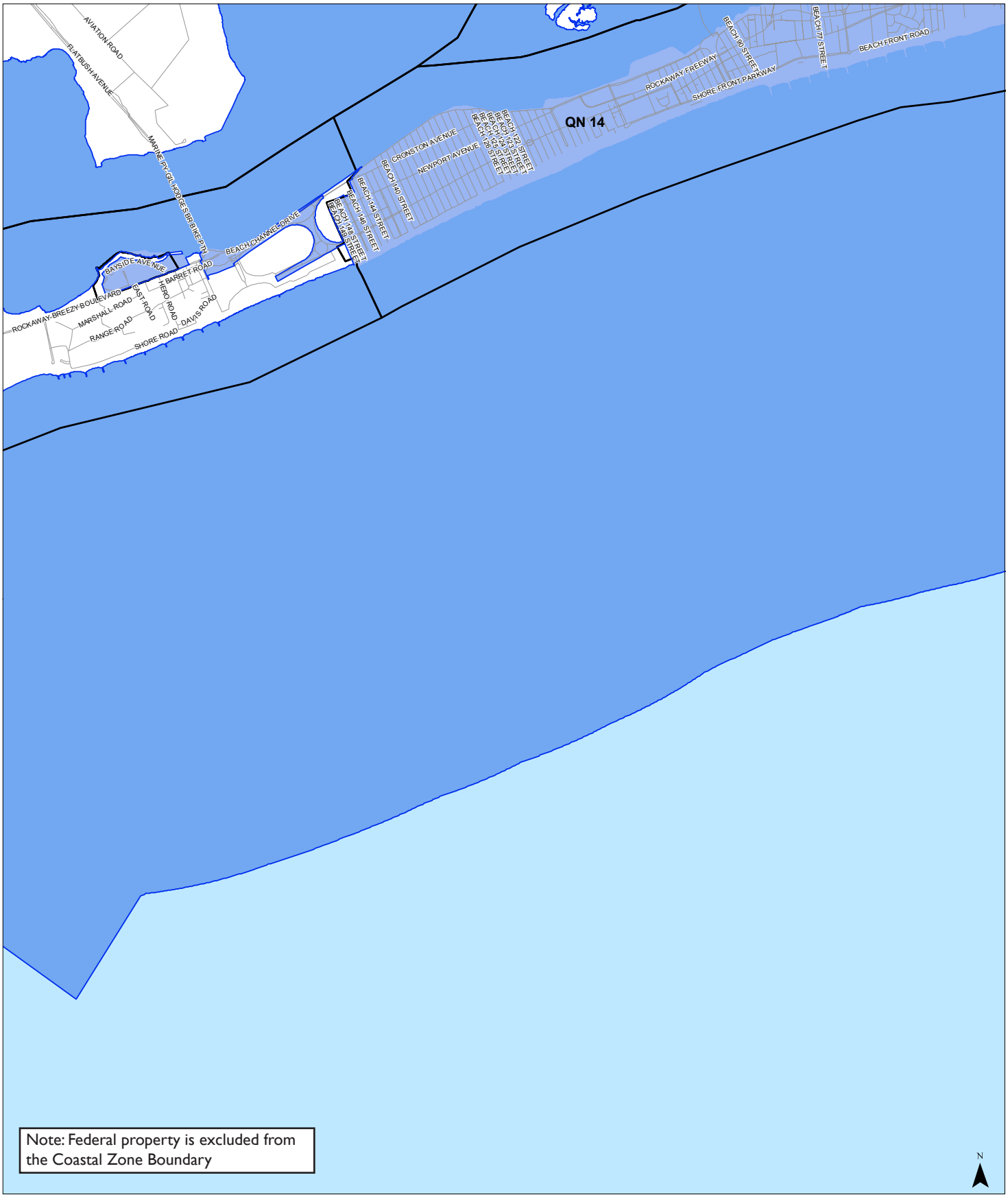
Coastal Zone Boundary

Community District Boundary



Miles
0 0.25 0.5 1

D3



Coastal Zone Boundary

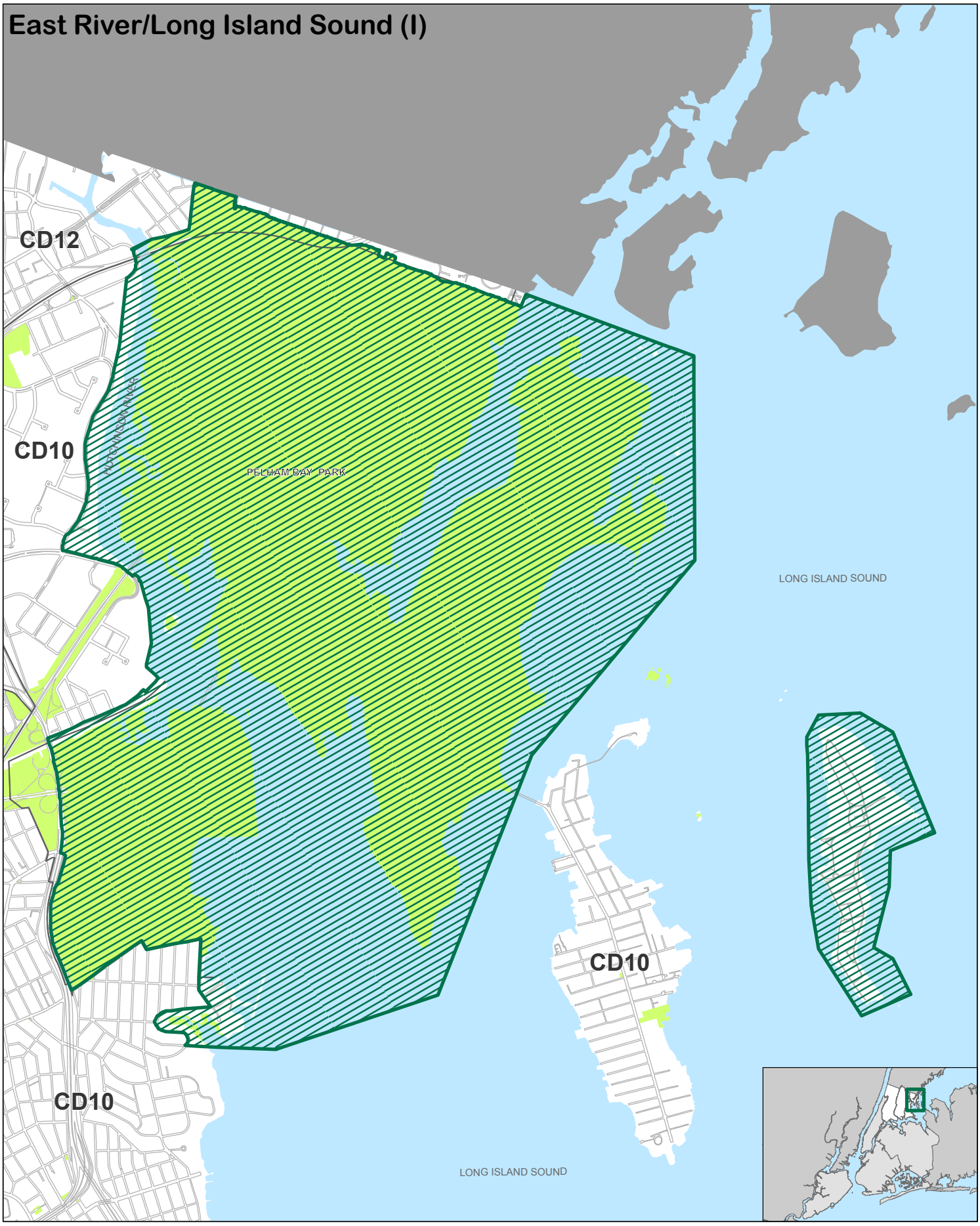
Coastal Zone Boundary

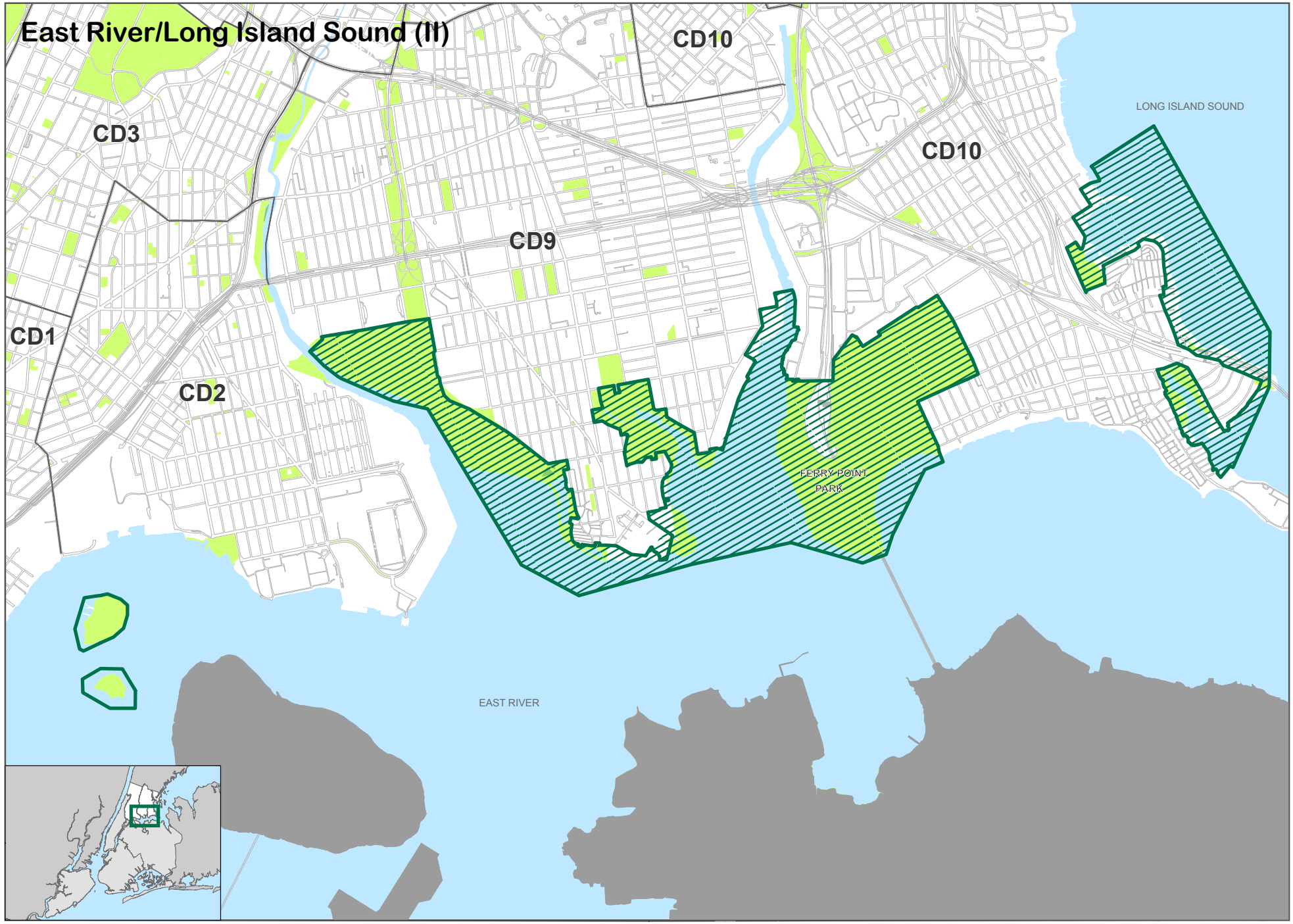
Community District Boundary

Miles
0 0.25 0.5 1

D4

SPECIAL NATURAL WATERFRONT AREAS


East River/Long Island Sound (I)
CD12
CD10
PELHAM BAY PARK
LONG ISLAND SOUND
CD10
CD10
LONG ISLAND SOUND
Special Natural Waterfront Areas
SNWA Boundary
Parkland
Feet
0
1,250
2,500
5,000



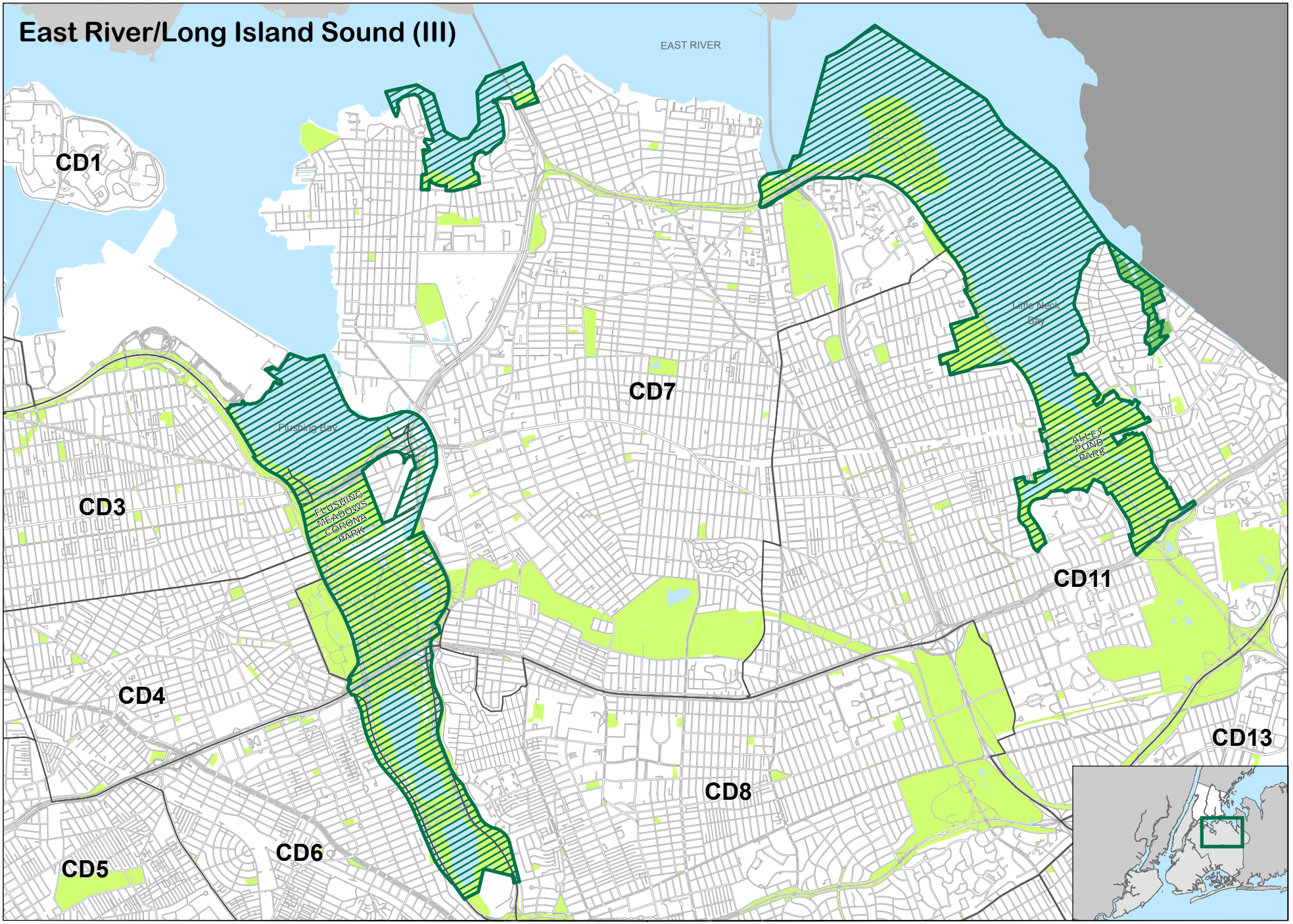
Special Natural Waterfront Areas

SNWA Boundary

Parkland

Feet

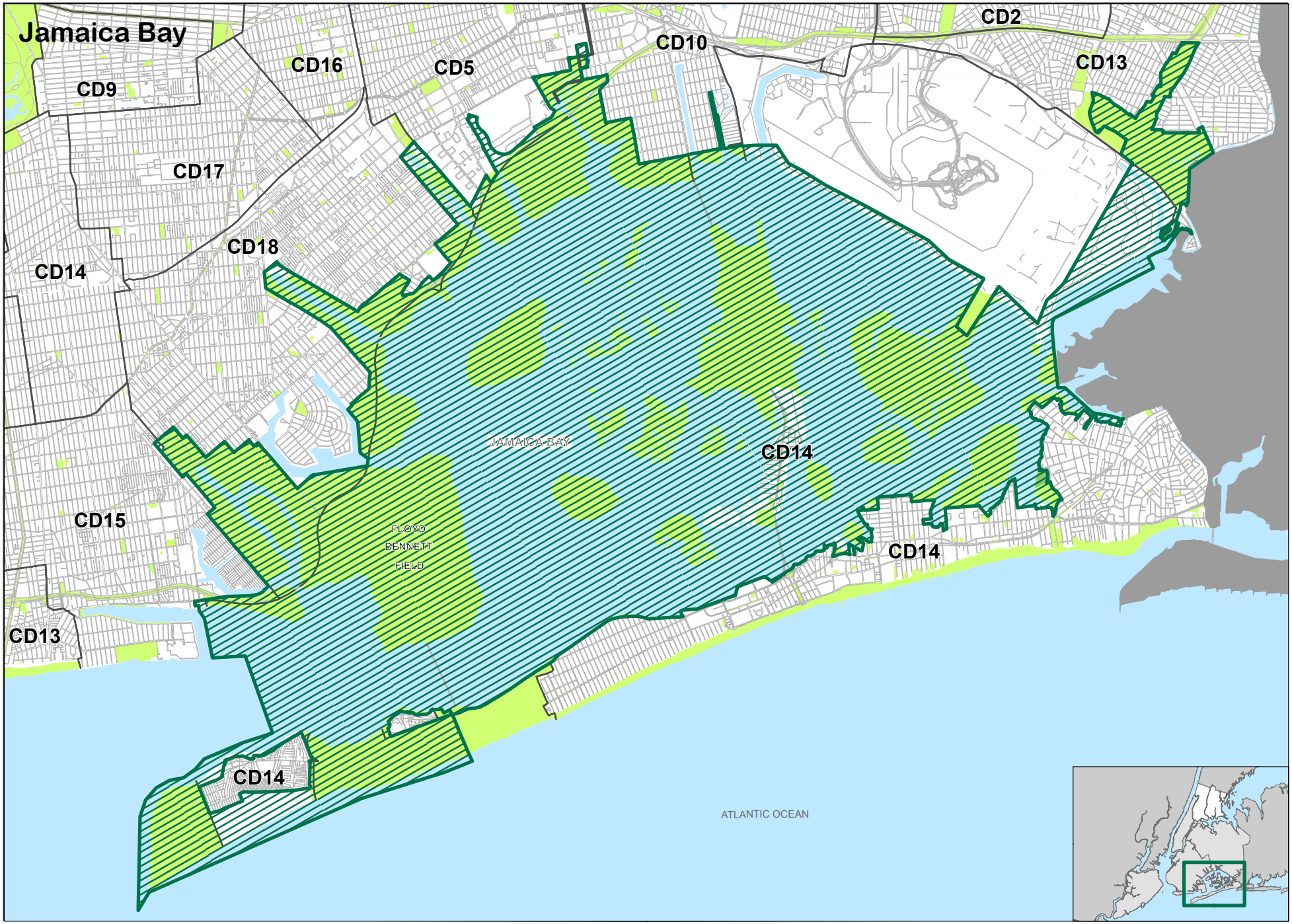
0 1,250 2,500 5,000

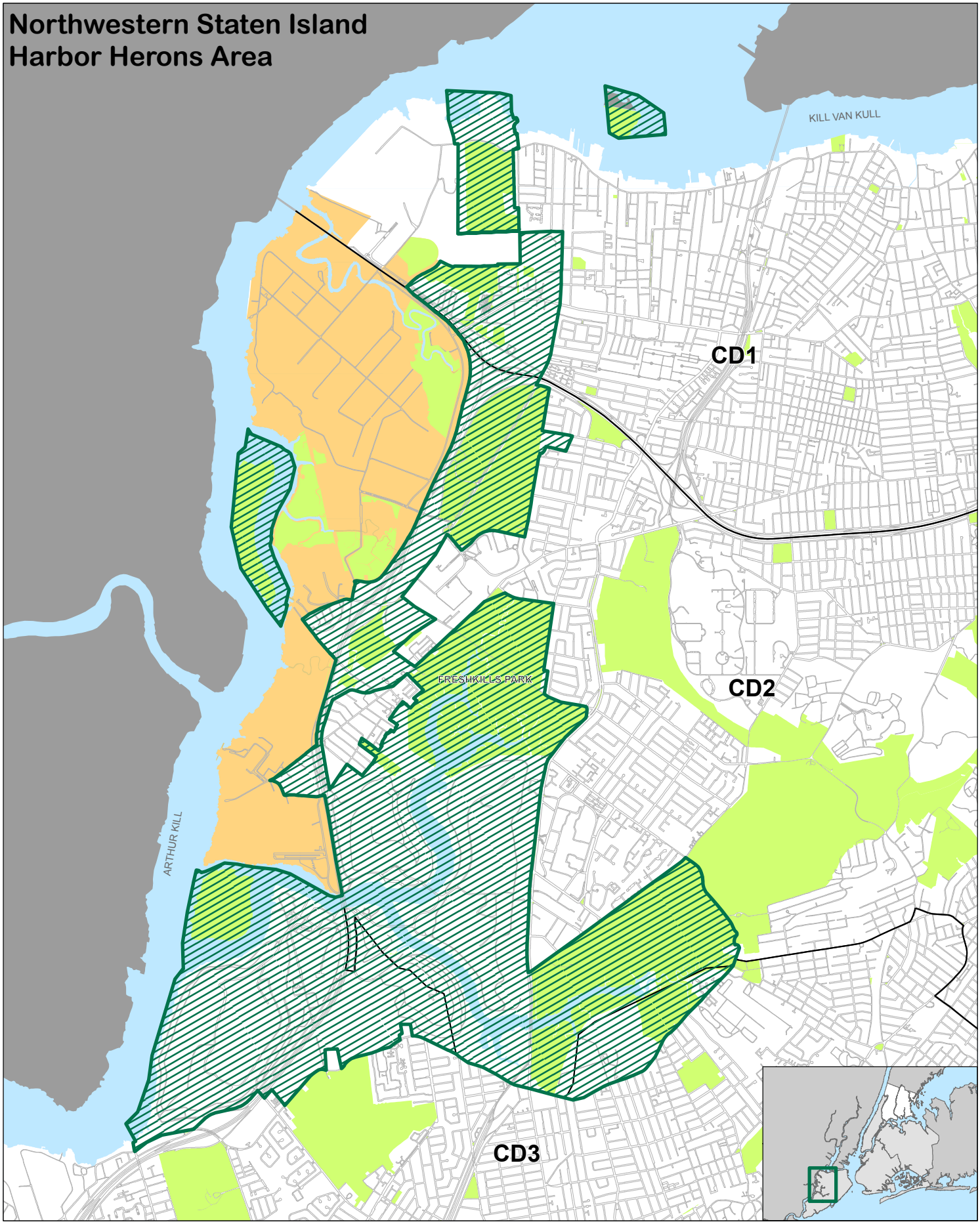


Special Natural Waterfront Areas

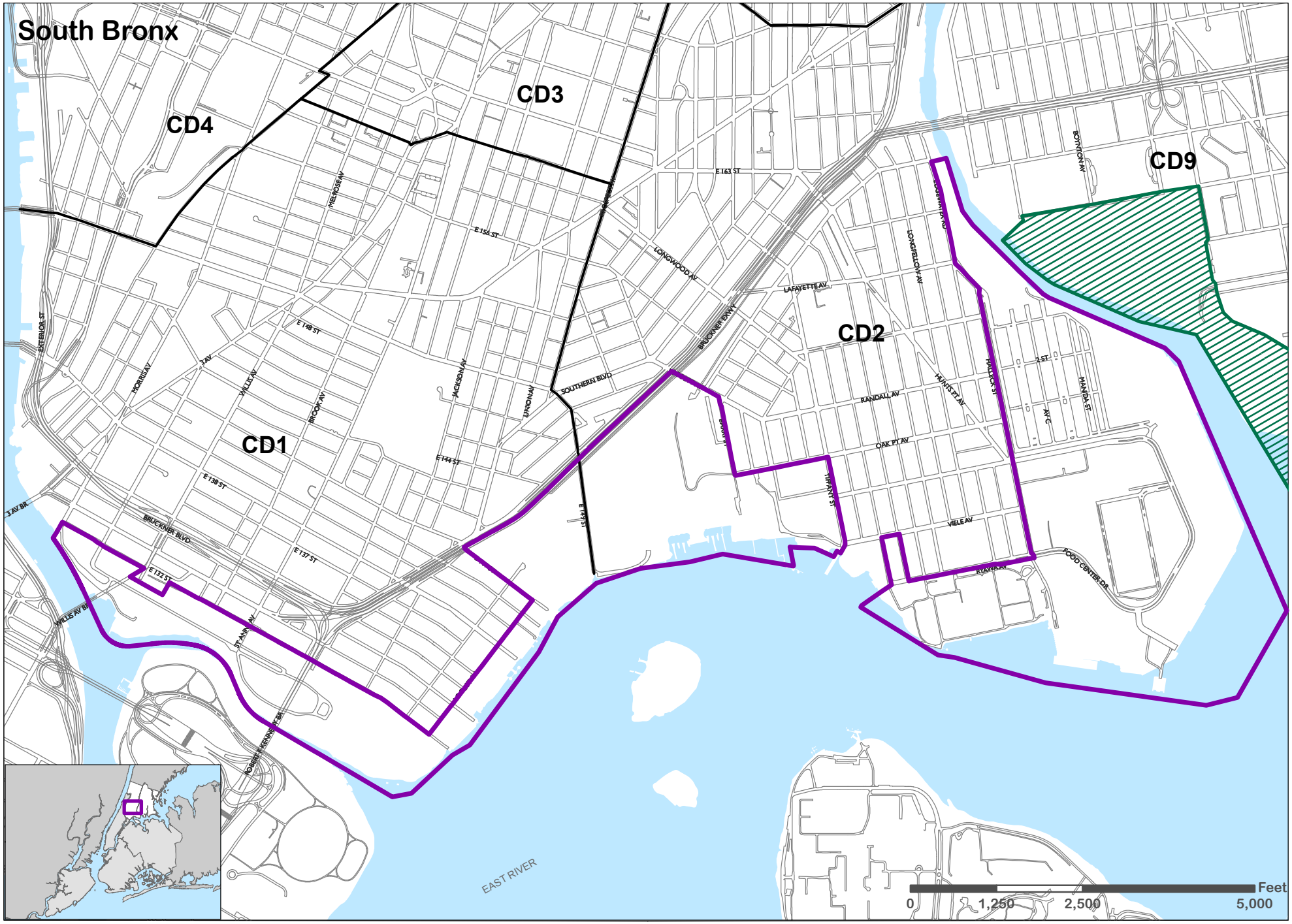
SNWA Boundary

Parkland


Jamaica Bay
CD9
CD16
CD5
CD10
CD2
CD13
CD17
CD18
CD14
JAMAICA BAY
CD14
CD15
FLOYD
BENNETT
FIELD
CD14
CD13
CD14
ATLANTIC OCEAN
Special Natural Waterfront Areas
SNWA Boundary
Parkland
Feet
0
5,000
10,000
20,000


Northwestern Staten Island
Harbor Herons Area
KILL VAN KULL
CD1
CD2
CD3
FRESHKILLS PARK
ARTHUR KILL
Special Natural Waterfront Areas
SNWA Boundary
Parkland
ESMIA
0
2,000
4,000
8,000
Feet

SIGNIFICANT MARITIME AND INDUSTRIAL AREAS

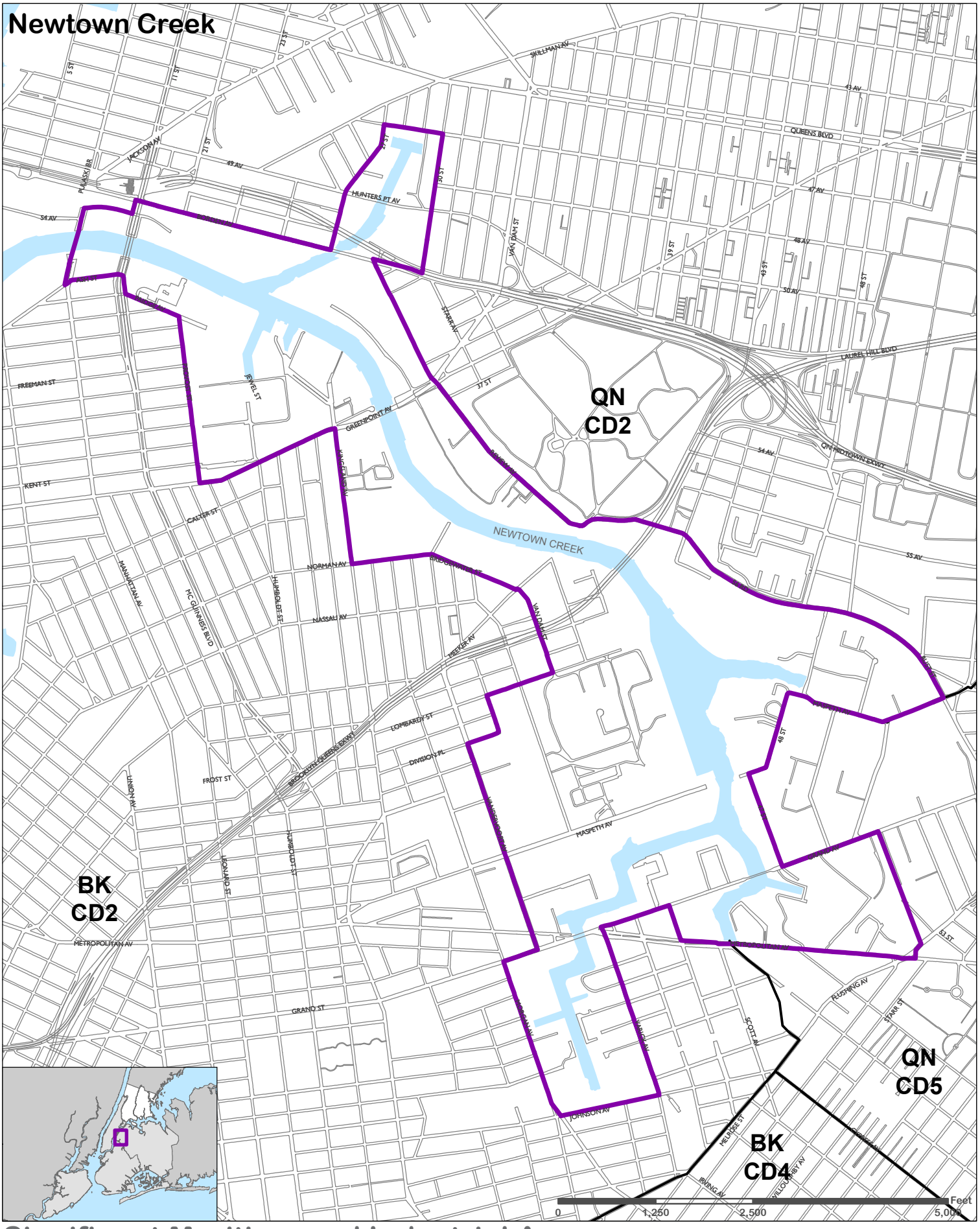


Significant Maritime and Industrial Areas

SMIA Boundary

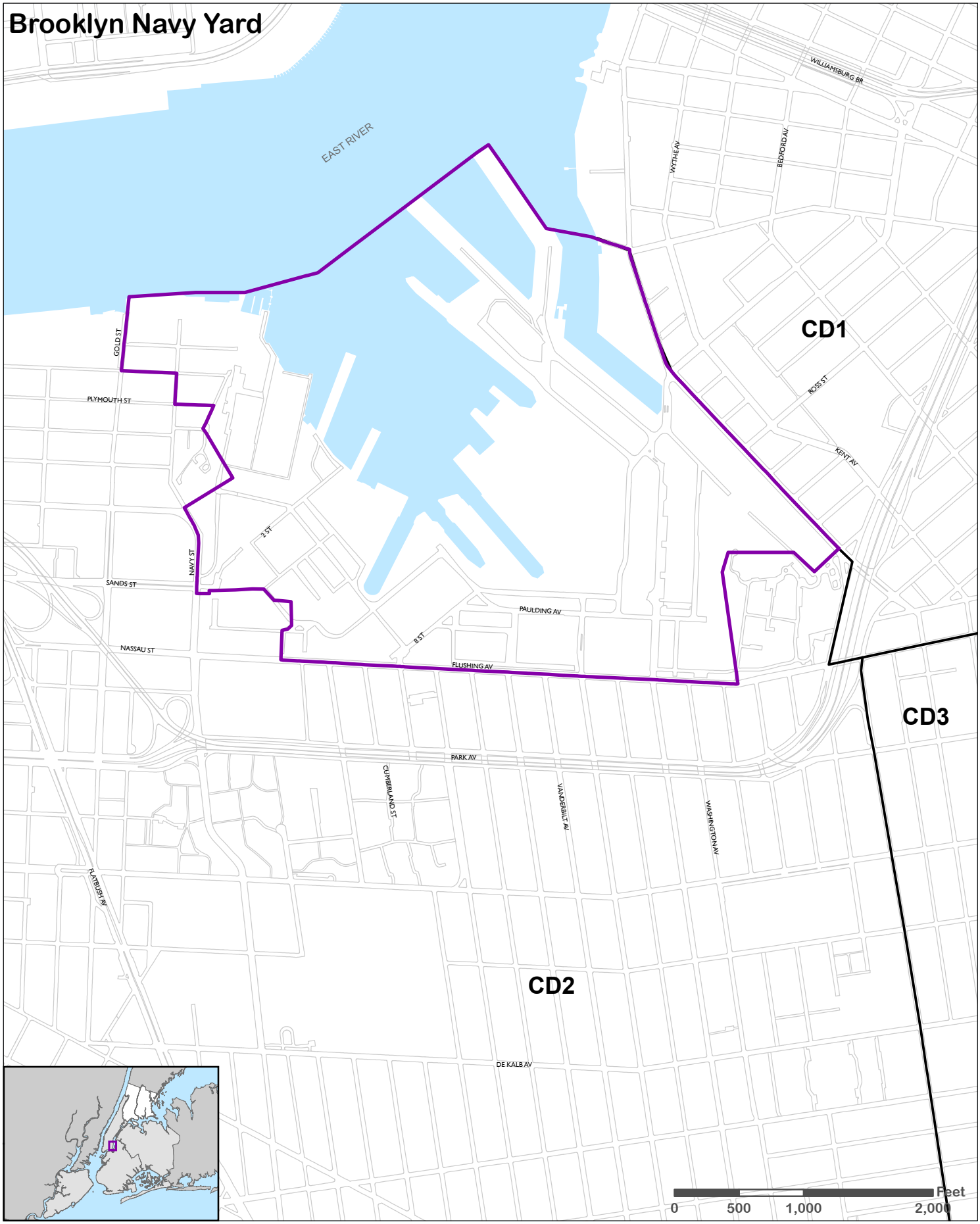
SNWA Boundary

Community District Boundary



Significant Maritime and Industrial Areas

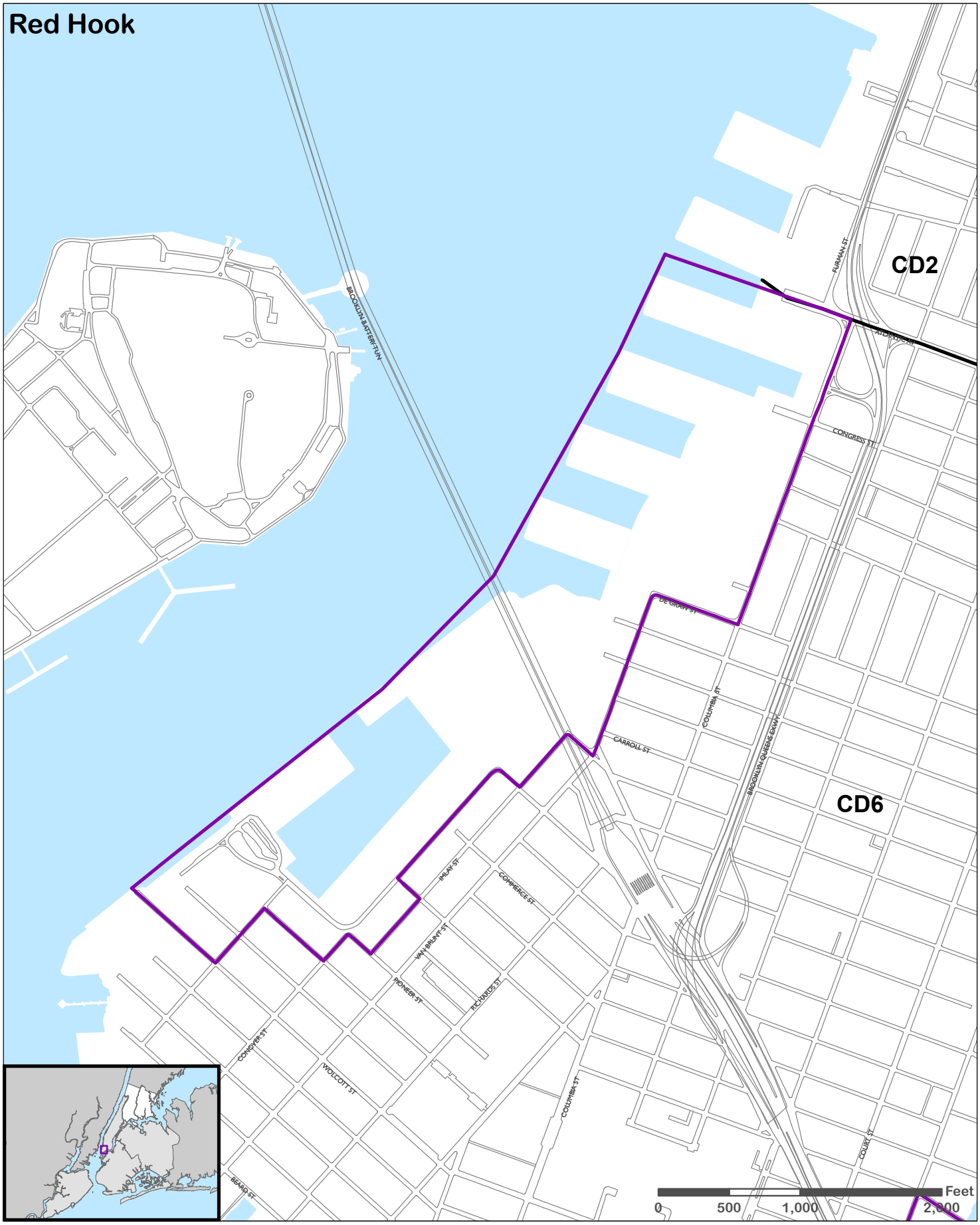
SMIA Boundary Community District Boundary



Significant Maritime and Industrial Areas

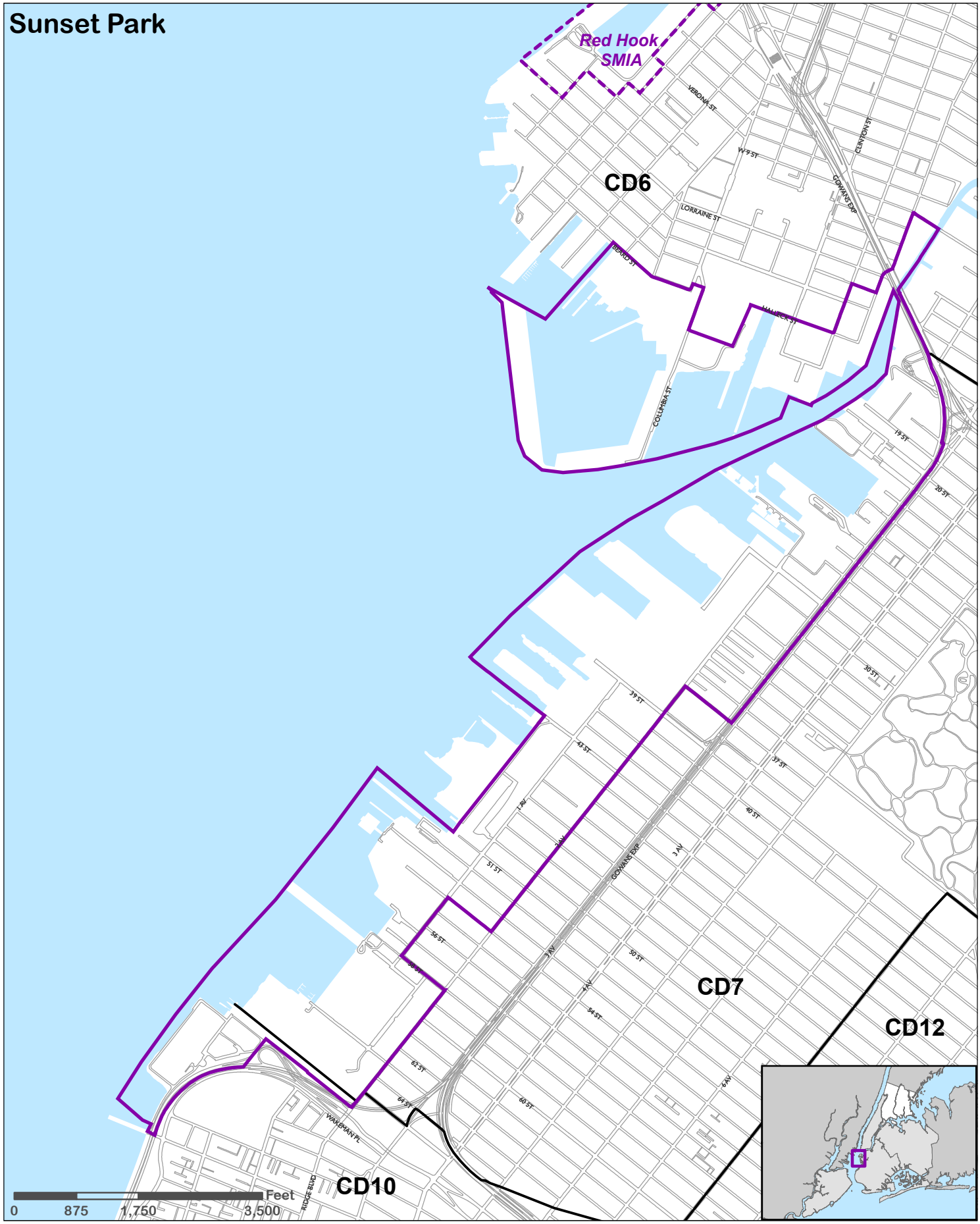
SMIA Boundary

Community District Boundary



Significant Maritime and Industrial Areas

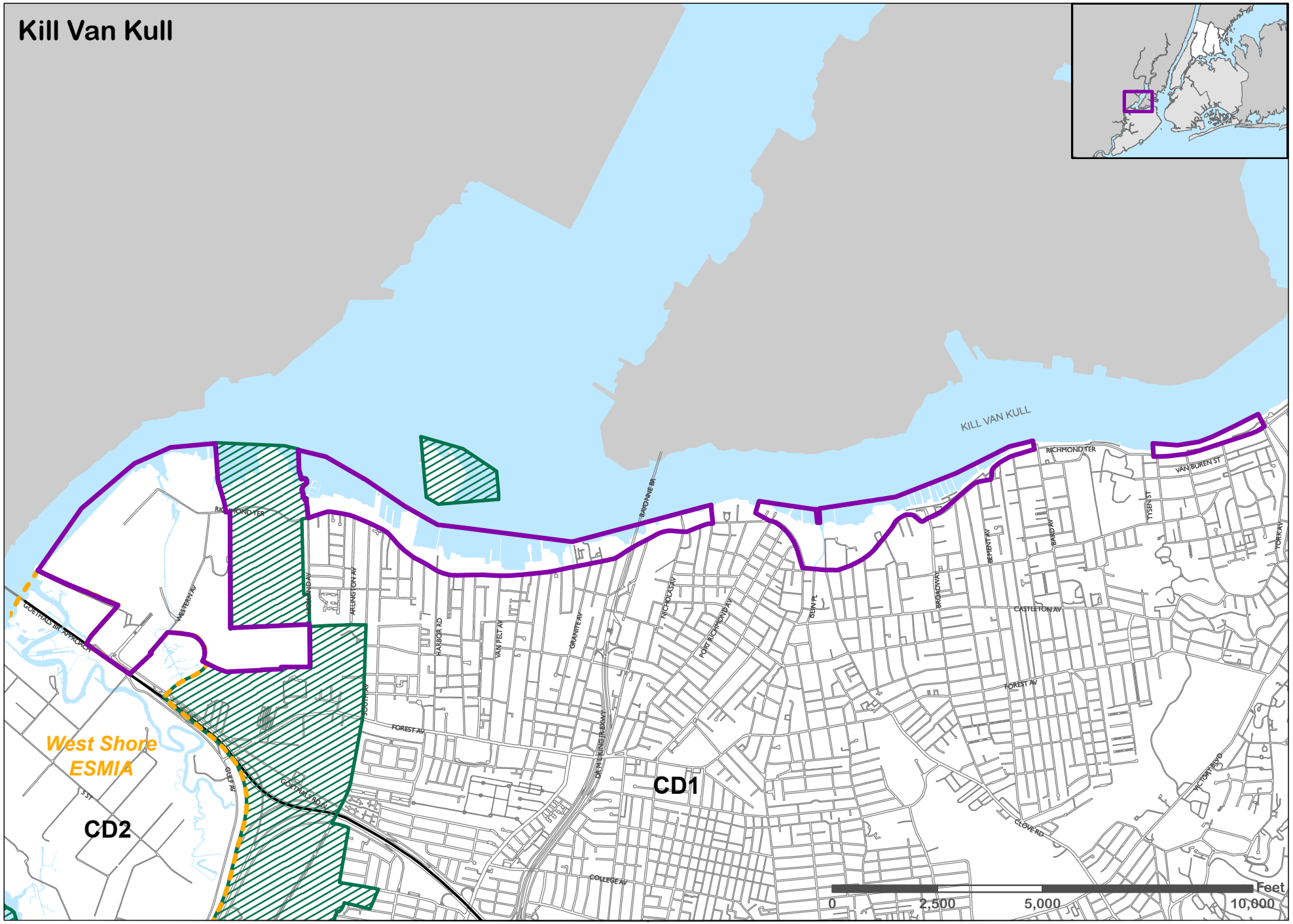
SMIA Boundary Community District Boundary



Significant Maritime and Industrial Areas

SMIA Boundary

Community District Boundary

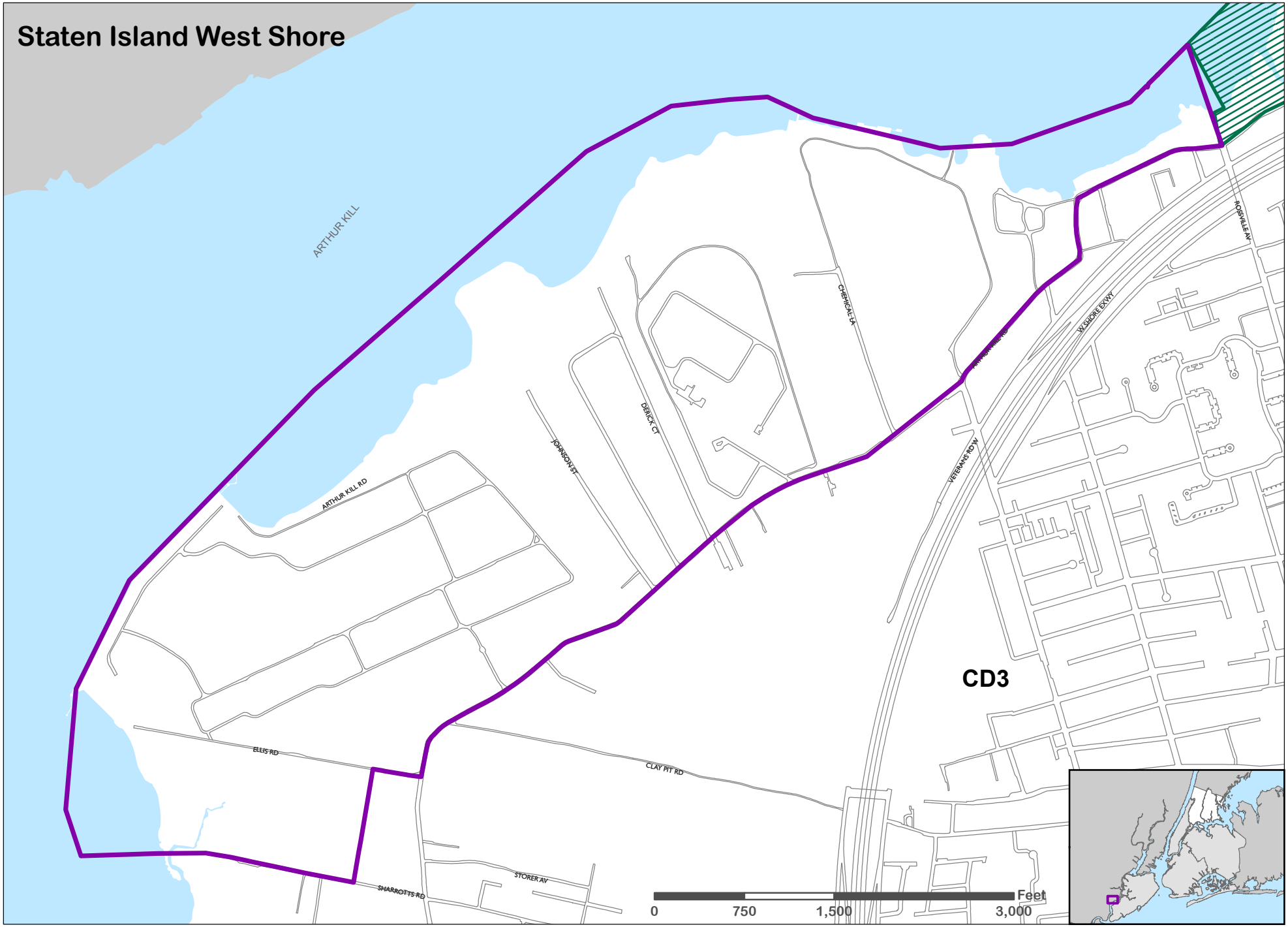


Significant Maritime and Industrial Areas

SMIA Boundary

SNWA Boundary

Community District Boundary

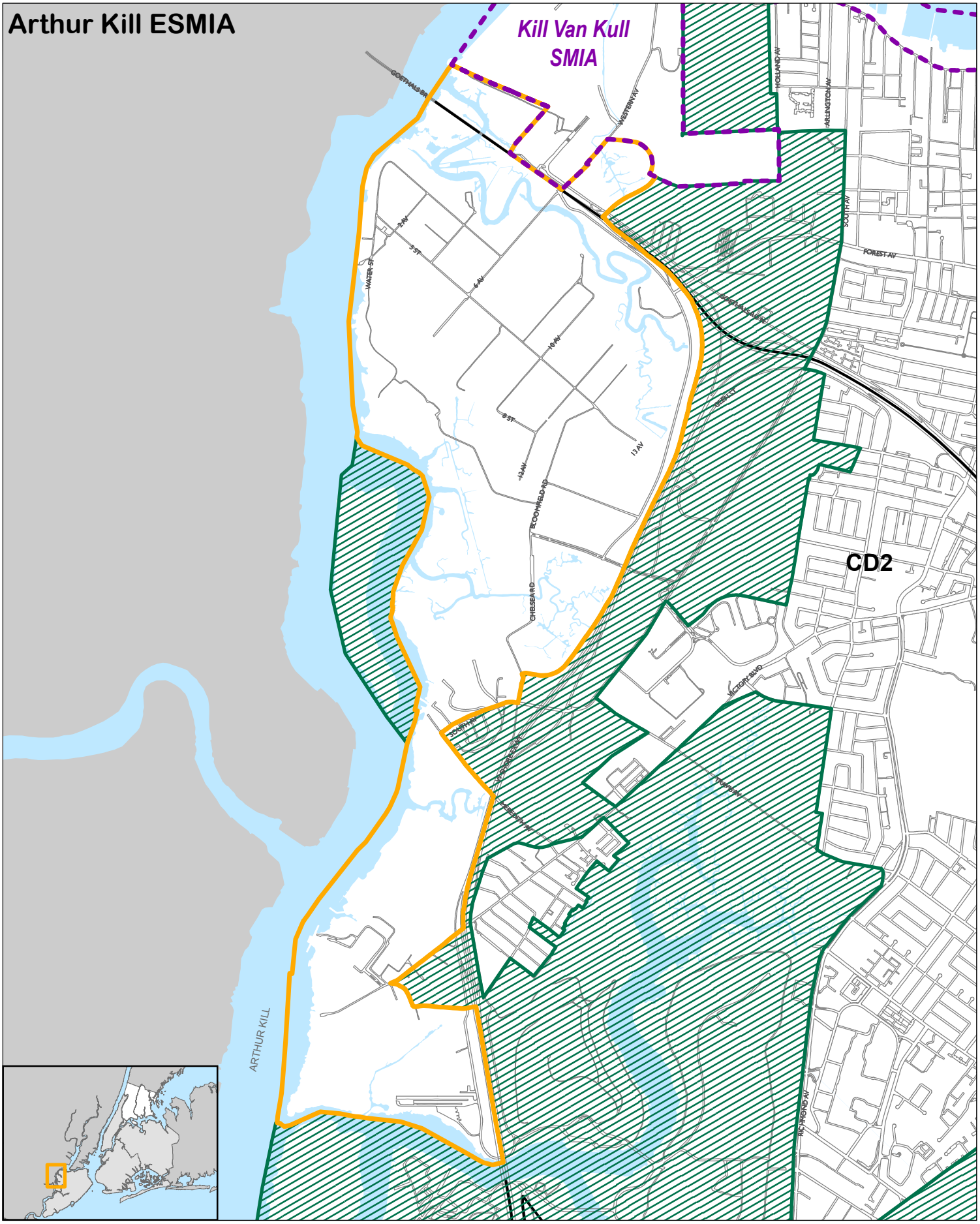


Significant Maritime and Industrial Areas

SMIA Boundary

SNWA Boundary

ARTHUR KILL ECOLOGICALLY SENSITIVE MARITIME AND INDUSTRIAL AREA

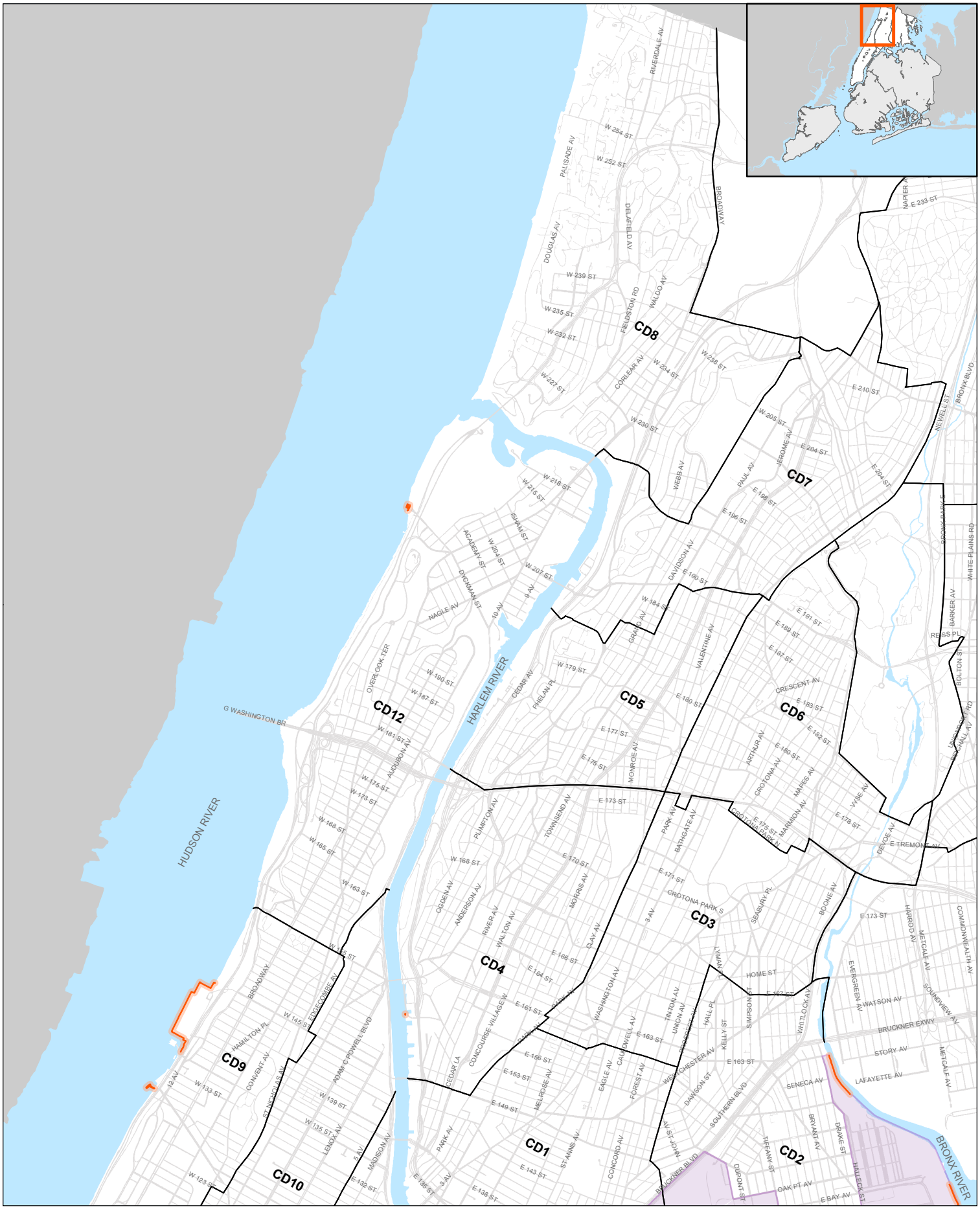


Ecologically Sensitive Maritime and Industrial Area

Feet
0 1,250 2,500 5,000

ESMIA Boundary | SNWA Boundary | SMIA Boundary | Community District Boundary

PRIORITY MARINE ACTIVITY ZONES



Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones

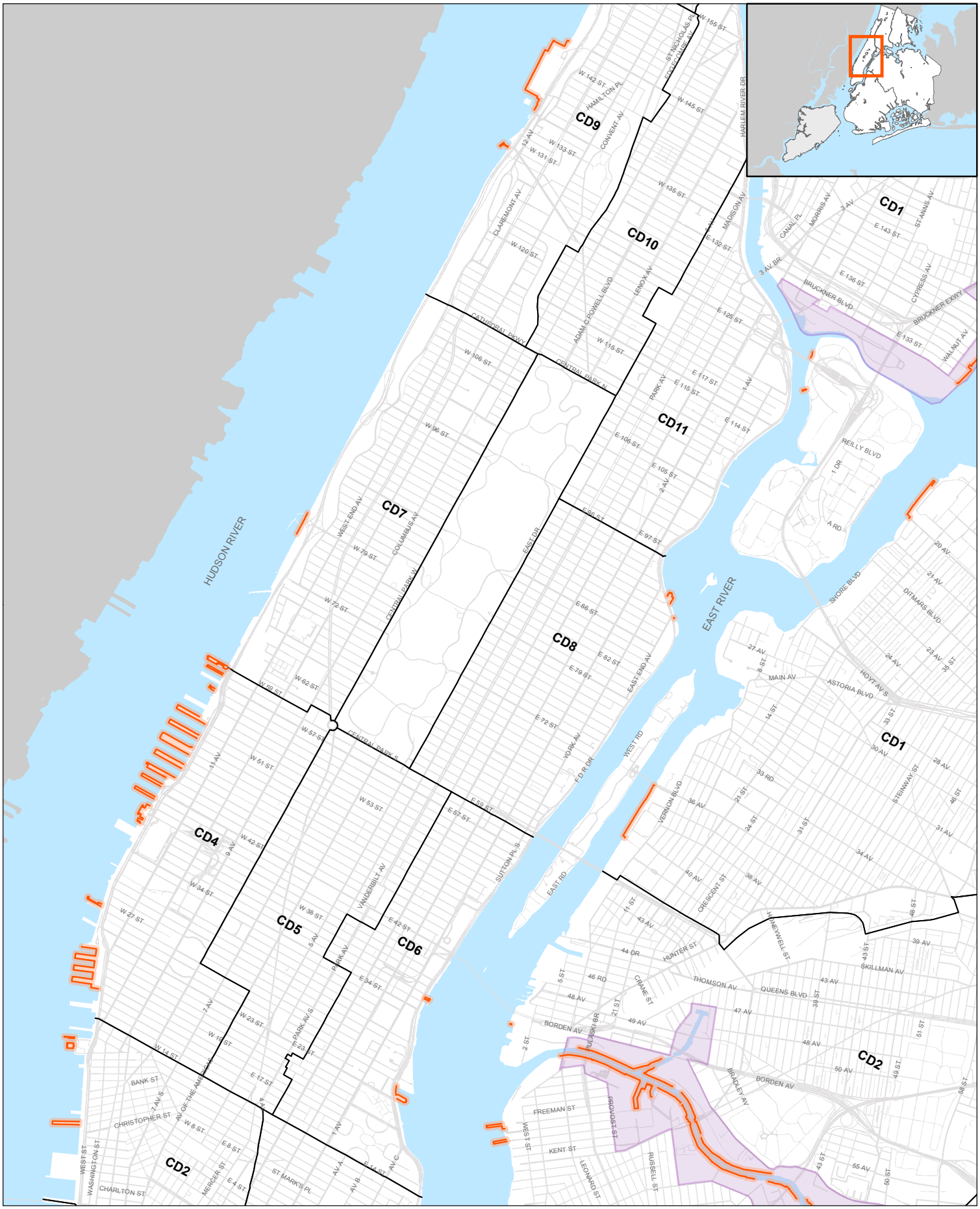
SMIA Boundaries

Priority Marine Activity Zones

Priority Marine Activity Zones

SMIA Boundaries

0 2,500 5,000 10,000 Feet

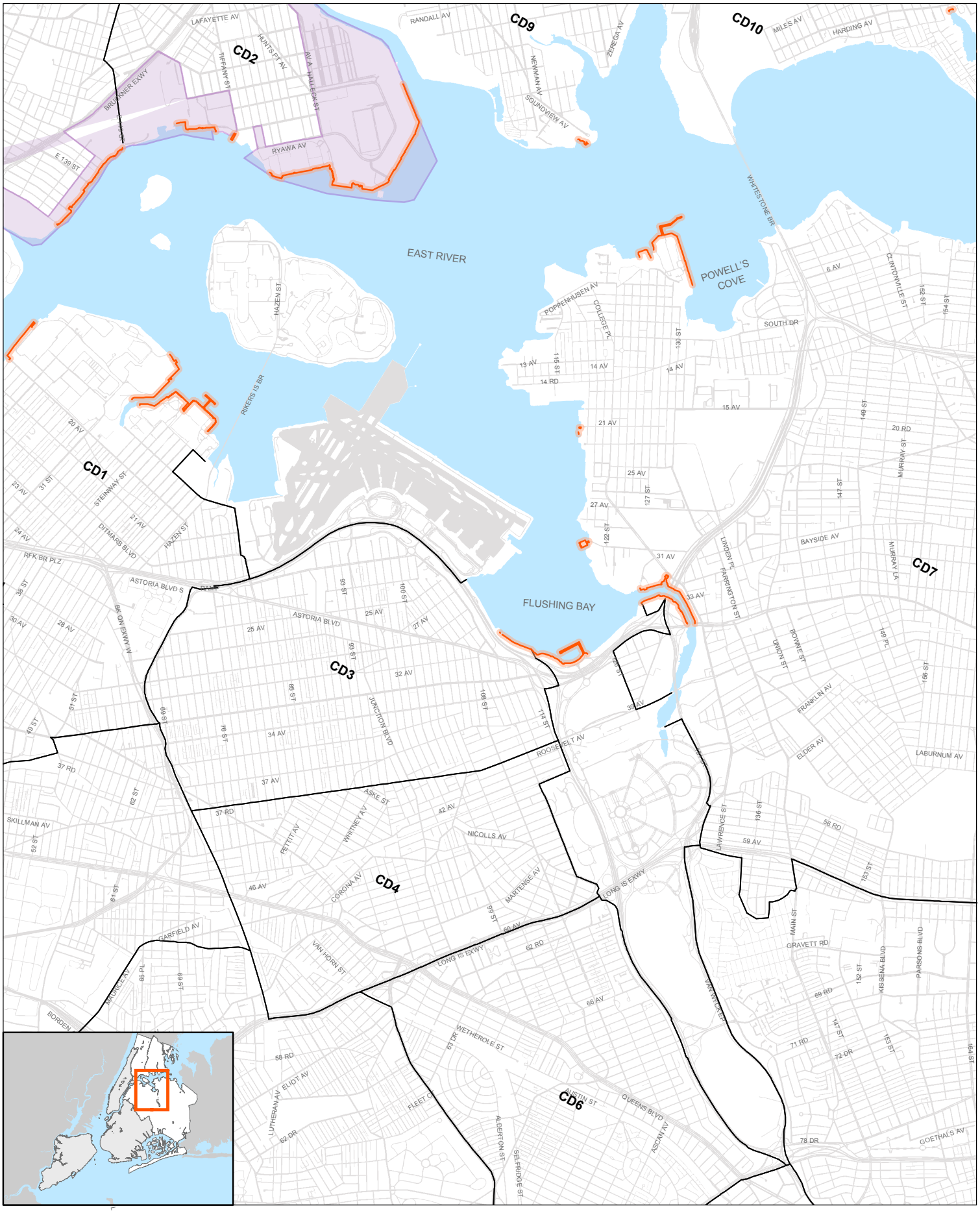


Priority Marine Activity Zones

Priority Marine Activity Zones

SMIA Boundaries

0 2,500 5,000 10,000 Feet

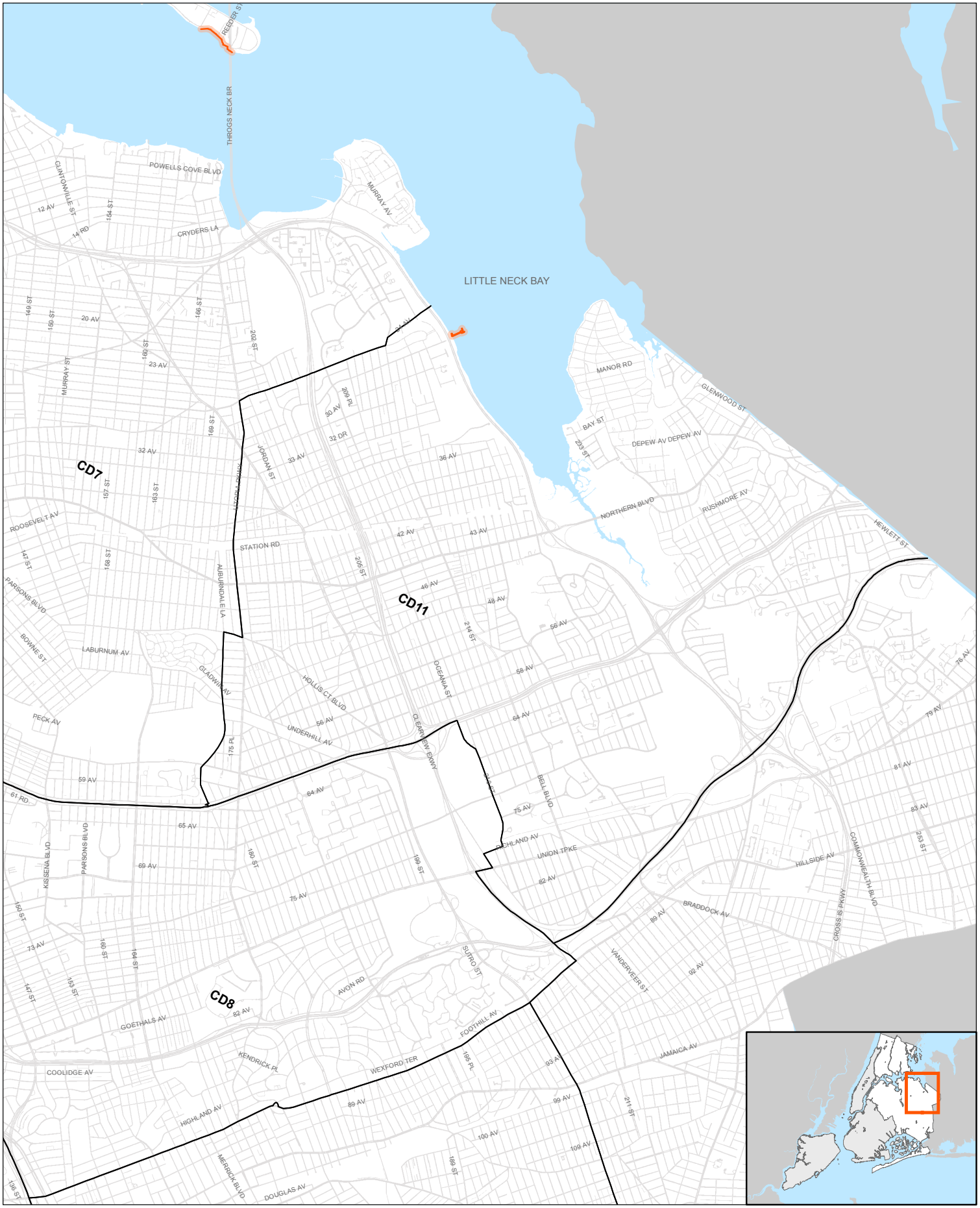


Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones

SMIA Boundaries

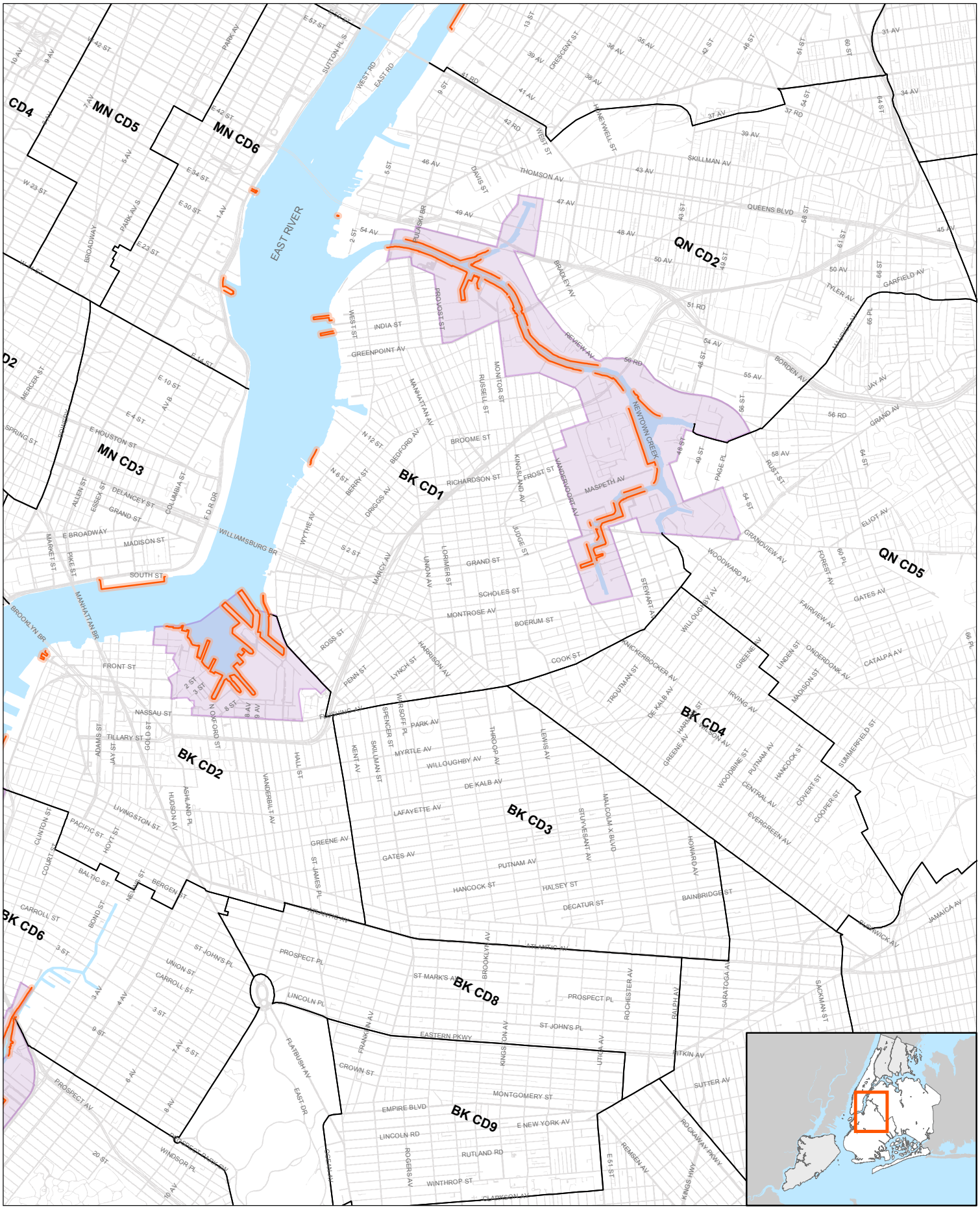


Proposed Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones

SMIA Boundaries

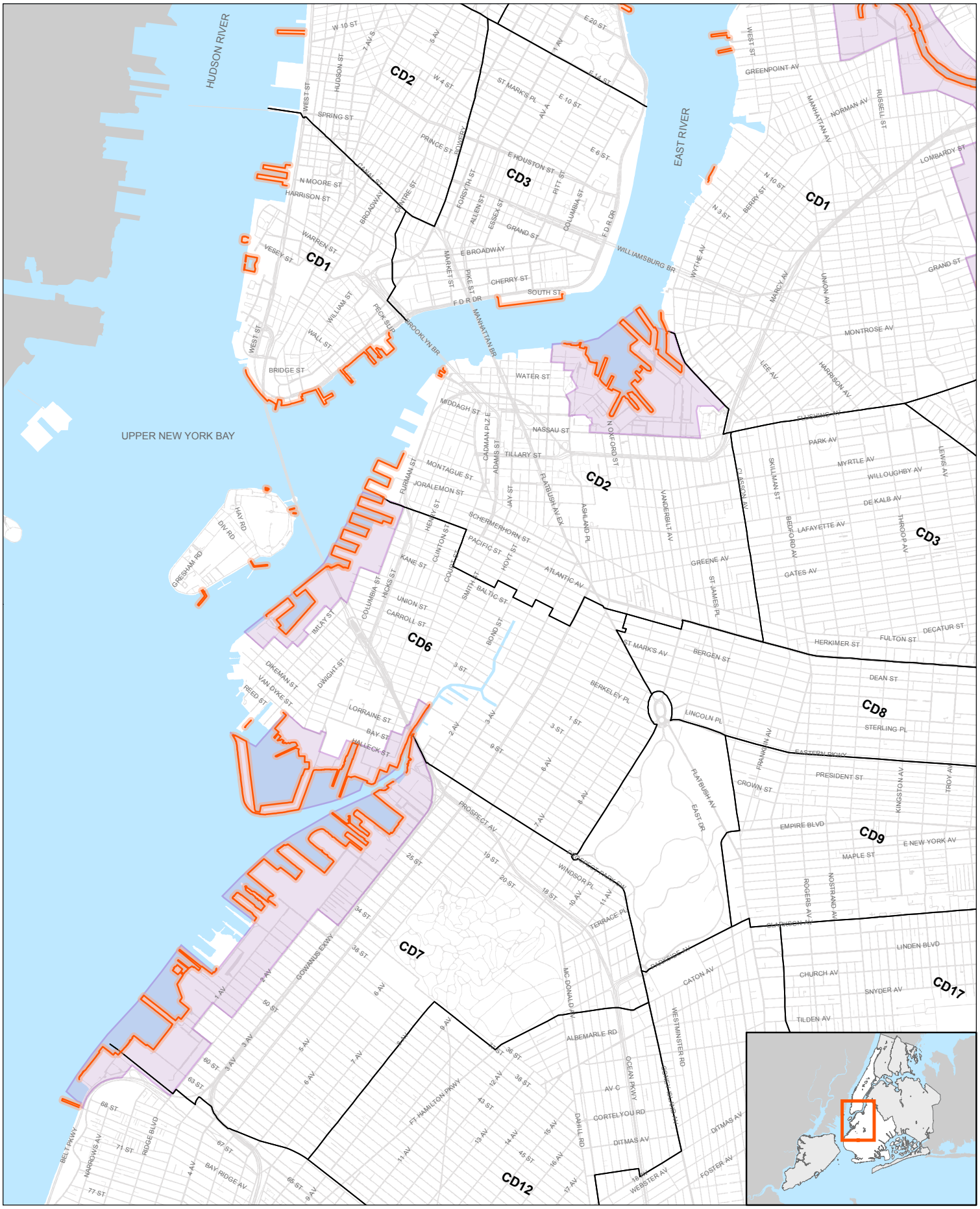


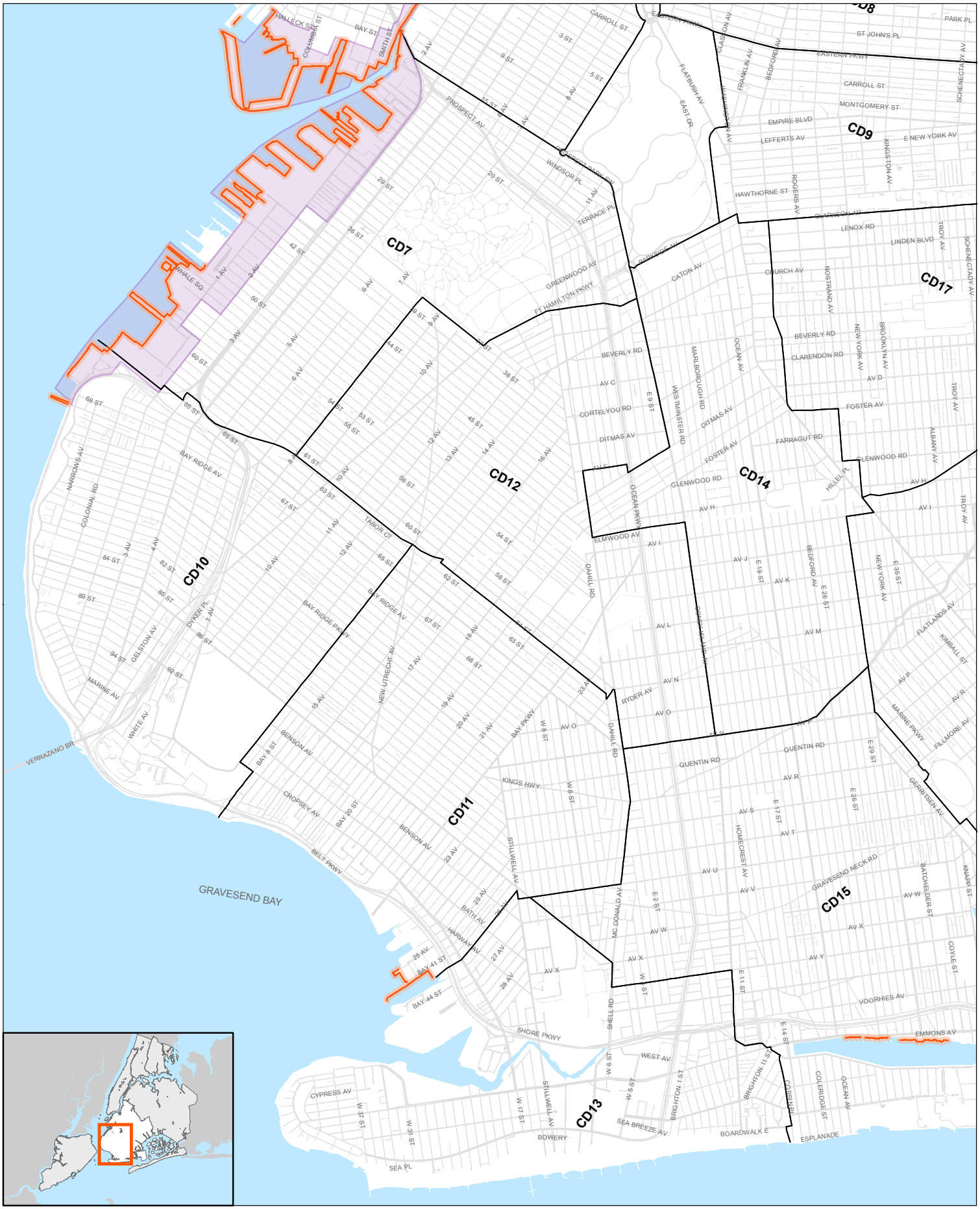
Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones

SMIA Boundaries


HUDSON RIVER
EAST RIVER
UPPER NEW YORK BAY
CD1
CD2
CD3
CD6
CD7
CD8
CD9
CD12
CD17
Priority Marine Activity Zones
Priority Marine Activity Zones
SMIA Boundaries
0
2,500
5,000
10,000
Feet



Priority Marine Activity Zones

Priority Marine Activity Zones

SMIA Boundaries

Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones

SMIA Boundaries

Priority Marine Activity Zones

Priority Marine Activity Zones

SMIA Boundaries

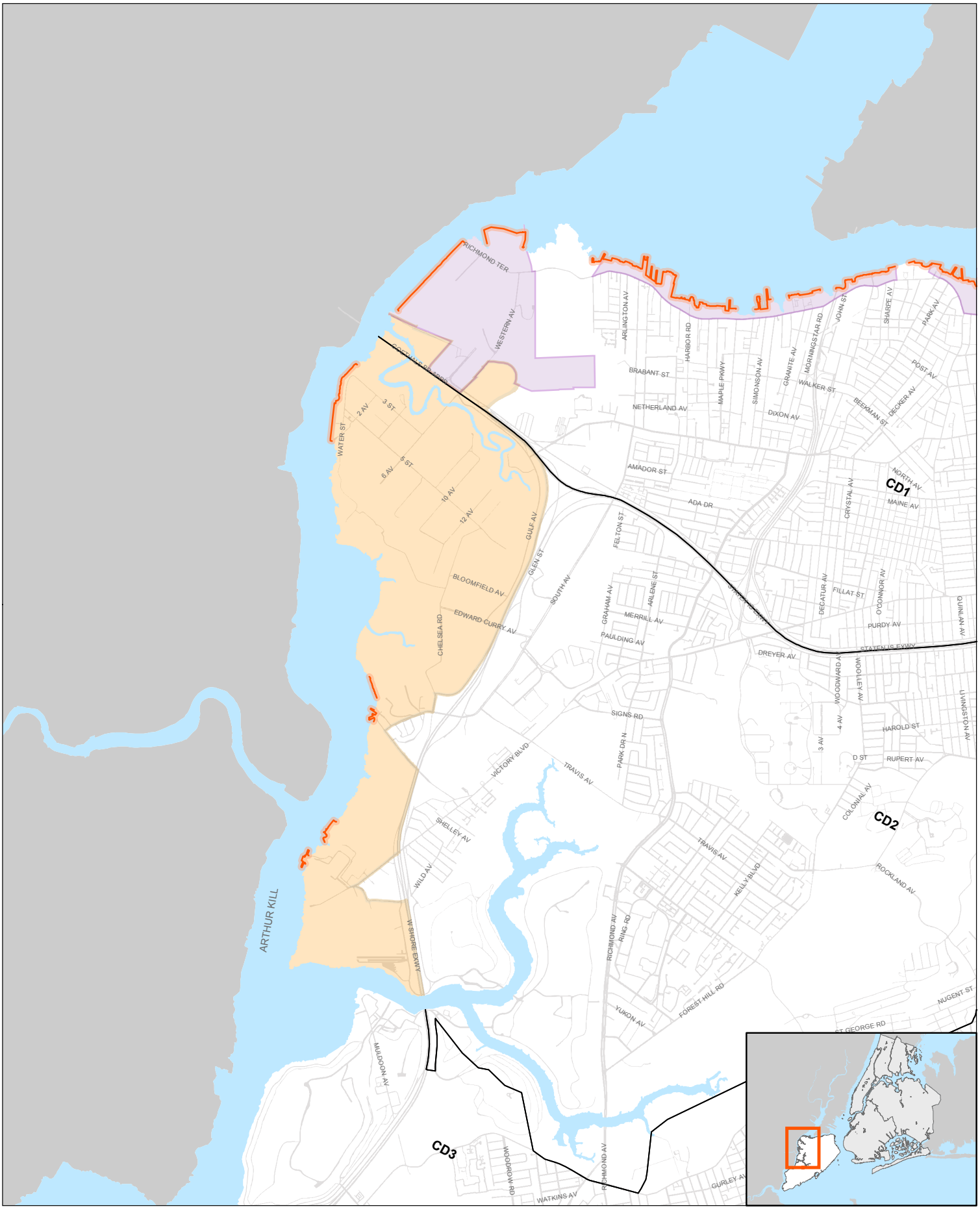
0 2,500 5,000 10,000 Feet

Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones

SMIA Boundaries



Priority Marine Activity Zones

Priority Marine Activity Zones

SMIA Boundaries

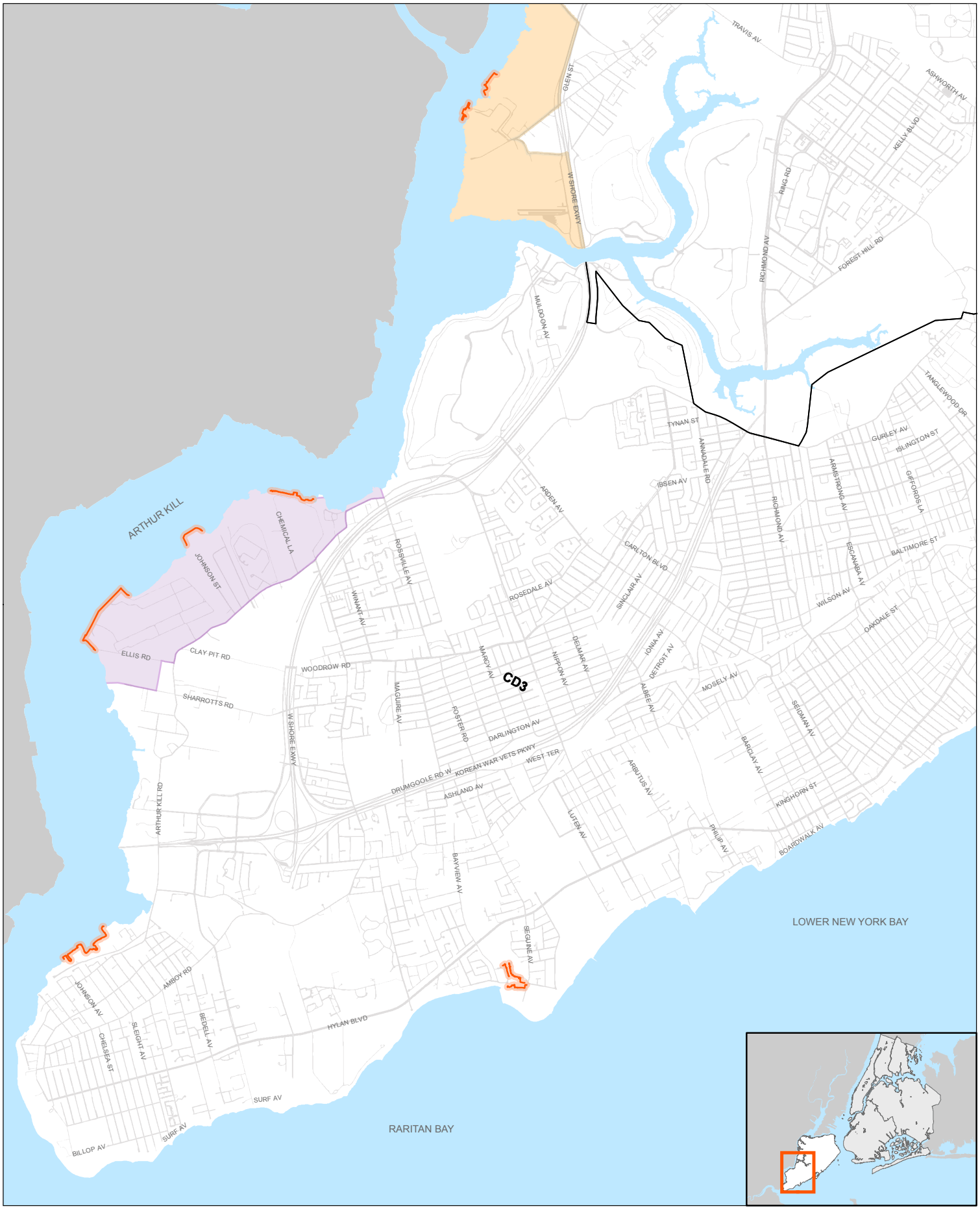
ESMIA Boundaries

0 2,500 5,000 10,000 Feet

Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones
SMIA Boundaries



Priority Marine Activity Zones

Feet
0 2,500 5,000 10,000

Priority Marine Activity Zones
SMIA Boundaries
ESMIA Boundaries

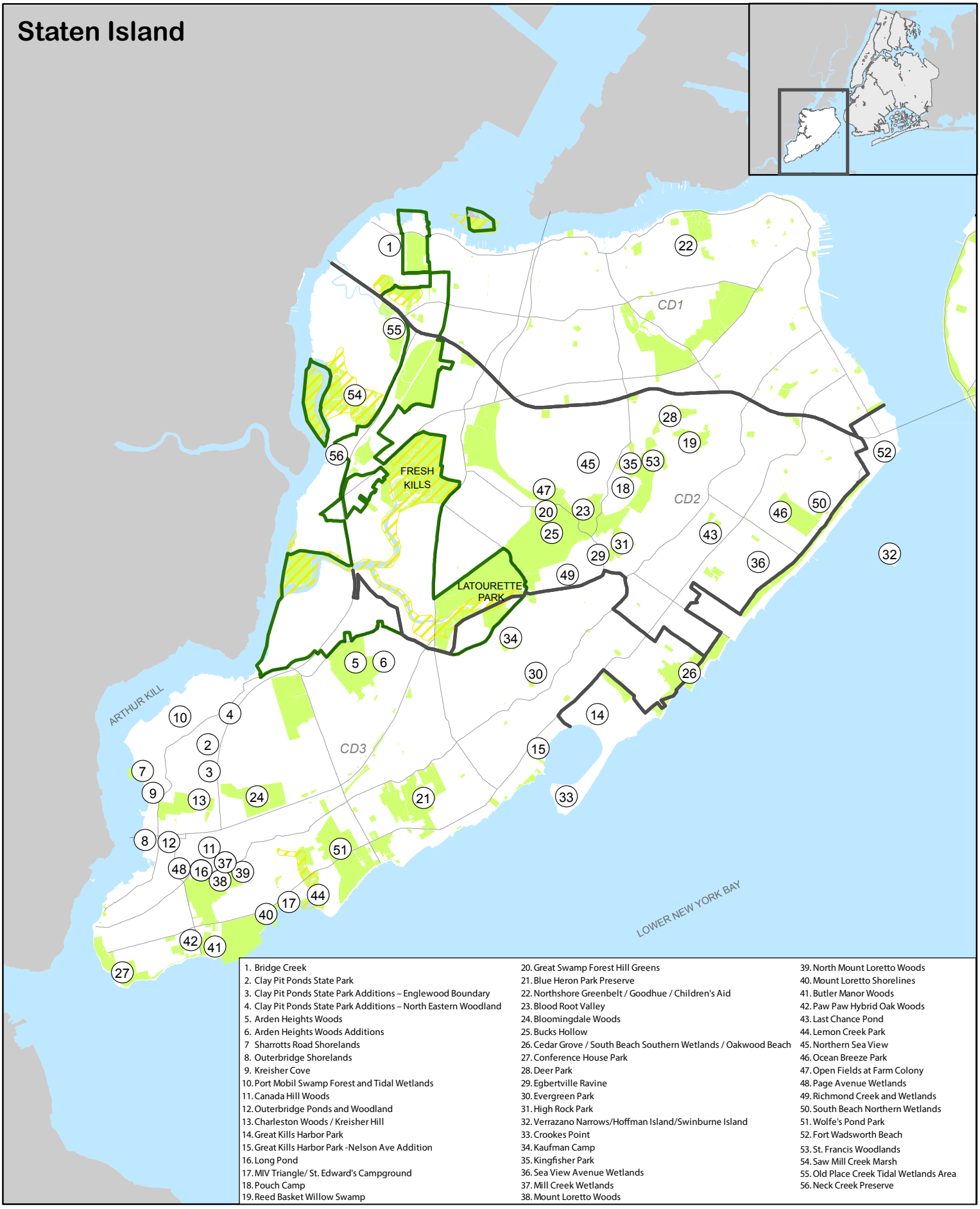
Priority Marine Activity Zones

Priority Marine Activity Zones

SMIA Boundaries

0 2,500 5,000 10,000 Feet

RECOGNIZED ECOLOGICAL COMPLEXES



Recognized Ecological Complexes

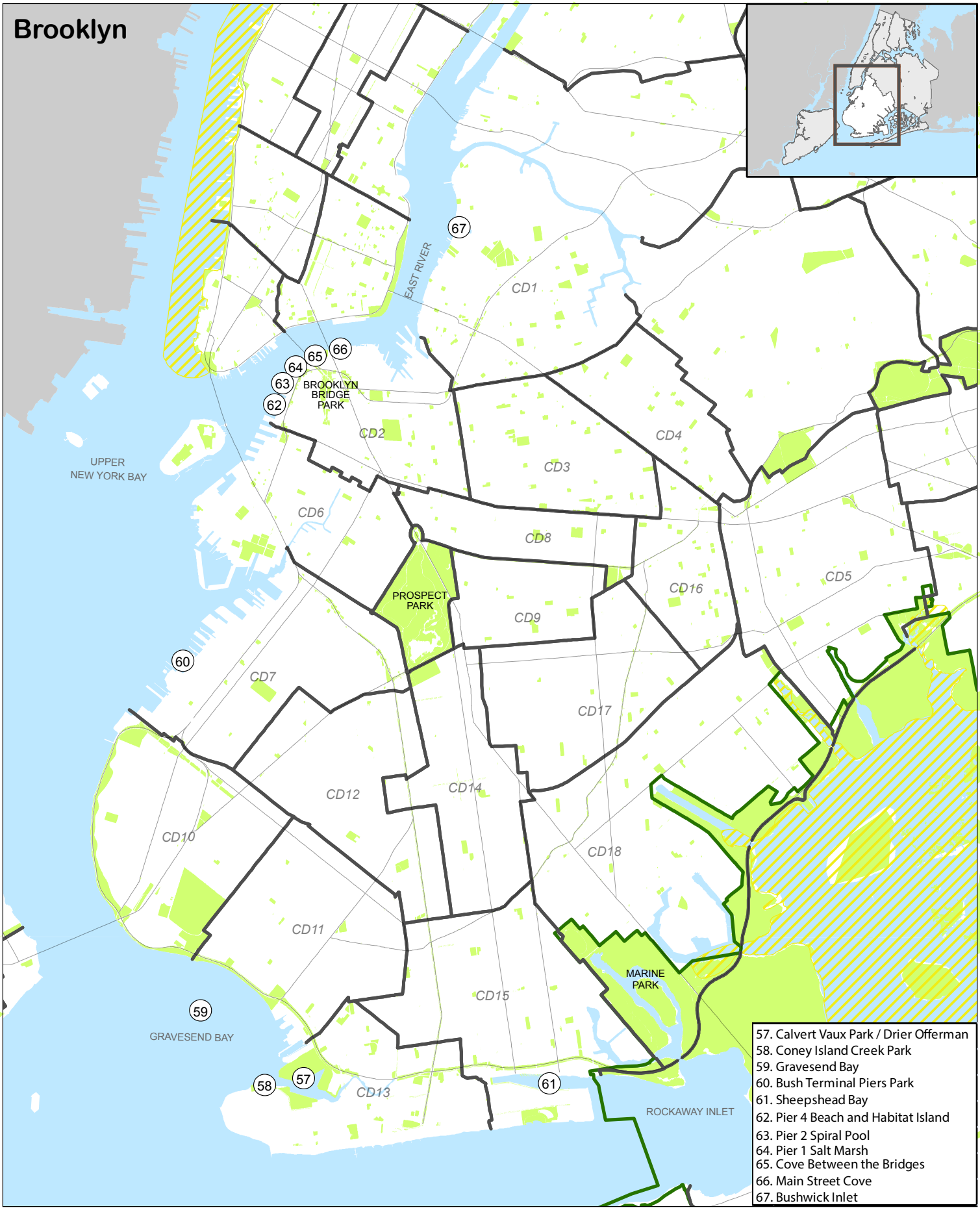
0 0.5 1 2 Miles

① Recognized Ecological Complex

Special Natural Waterfront Area

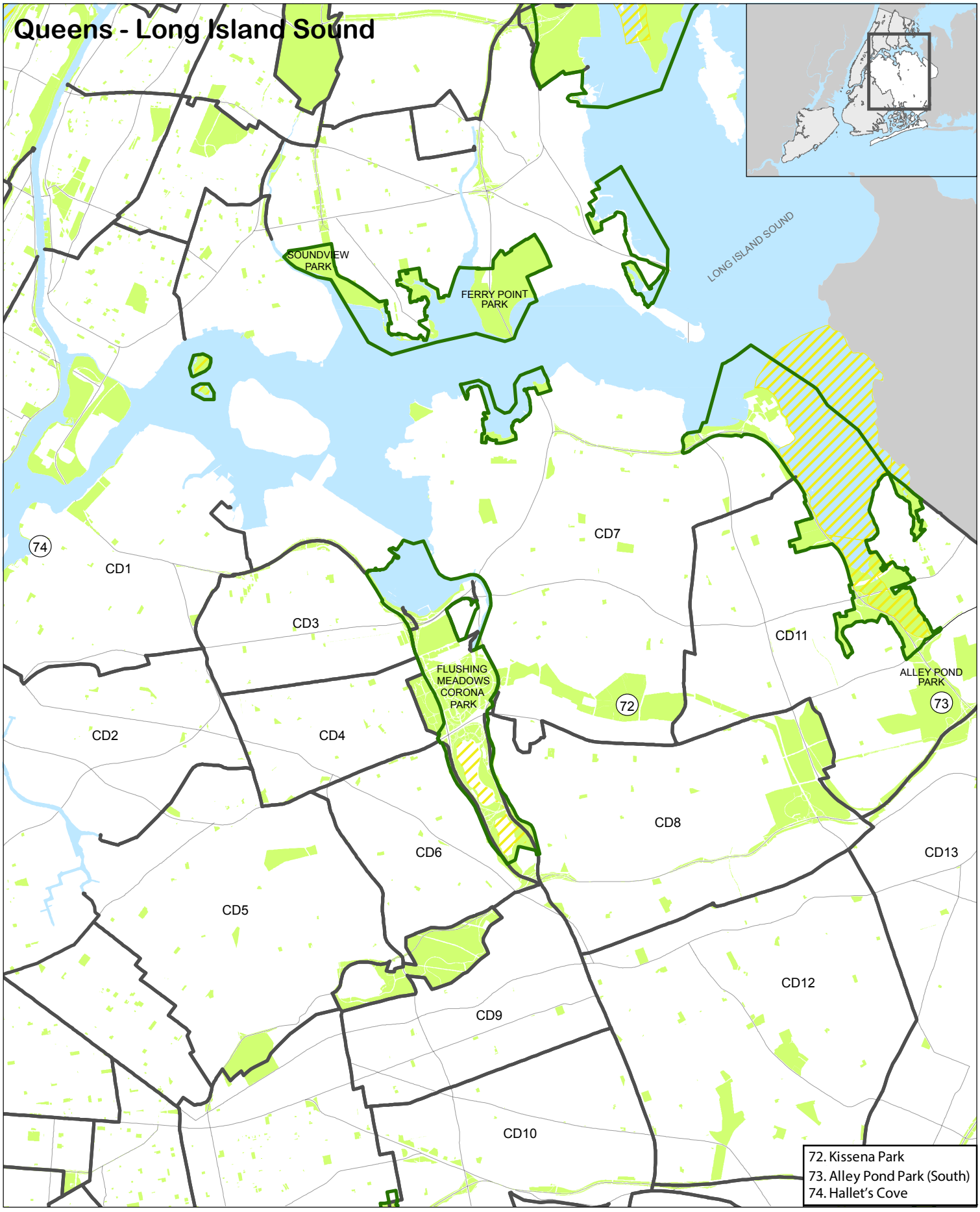
Significant Coastal Fish & Wildlife Habitat

Parkland



Recognized Ecological Complexes

① Recognized Ecological Complex | Special Natural Waterfront Area | Significant Coastal Fish & Wildlife Habitat | Parkland



Recognized Ecological Complexes

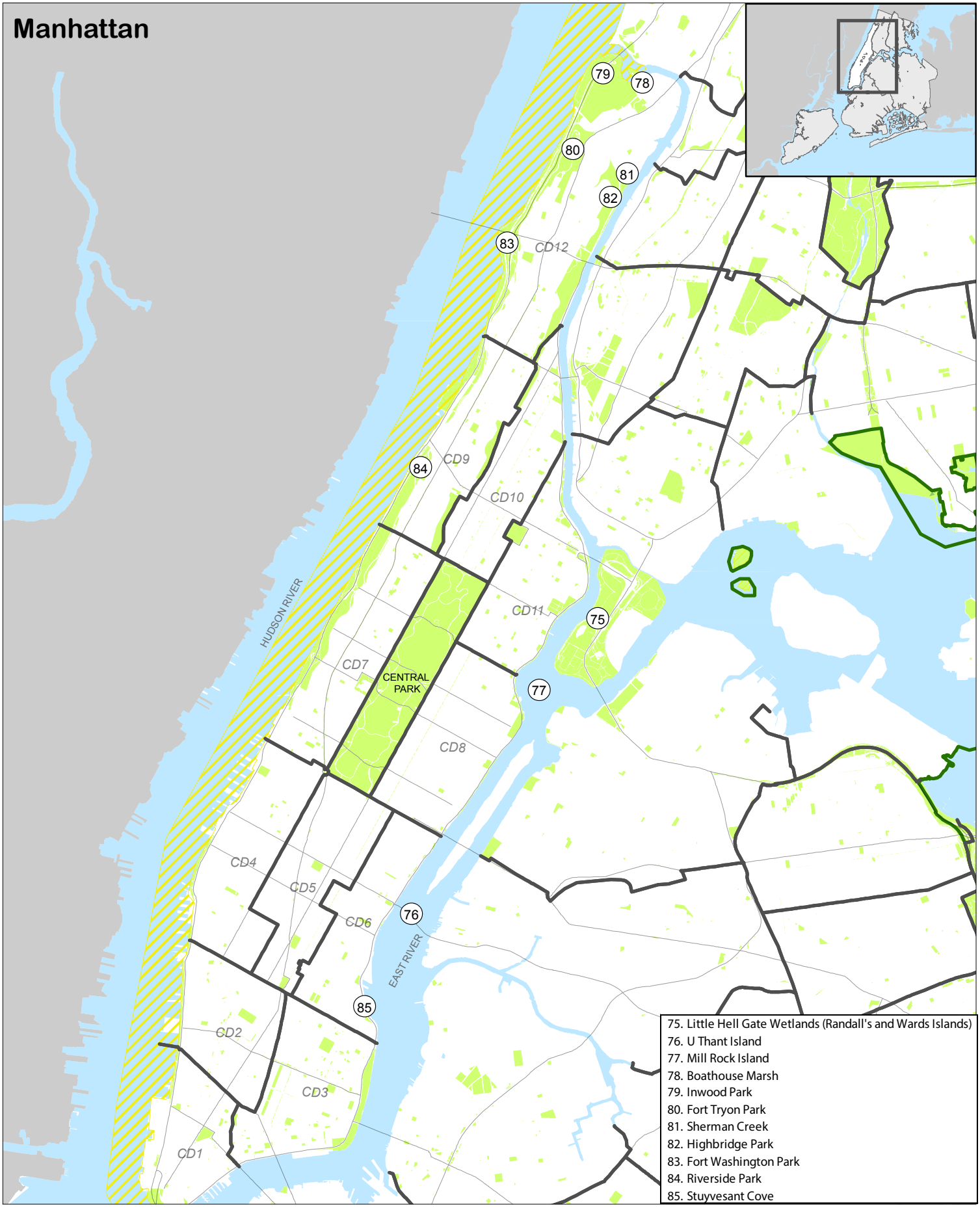
Miles
0 0.5 1 2

(1) Recognized Ecological Complex

Special Natural Waterfront Area

Significant Coastal Fish & Wildlife Habitat

Parkland



Recognized Ecological Complexes

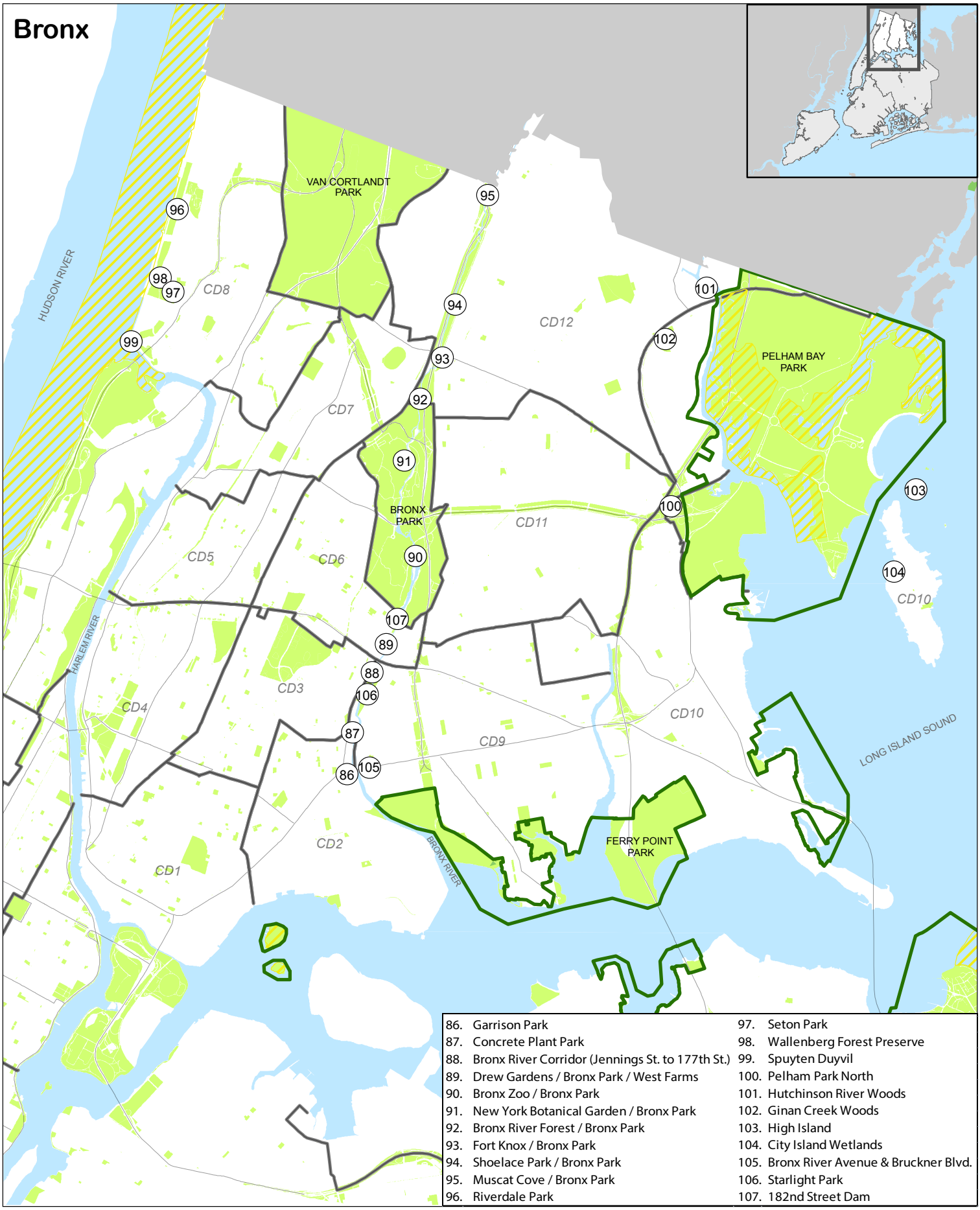
0 0.5 1 2 Miles

① Recognized Ecological Complex

Special Natural Waterfront Area

Significant Coastal Fish & Wildlife Habitat

Parkland



86. Garrison Park	97. Seton Park
87. Concrete Plant Park	98. Wallenberg Forest Preserve
88. Bronx River Corridor (Jennings St. to 177th St.)	99. Spuyten Duyvil
89. Drew Gardens / Bronx Park / West Farms	100. Pelham Park North
90. Bronx Zoo / Bronx Park	101. Hutchinson River Woods
91. New York Botanical Garden / Bronx Park	102. Ginan Creek Woods
92. Bronx River Forest / Bronx Park	103. High Island
93. Fort Knox / Bronx Park	104. City Island Wetlands
94. Shoelace Park / Bronx Park	105. Bronx River Avenue & Bruckner Blvd.
95. Muscat Cove / Bronx Park	106. Starlight Park
96. Riverdale Park	107. 182nd Street Dam

Recognized Ecological Complexes

Miles: 0 0.5 1 2

(1) Recognized Ecological Complex

Special Natural Waterfront Area

Significant Coastal Fish & Wildlife Habitat

Parkland

APPENDIX A:

STATE AND FEDERAL ACTIONS AND PROGRAMS WHICH SHOULD BE UNDERTAKEN IN A MANNER CONSISTENT WITH THE LWRP

A. STATE AND FEDERAL ACTIONS AND PROGRAMS WHICH SHOULD BE UNDERTAKEN IN A MANNER CONSISTENT WITH THE LWRP

1. STATE ACTIVITIES

AGING, OFFICE FOR THE

1.00 Funding and/or approval programs for the establishment of new or expanded facilities providing various services for the elderly.

AGRICULTURE AND MARKETS, DEPARTMENT OF

1.00 Agricultural Districts Program
2.00 Rural Development Program
3.00 Conservation Reserve Enhancement Program
4.00 Permit and approval programs:
- 4.01 Custom Slaughters/Processor Permit
- 4.02 Processing Plant License
- 4.03 Refrigerated Warehouse and/or Locker Plant License

5.00 Farmland Protection Grants from the Environmental Protection Fund
6.00 Agricultural nonpoint Source Abatement and Control Grant Program
7.00 Farmers Market Grant Program
8.00 Community Gardens Capacity Building Grant Program
9.00 Management of Invasive Species funding

ALCOHOLIC BEVERAGE CONTROL, DIVISION OF (STATE LIQUOR AUTHORITY)

1.00 Permit and Approval Programs:
- 1.01 Ball Park - Stadium License
- 1.02 Bottle Club License
- 1.03 Bottling Permits
- 1.04 Brewer's Licenses and Permits
- 1.05 Brewer's Retail Beer License
- 1.06 Catering Establishment Liquor License
- 1.07 Cider Producer's and Wholesaler's Licenses
- 1.08 Club Beer, Liquor, and Wine Licenses
- 1.09 Distiller's Licenses
- 1.10 Drug Store, Eating Place, and Grocery Store Beer Licenses
- 1.11 Farm Winery and Winery Licenses
- 1.12 Hotel Beer, Wine, and Liquor Licenses
- 1.13 Industrial Alcohol Manufacturer's Permits
- 1.14 Liquor Store License
- 1.15 On-Premises Liquor Licenses
- 1.16 Plenary Permit (Miscellaneous-Annual)
- 1.17 Summer Beer and Liquor Licenses
- 1.18 Tavern/Restaurant and Restaurant Wine Licenses
- 1.19 Vessel Beer and Liquor Licenses
- 1.20 Warehouse Permit
- 1.21 Wine Store License
- 1.22 Winter Beer and Liquor Licenses
- 1.23 Wholesale Beer, Wine, and Liquor Licenses

ALCOHOLISM AND SUBSTANCE ABUSE SERVICES, OFFICE OF

1.00 Facilities, construction, rehabilitation, expansion, or demolition or the funding of such activities.
2.00 Permit and approval programs:
- 2.01 Certificate of approval (Substance Abuse Services Program)

3.00 Permit and approval:
- 3.01 Letter Approval for Certificate of Need
- 3.02 Operating Certificate (Alcoholism Facility)
- 3.03 Operating Certificate (Community Residence)
- 3.04 Operating Certificate (Outpatient Facility)
- 3.05 Operating Certificate (Sobering-Up Station)

ARTS, COUNCIL ON THE

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
2.00 Architecture and environmental arts program.

CHILDREN AND FAMILY SERVICES, OFFICE OF

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
2.00 Bureau of Housing and Shelter Services/Homeless Housing and Assistance Program.
3.00 Permit and approval programs:
- 3.01 Certificate of Incorporation (Adult Residential Care Facilities)
- 3.02 Operating Certificate (Children's Services)
- 3.03 Operating Certificate (Enriched Housing Program)
- 3.04 Operating Certificate (Home for Adults)
- 3.05 Operating Certificate (Proprietary Home)
- 3.06 Operating Certificate (Public Home)
- 3.07 Operating Certificate (Special Care Home)
- 3.08 Permit to Operate a Day Care Center

CORRECTIONS AND COMMUNITY SUPERVISION, DEPARTMENT OF

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

DORMITORY AUTHORITY OF THE STATE OF NEW YORK

1.00 Financing of higher education and health care facilities.
2.00 Planning and design services assistance program.

EDUCATION DEPARTMENT

1.00 Facilities construction, rehabilitation, expansion, demolition or the funding of such activities.
2.00 Permit and approval programs:
- 2.01 Certification of Incorporation (Regents Charter)
- 2.02 Private Business School Registration
- 2.03 Private School License
- 2.04 Registered Manufacturer of Drugs and/or Devices
- 2.05 Registered Pharmacy Certificate
- 2.06 Registered Wholesale of Drugs and/or Devices
- 2.07 Registered Wholesaler-Re-packer of Drugs and/or Devices
- 2.08 Storekeeper's Certificate

3.00 Administration of Article 5, Section 233 of the Education Law regarding the removal of archaeological and paleontological objects under the waters of the State.

EMERGENCY MANAGEMENT, OFFICE OF

- hazard identification,
- loss prevention, planning, training, operational response to emergencies,

- technical support, and disaster recovery assistance.

EMPIRE STATE DEVELOPMENT

1.00 Preparation or revision of statewide or specific plans to address State economic development needs.

2.00 Allocation of the state tax-free bonding reserve.

ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

1.00 Issuance of revenue bonds to finance pollution abatement modifications in power-generation facilities and various energy projects.

2.00 New Construction Program – provide assistance to incorporate energy-efficiency measures into the design, construction and operation of new and substantially renovated buildings.

3.00 Existing Facilities Program – offers incentives for a variety of energy projects

ENVIRONMENTAL CONSERVATION, DEPARTMENT OF

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of lands under the jurisdiction of the Department.

2.00 Classification of Waters Program; classification of land areas under the Clean Air Act.

3.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

4.00 Financial assistance/grant programs:

- 4.01 Capital projects for limiting air pollution
- 4.02 Cleanup of toxic waste dumps
- 4.03 Flood control, beach erosion and other water resource projects
- 4.04 Operating aid to municipal wastewater treatment facilities
- 4.05 Resource recovery and solid waste management capital projects
- 4.06 Wastewater treatment facilities
- 4.07 State Wildlife Grants

5.00 Planning, construction, rehabilitation, expansion, demolition, or the funding of such activities and/or projects funded through the Environmental Protection Fund (Environmental Protection Act of 1993) or Clean Water/Clean Air Bond Act of 1996.

6.00 Funding assistance for issuance of permits and other regulatory activities (New York City only).

7.00 Implementation of the Environmental Quality Bond Act of 1972, including:

(a) Water Quality Improvement Projects

(b) Land Preservation and Improvement Projects including Wetland Preservation and Restoration Projects, Unique Area Preservation Projects, Metropolitan Parks Projects, Open Space Preservation Projects and Waterways Projects.

8.00 Marine Finfish and Shellfish Programs.

9.00 New York Harbor Drift Removal Project.

10.00 Permit and approval programs:

<u>Air Resources</u>

- 10.01 Certificate of Approval for Air Pollution Episode Action Plan
- 10.02 Certificate of Compliance for Tax Relief - Air Pollution Control Facility
- 10.03 Certificate to Operate: Stationary Combustion Installation; Incinerator; Process, Exhaust or Ventilation System
- 10.04 Permit for Burial of Radioactive Material
- 10.05 Permit for Discharge of Radioactive Material to Sanitary Sewer
- 10.06 Permit for Restricted Burning
- 10.07 Permit to Construct: a Stationary Combustion Installation; Incinerator; Indirect Source of Air Contamination; Process, Exhaust or Ventilation System

<u>Construction Management</u>

- 10.08 Approval of Plans and Specifications for Wastewater Treatment Facilities

Fish and Wildlife

10.09 Certificate to Possess and Sell Hatchery Trout in New York State
10.10 Commercial Inland Fisheries Licenses
10.11 Fishing Preserve License
10.12 Fur Breeder's License
10.13 Game Dealer's License
10.14 Licenses to Breed Domestic Game Animals
10.15 License to Possess and Sell Live Game
10.16 Permit to Import, Transport and/or Export under Section 184.1 (11-0511)
10.17 Permit to Raise and Sell Trout
10.18 Private Bass Hatchery Permit
10.19 Shooting Preserve Licenses
10.20 Taxidermy License
10.21 Permit - Article 15, (Protection of Water) - Dredge or Deposit Material in a Waterway
10.22 Permit - Article 15, (Protection of Water) - Stream Bed or Bank Disturbances
10.23 Permit - Article 24, (Freshwater Wetlands)

Hazardous Substances

10.24 Permit to Use Chemicals for the Control or Elimination of Aquatic Insects
10.25 Permit to Use Chemicals for the Control or Elimination of Aquatic Vegetation
10.26 Permit to Use Chemicals for the Control or Extermination of Undesirable Fish

Lands and Forest

10.27 Certificate of Environmental Safety (Liquid Natural Gas and Liquid Petroleum Gas)
10.28 Floating Object Permit
10.29 Marine Regatta Permit
10.30 Navigation Aid Permit

Marine Resources

10.31 Digger's Permit (Shellfish)
10.32 License of Menhaden Fishing Vessel
10.33 License for Non-Resident Food Fishing Vessel
10.34 Non-Resident Lobster Permit
10.35 Marine Hatchery and/or Off-Bottom Culture Shellfish Permits
10.36 Permits to Take Blue-Claw Crabs
10.37 Permit to Use Pond or Trap Net
10.38 Resident Commercial Lobster Permit
10.39 Shellfish Bed Permit
10.40 Shellfish Shipper's Permits
10.41 Special Permit to Take Surf Clams from Waters other than the Atlantic Ocean
10.42 Permit - Article 25, (Tidal Wetlands)

Mineral Resources

10.43 Mining Permit
10.44 Permit to Plug and Abandon (a non-commercial, oil, gas or solution mining well)
10.45 Underground Storage Permit (Gas)
10.46 Well Drilling Permit (Oil, Gas, and Solution Salt Mining)

Solid Wastes

10.47 Permit to Construct and/or Operate a Solid Waste Management Facility
10.48 Septic Tank Cleaner and Industrial Waste Collector Permit

Water Resources

10.49 Approval of Plans for Wastewater Disposal Systems
10.50 Certificate of Approval of Realty Subdivision Plans
10.51 Certificate of Compliance (Industrial Wastewater Treatment Facility)

10.52 Letters of Certification for Major Onshore Petroleum Facility Oil Spill Prevention and Control Plan
10.53 Permit - Article 36, (Construction in Flood Hazard Areas)
10.54 Permit for State Agency Activities for Development in Coastal Erosion Hazards Areas
10.55 State Pollutant Discharge Elimination System (SPDES) Permit
10.56 Approval - Drainage Improvement District
10.57 Approval - Water (Diversions for) Power
10.58 Approval of Well System and Permit to Operate
10.59 Permit - Article 15, (Protection of Water) - Dam
10.60 Permit - Article 15, Title 15 (Water Supply)
10.61 River Improvement District Approvals
10.62 River Regulatory District Approvals
10.63 Well Drilling Certificate of Registration
10.64 401 Water Quality Certification

11.00 Preparation and revision of Air Pollution State Implementation Plan.
12.00 Preparation and revision of Continuous Executive Program Plan.
13.00 Preparation and revision of Statewide Environmental Plan.
14.00 Protection of Natural and Man-made Beauty Program.
15.00 Urban Fisheries Program.
16.00 Urban Forestry Program.
17.00 Urban Wildlife Program.

ENVIRONMENTAL FACILITIES CORPORATION

1.00 Financing program for pollution control facilities for industrial firms and small businesses.
2.00 Clean Vessel Assistance Program

FINANCIAL SERVICES, DEPARTMENT OF

1.00 Permit and approval programs:
1.01 Authorization Certificate (Bank Branch)
1.02 Authorization Certificate (Bank Change of Location)
1.03 Authorization Certificate (Bank Charter)
1.04 Authorization Certificate (Credit Union Change of Location)
1.05 Authorization Certificate (Credit Union Charter)
1.06 Authorization Certificate (Credit Union Station)
1.07 Authorization Certificate (Foreign Banking Corporation Change of Location)
1.08 Authorization Certificate (Foreign Banking Corporation Public Accommodations Office)
1.09 Authorization Certificate (Investment Company Branch)
1.10 Authorization Certificate (Investment Company Change of Location)
1.11 Authorization Certificate (Investment Company Charter)
1.12 Authorization Certificate (Licensed Lender Change of Location)
1.13 Authorization Certificate (Mutual Trust Company Charter)
1.14 Authorization Certificate (Private Banker Charter)
1.15 Authorization Certificate (Public Accommodation Office - Banks)
1.16 Authorization Certificate (Safe Deposit Company Branch)
1.17 Authorization Certificate (Safe Deposit Company Change of Location)
1.18 Authorization Certificate (Safe Deposit Company Charter)
1.19 Authorization Certificate (Savings Bank Charter)
1.20 Authorization Certificate (Savings Bank De Novo Branch Office)
1.21 Authorization Certificate (Savings Bank Public Accommodations Office)
1.22 Authorization Certificate (Savings and Loan Association Branch)
1.23 Authorization Certificate (Savings and Loan Association Change of Location)

1.24 Authorization Certificate (Savings and Loan Association Charter)
1.25 Authorization Certificate (Subsidiary Trust Company Charter)
1.26 Authorization Certificate (Trust Company Branch)
1.27 Authorization Certificate (Trust Company-Change of Location)
1.28 Authorization Certificate (Trust Company Charter)
1.29 Authorization Certificate (Trust Company Public Accommodations Office)
1.30 Authorization to Establish a Life Insurance Agency
1.31 License as a Licensed Lender
1.32 License for a Foreign Banking Corporation Branch

GENERAL SERVICES, OFFICE OF

1.00 Administration of the Public Lands Law for acquisition and disposition of lands, grants of land, grants of easement and issuance of licenses for land underwater, including for residential docks over 5,000 square feet and all commercial docks, issuance of licenses for removal of materials from lands under water, and oil and gas leases for exploration and development.
2.00 Administration of Article 4-B, Public Buildings Law, in regard to the protection and management of State historic and cultural properties and State uses of buildings of historic, architectural or cultural significance.
3.00 Facilities construction, rehabilitation, expansion, or demolition.
4.00 Administration of Article 5, Section 233, sub. 5 of the Education Law on removal of archaeological and paleontological objects under the waters of the State.
5.00 Administration of Article 3, Section 32 of the Navigation Law regarding location of structures in or on navigable waters.
6.00 Section 334 of the State Real Estate Law regarding subdivision of waterfront properties on navigable waters to include the location of riparian lines.

HEALTH, DEPARTMENT OF

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
2.00 Permit and approval programs:
2.01 Approval of Completed Works for Public Water Supply Improvements
2.02 Approval of Plans for Public Water Supply Improvements.
2.03 Certificate of Need (Health Related Facility - except Hospitals)
2.04 Certificate of Need (Hospitals)
2.05 Operating Certificate (Diagnostic and Treatment Center)
2.06 Operating Certificate (Health Related Facility)
2.07 Operating Certificate (Hospice)
2.08 Operating Certificate (Hospital)
2.09 Operating Certificate (Nursing Home)
2.10 Permit to Operate a Children's Overnight or Day Camp
2.11 Permit to Operate a Migrant Labor Camp
2.12 Permit to Operate as a Retail Frozen Dessert Manufacturer
2.13 Permit to Operate a Service Food Establishment
2.14 Permit to Operate a Temporary Residence/Mass Gathering
2.15 Permit to Operate or Maintain a Swimming Pool or Public Bathing Beach
2.16 Permit to Operate Sanitary Facilities for Realty Subdivisions
2.17 Shared Health Facility Registration Certificate

HOMES AND COMMUNITY RENEWAL, DIVISION OF (and its subsidiaries and affiliates)

1.00 Facilities construction, rehabilitation, expansion, or demolition.
2.00 Financial assistance/grant programs:

2.01 Federal Housing Assistance Payments Programs (Section 8 Programs)
2.02 Housing Development Fund Programs
2.03 Neighborhood Preservation Companies Program
2.04 Public Housing Programs
2.05 Rural Initiatives Grant Program
2.06 Rural Preservation Companies Program
2.07 Rural Rental Assistance Program
2.08 Special Needs Demonstration Projects
2.09 Urban Initiatives Grant Program
2.10 Urban Renewal Programs

3.00 Preparation and implementation of plans to address housing and community renewal needs.
4.00 Funding programs for the construction, rehabilitation, or expansion of facilities.
5.00 Affordable Housing Corporation

HUDSON RIVER VALLEY GREENWAY (regional agency)
1.00 Greenway Planning and Review
2.00 Greenway Compact Activities
3.00 Financial Assistance/Grants Program
4.00 Greenway Trail Activities

GREENWAY HERITAGE CONSERVANCY FOR THE HUDSON RIVER VALLEY
1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of lands under the jurisdiction of the Conservancy.
2.00 Financial assistance/grant programs
3.00 Model Greenway Program
4.00 Greenway Trail Activities

HUDSON RIVER PARK TRUST (promotes and expands public access to the Hudson River, to promote water-based recreation, and enhance the natural, cultural, and historic aspects of the river from Battery Place to West 59th Street in New York City)

INTERSTATE ENVIRONMENTAL COMMISSION (regional agency)
1.00 Coordinating interstate and region-wide water quality programs and enforcing the IEC's water quality regulations.
2.00 Coordinating interstate and region-wide air quality programs and taking the lead on region-wide air quality issues.
3.00 Providing technical assistance and support to its member States on both water quality and air quality issues.
4.00 Enhancing public and legislative awareness, and disseminating information on issues related to both water quality and air quality.

MENTAL HEALTH, OFFICE OF
1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
2.00 Permit and approval programs:
2.01 Operating Certificate (Community Residence)
2.02 Operating Certificate (Family Care Homes)
2.03 Operating Certificate (Inpatient Facility)
2.04 Operating Certificate (Outpatient Facility)

METROPOLITAN TRANSPORTATION AUTHORITY (regional agency)
1.0 Facilities construction, rehabilitation, expansion, or demolition, or the funding of such activities.

2.00 Increases in special fares for transportation services to public water-related recreation resources.

MILITARY AND NAVAL AFFAIRS, DIVISION OF

1.00 Preparation and implementation of the State Disaster Preparedness Plan.

NATURAL HERITAGE TRUST

1.00 Funding program for natural heritage institutions.

NEW YORK CITY TRANSIT AUTHORITY (regional agency)

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
2.00 Increases in special fares for transportation services to public water-related recreation resources.

NEW YORK STATE BRIDGE AUTHORITY (Hudson River regional agency)

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Authority.
2.00 Facilities construction, rehabilitation, expansion, or demolition.

NEW YORK STATE POWER AUTHORITY

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Authority.
2.00 Facilities construction, rehabilitation, expansion, or demolition.

PARKS, RECREATION AND HISTORIC PRESERVATION, OFFICE OF (including Regional State Park Commissions)

1.00 Acquisition, disposition, lease, grant of easement or other activities related to the management of land under the jurisdiction of the Office.
2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
3.00 Funding program for recreational boating, safety and enforcement.
4.00 Funding program for State and local historic preservation projects.
5.00 Land and Water Conservation Fund programs.
6.00 Nomination of properties to the Federal and/or State Register of Historic Places.
7.00 Permit and approval programs:
- 7.01 Floating Objects Permit
- 7.02 Marine Regatta Permit
- 7.03 Navigation Aide Permit
- 7.04 Posting of Signs Outside State Parks

8.00 Preparation and revision of the Statewide Comprehensive Outdoor Recreation Plan and the Statewide Comprehensive Historic Preservation Plan and other plans for public access, recreation, historic preservation or related purposes.
9.00 Recreation services program.
10.00 Urban Cultural Parks Program.
11.00 Planning, construction, rehabilitation, expansion, demolition, or the funding of such activities and/or projects funded through the Environmental Protection Fund (Environmental Protection Act of 1993) or Clean Water/Clean Air Bond Act of 1996.

PEOPLE WITH DEVELOPMENTAL DISABILITIES, OFFICE FOR

1.00 Facilities construction, rehabilitation, expansion, or demolition, or the funding of such activities.
2.00 Permit and approval programs:
- 2.01 Establishment and Construction Prior Approval
- 2.02 Operating Certificate Community Residence

2.03 Outpatient Facility Operating Certificate

PORT AUTHORITY OF NEW YORK AND NEW JERSEY (regional agency)

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Commission.
2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.
3.00 Waterfront development project activities.

SCIENCE AND TECHNOLOGY FOUNDATION

1.00 Corporation for Innovation Development Program.
2.00 Center for Advanced Technology Program.

STATE, DEPARTMENT OF

1.00
2.00 Coastal Management Program.
  2.10 Planning, construction, rehabilitation, expansion, demolition, or the funding of such activities and/or projects funded through the Environmental Protection Fund (Environmental Protection Act of 1993) or Clean Water/Clean Air Bond Act of 1996.
3.00 Community Services Block Grant Program.
4.00 Permit and approval programs:
  4.01 Billiard Room License
  4.02 Cemetery Operator
  4.03 Uniform Fire Prevention and Building Code

STATE UNIVERSITY CONSTRUCTION FUND

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

STATE UNIVERSITY OF NEW YORK

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the University.
2.00 Facilities construction, rehabilitation, expansion, or demolition or the funding of such activities.

TRANSPORTATION, DEPARTMENT OF

1.00 Acquisition, disposition, lease, grant of easement and other activities related to the management of land under the jurisdiction of the Department.
2.00 Construction, rehabilitation, expansion, or demolition of facilities, including, but not limited to:
  (a) Highways and parkways
  (b) Bridges on the State highways system
  (c) Highway and parkway maintenance facilities
  (d) Rail facilities
3.00 Financial assistance/grant programs:
  3.01 Funding programs for construction/reconstruction and reconditioning/preservation of municipal streets and highways (excluding routine maintenance and minor rehabilitation)
  3.02 Funding programs for development of the ports of Albany, Buffalo, Oswego, Ogdensburg, and New York
  3.03 Funding programs for rehabilitation and replacement of municipal bridges
  3.04 Subsidies program for marginal branchlines abandoned by Conrail
  3.05 Subsidies program for passenger rail service
  3.06 Financial assistance to local governments for transportation enhancement activities.
4.00 Permits and approval programs:
  4.01 Approval of applications for airport improvements (construction projects)

4.02 Approval of municipal applications for Section 18 Rural and Small Urban Transit Assistance Grants (construction projects)
4.03 Approval of municipal or regional transportation authority applications for funds for design, construction and rehabilitation of omnibus maintenance and storage facilities
4.04 Approval of municipal or regional transportation authority applications for funds for design and construction of rapid transit facilities
4.05 Certificate of Convenience and Necessity to Operate a Railroad
4.06 Highway Work Permits
4.07 License to Operate Major Petroleum Facilities
4.08 Outdoor Advertising Permit (for off-premises advertising signs adjacent to interstate and primary highway)
4.09 Real Property Division Permit for Use of State-Owned Property

5.00 Preparation or revision of the Statewide Master Plan for Transportation and sub-area or special plans and studies related to the transportation needs of the State.

6.00 Water Operation and Maintenance Program--Activities related to the containment of petroleum spills and development of an emergency oil-spill control network.

YOUTH, DIVISION OF

1.00 Facilities construction, rehabilitation, expansion, or demolition or the funding or approval of such activities.

2. FEDERAL ACTIVITIES AFFECTING LAND AND WATER USES AND NATURAL RESOURCES IN THE COASTAL ZONE OF NEW YORK STATE

I. ACTIVITIES UNDERTAKEN DIRECTLY BY OR ON BEHALF OF FEDERAL AGENCIES

The following activities, undertaken directly by or on behalf of the identified federal agencies, are subject to the consistency provision of the Coastal Zone Management Act, its implementing regulations in 15 CFR Part 930, Subpart C, and the New York Coastal Management Program.

DEPARTMENT OF COMMERCE

National Marine Fisheries Services

1.00 Fisheries Management Plans

DEPARTMENT OF DEFENSE

Army Corps of Engineers

1.00 Proposed authorizations for dredging, channel improvements, break-waters, other navigational works, or erosion control structures, beach replenishment, dams or flood control works, ice management practices and activities, and other projects with potential to impact coastal lands and waters.
2.00 Land acquisition for spoil disposal or other purposes.
3.00 Selection of open water disposal sites.

Army, Navy and Air Force

4.00 Location, design, and acquisition of new or expanded defense installations (active or reserve status, including associated housing, transportation or other facilities).
5.00 Plans, procedures and facilities for landing or storage use zones.
6.00 Establishment of impact, compatibility or restricted use zones.

DEPARTMENT OF ENERGY

1.00 Prohibition orders.

GENERAL SERVICES ADMINISTRATION

1.00 Acquisition, location and design of proposed Federal Government property or buildings, whether leased or owned by the Federal Government.

DEPARTMENT OF INTERIOR

Fish and Wildlife Service

1.00 Management of National Wildlife refuges and proposed acquisitions.

Bureau of Ocean Energy Management Regulation and Enforcement

2.00 OCS lease sale activities including tract selection, lease sale stipulations, etc.

National Park Service

3.00 National Park and Seashore management and proposed acquisitions.

DEPARTMENT OF TRANSPORTATION

Amtrak, Conrail

1.00 Expansions, curtailments, new construction, upgrading or abandonments or railroad facilities or services, in or affecting the State's coastal area.

Federal Aviation Administration

2.00 Location and design, construction, maintenance, and demolition of Federal aids to air navigation.

Federal Highway Administration

3.00 Highway construction.

St. Lawrence Seaway Development Corporation

4.00 Acquisition, location, design, improvement and construction of new and existing facilities for the operation of the Seaway, including traffic safety, traffic control and length of navigation season.

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

1.00 Location and design, construction or enlargement of Coast Guard stations, bases, and lighthouses.

2.00 Location, placement or removal of navigation devices which are not part of the routine operations under the Aids to Navigation Program (ATON).

3.00 Expansion, abandonment, designation or anchorages, lightening areas or shipping lanes and ice management practices and activities.

II. FEDERAL LICENSES, PERMITS AND OTHER FORMS OF APPROVAL OR AUTHORIZATION

The following activities, requiring permits, or other forms of authorization or approval from federal agencies, are subject to the consistency provisions of the Coastal Zone Management Act, its implementing regulations in 15 CFR Part 930, Subpart D, and the New York Coastal Management Program.

DEPARTMENT OF DEFENSE

Army Corps of Engineers

1.00 Construction of dams, dikes or ditches across navigable waters, or obstruction or alteration of navigable waters required under Sections 9 and 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403).

2.00 Establishment of harbor lines pursuant to Section 11 of the Rivers and Harbors Act of 1899 (33 U.S.C. 404, 405).

3.00 Occupation of seawall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the U.S. pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).

4.00 Approval of plans for improvements made at private expense under Corps supervision pursuant to the Rivers and Harbors Act of 1902 (33 U.S.C. 565).

5.00 Disposal of dredged spoils into the waters of the U.S., pursuant to the Clean Water Act, Section 404, (33 U.S.C. 1344).

6.00 All actions for which permits are required pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

7.00 Construction of artificial islands and fixed structures in Long Island Sound pursuant to Section 4(f) of the River and Harbors Act of 1912 (33 U.S.C.).

DEPARTMENT OF ENERGY

Economic Regulatory Commission

1.00 Regulation of gas pipelines, and licensing of import or export of natural gas pursuant to the Natural Gas Act (15 U.S.C. 717) and the Energy Reorganization Act of 1974.

2.00 Exemptions from prohibition orders.

Federal Energy Regulatory Commission

3.00 Licenses for non-Federal hydroelectric projects and primary transmission lines under Sections 3(11), 4(e) and 15 of the Federal Power Act (16 U.S.C. 796(11), 797(11) and 808).

4.00 Orders for interconnection of electric transmission facilities under Section 202(b) of the Federal Power Act (15 U.S.C. 824a(b)).

5.00 Certificates for the construction and operation of interstate natural gas pipeline facilities, including both pipelines and terminal facilities under Section 7(c) of the Natural Gas Act (15 U.S.C. 717f(c)).

6.00 Permission and approval for the abandonment of natural gas pipeline facilities under Section 7(b) of the Natural Gas Act (15 U.S.C. 717f(b)).

ENVIRONMENTAL PROTECTION AGENCY

1.00 NPDES permits and other permits for Federal installations, discharges in contiguous zones and ocean waters, sludge runoff and aquaculture permits pursuant to Section 401, 402, 403, 405, and 318 of the Federal Water Pollution Control Act of 1972 (33 U.S.C. 1341, 1342, 1343, and 1328).

2.00 Permits pursuant to the Resources Recovery and Conservation Act of 1976.

3.00 Permits pursuant to the underground injection control program under Section 1424 of the Safe Water Drinking Water Act (42 U.S.C. 300h-c).

4.00 Permits pursuant to the Clean Air Act of 1976 (42 U.S.C. 1857).

DEPARTMENT OF INTERIOR

Fish and Wildlife Services

1.00 Endangered species permits pursuant to the Endangered Species Act (16 U.S.C. 153(a).

Bureau of Ocean Energy Management Regulation and Enforcement

2.00 Permits to drill, rights of use and easements for construction and maintenance of pipelines, gathering and flow lines and associated structures pursuant to 43 U.S.C. 1334, exploration and development plans, and any other permits or authorizations granted for activities described in detail in OCS exploration, development, and production plans.

3.00 Permits required for pipelines crossing federal lands, including OCS lands, and associated activities pursuant to the OCS Lands Act (43 U.S.C. 1334) and 43 U.S.C. 931 (c) and 20 U.S.C. 185.

SURFACE TRANSPORTATION BOARD (former Interstate Commerce Commission)

1.00 Authority to abandon railway lines (to the extent that the abandonment involves removal of trackage and disposition of right-of-way); authority to construct railroads; authority to construct coal slurry pipelines.

NUCLEAR REGULATORY COMMISSION

1.00 Licensing and certification of the siting, construction and operation of nuclear power plans pursuant to Atomic Energy Act of 1954, Title II of the Energy Reorganization Act of 1974 and the National Environmental Policy Act of 1969.

DEPARTMENT OF TRANSPORTATION

1.0 Construction or modification of bridges, causeways or pipelines over navigable waters pursuant to 49 USC 1455

2.0 Permits for Deepwater Ports pursuant to the Deepwater Ports Act of 1974 (33USC 1501)

Federal Aviation Administration

3.00 Permits and licenses for construction, operation or alteration of airports.

III. FEDERAL FINANCIAL ASSISTANCE TO STATE AND LOCAL GOVERNMENTS

The following activities, involving financial assistance from federal agencies to state and local governments, are subject to the consistency provisions of the Coastal Zone Management Act, its implementing regulations in 15 CFR Part 930, Subpart F, and the New York State Coastal Management Program. When these activities involve financial assistance for entities other than State and local government, the activities are subject to the consistency provisions of 15 CFR Part 930, Subpart C.

DEPARTMENT OF AGRICULTURE

10.068 Rural Clean Water Program
10.409 Irrigation, Drainage, and Other Soil and Water Conservation Loans
10.410 Low to Moderate Income Housing Loans
10.411 Rural Housing Site Loans
10.413 Recreation Facility Loans
10.414 Resource Conservation and Development Loans
10.415 Rural Renting Housing Loans
10.416 Soil and Water Loans
10.418 Water and Waste Disposal Systems for Rural Communities
10.419 Watershed Protection and Flood Prevention Loans
10.422 Business and Industrial Loans
10.423 Community Facilities Loans
10.424 Industrial Development Grants
10.426 Area Development Assistance Planning Grants
10.429 Above Moderate Income Housing Loans
10.430 Energy Impacted Area Development Assistance Program
10.901 Resource Conservation and Development
10.902 Soil and Water Conservation
10.904 Watershed Protection and Flood Prevention
10.906 River Basin Surveys and Investigations

DEPARTMENT OF COMMERCE

11.300 Economic Development - Grants and Loans for Public Works and Development Facilities

11.301 Economic Development - Business Development Assistance
11.302 Economic Development - Support for Planning Organizations
11.304 Economic Development - State and Local Economic Development Planning
11.305 Economic Development - State and Local Economic Development Planning
11.307 Special Economic Development and Adjustment Assistance Program - Long Term Economic Deterioration
11.308 Grants to States for Supplemental and Basic Funding of Titles I, II, III, IV, and V Activities
11.405 Anadromous and Great Lakes Fisheries Conservation
11.407 Commercial Fisheries Research and Development
11.417 Sea Grant Support
11.427 Fisheries Development and Utilization - Research and Demonstration Grants and Cooperative Agreements Program
11.501 Development and Promotion of Ports and Inter-modal Transportation
11.509 Development and Promotion of Domestic Waterborne Transport Systems

COMMUNITY SERVICES ADMINISTRATION

49.002 Community Action
49.011 Community Economic Development
49.013 State Economic Opportunity Offices
49.017 Rural Development Loan Fund
49.018 Housing and Community Development (Rural Housing)

ENVIRONMENTAL PROTECTION AGENCY

66.001 Air Pollution Control Program Grants
66.418 Construction Grants for Wastewater Treatment Works
66.426 Water Pollution Control - State and Areawide Water Quality Management Planning Agency
66.451 Solid and Hazardous Waste Management Program Support Grants
66.452 Solid Waste Management Demonstration Grants
66.600 Environmental Protection Consolidated Grants Program Support Comprehensive Environmental Response, Compensation and Liability (Super Fund)

GENERAL SERVICES ADMINISTRATION

39.002 Disposal of Federal Surplus Real Property

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

14.112 Mortgage Insurance - Construction or Substantial Rehabilitation of Condominium Projects
14.115 Mortgage Insurance - Development of Sales Type Cooperative Projects
14.117 Mortgage Insurance - Homes
14.124 Mortgage Insurance - Investor Sponsored Cooperative Housing
14.125 Mortgage Insurance - Land Development and New Communities
14.126 Mortgage Insurance - Management Type Cooperative Projects
14.127 Mortgage Insurance - Mobile Home Parks
14.218 Community Development Block Grants/Entitlement Grants
14.219 Community Development Block Grants/Small Cities Program
14.221 Urban Development Action Grants
14.223 Indian Community Development Block Grant Program

DEPARTMENT OF INTERIOR

15.400 Outdoor Recreation - Acquisition, Development and Planning
15.402 Outdoor Recreation - Technical Assistance
15.403 Disposal of Federal Surplus Real Property for Parks, Recreation, and Historic Monuments

15.411 Historic Preservation Grants-in-Aid
15.417 Urban Park and Recreation Recovery Program
15.600 Anadromous Fish Conservation
15.605 Fish Restoration
15.611 Wildlife Restoration
15.613 Marine Mammal Grant Program
15.802 Minerals Discovery Loan Program
15.950 National Water Research and Development Program
15.951 Water Resources Research and Technology - Assistance to State Institutes
15.952 Water Research and Technology - Matching Funds to State Institutes

SMALL BUSINESS ADMINISTRATION

59.012 Small Business Loans
59.013 State and Local Development Company Loans
59.024 Water Pollution Control Loans
59.025 Air Pollution Control Loans
59.031 Small Business Pollution Control Financing Guarantee

DEPARTMENT OF TRANSPORTATION

20.102 Airport Development Aid Program
20.103 Airport Planning Grant Program
20.205 Highway Research, Planning, and Construction
20.309 Railroad Rehabilitation and Improvement - Guarantee of Obligations
20.310 Railroad Rehabilitation and Improvement - Redeemable Preference Shares
20.506 Urban Mass Transportation Demonstration Grants
20.509 Public Transportation for Rural and Small Urban Areas

Note: Numbers refer to the Catalog of Federal Domestic Assistance Programs, 1980 and its two subsequent updates.

APPENDIX B:
LOCAL STATE AND FEDERAL REGULATIONS RELATED TO THE IMPLEMENTATION OF THE LWRP

B. LOCAL AND STATE REGULATIONS RELATED TO THE IMPLEMENTATION OF THE WRP (BY POLICY)

POLICY 1: RESIDENTIAL AND COMMERCIAL REDEVELOPMENT

I. LOCAL REGULATIONS

Uniform Land Use Review Procedure, NYCC Chapter 8, 197-C
NYC Zoning Resolution, NYCC Chapter 8, 200
NYC Building Code, NYC Administrative Code, Title 27
Board of Standards and Appeals, NYCC Chapter 27
CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91
Landmark Preservation Commission, NYCC Chapter 74

II. STATE REGULATIONS

Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42)
State Environmental Quality Review Act (ECL Article 8)
Public Building Law (Article 4-B)
New York State Urban Development Corporation Act, Unconsolidated Law (§6251)
Construction of Projects Over State-owned Land Under Water (Chapter 791 of the Laws of 1992)
Environmental Protection Act (ECL Article 54)
Implementation of the Clean Water/Clean Air Bond Act of 1996 (ECL Article 56)
New York State Land Use Element
Transportation Law, Article 2, Sections 14 and 15.

POLICY 2: MARITIME AND INDUSTRIAL DEVELOPMENT

I. LOCAL REGULATIONS

Uniform Land Use Review Procedure, NYCC Chapter 8, 197-C
NYC Zoning Resolution, NYCC Chapter 8, 200
NYC Building Code, NYC Administrative Code, Title 27
Board of Standards and Appeals, NYCC Chapter 27
CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91
Landmark Preservation Commission, NYCC Chapter 74
NYC Industrial Business Zones, NYC Administrative Code 22-621 - 22-622
Local law on bridge heights, NYCC Chapter 26, Section 643
New York City Air Pollution Control, NYC Administrative Code, Title 24, Chapter 1
Noise Control Law, NYC Administrative Code, Title 24, Chapter 2
Commercial Licensing (Chapter 2 of Title 6, RCNY: Department of Consumer Affairs Licenses)
Zoning Performance Standards, Z.R. 42-00
Open Use Enclosures (Chapter 30, Section 1 of Title 1 of the Rules of the City of New York)

II. STATE REGULATIONS

Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42)
State Environmental Quality Review Act (ECL Article 8)
New York State Urban Development Corporation Act, Unconsolidated Law (§6251).
Construction of Projects Over State-owned Land Under Water (Chapter 791, Laws of 1992)
Environmental Protection Act (ECL Article 54)
Implementation of the Clean Water/Clean Air Bond Act of 1996 (ECL Article 56)
Transportation Law, Article 2, Sections 14 and 15.
New York State Land Use Element
Energy Law (ECL Article 6)
Siting of Major Electric Generating Facilities, Public Service Law (Article X)
Liquefied Natural and Petroleum Gas (ECL Article 23, Title 17)
Water Resources Law (ECL Article 15)
Tidal Wetlands Act (ECL Article 25)
Freshwater Wetlands Act (ECL Article 24)

Oil Spill Prevention, Control and Compensation, Navigation Law (Article 12, Section 170 et. seq.)
State Pollutant Discharge Elimination System (ECL Article 27)

POLICY 3: USE OF THE WATERWAYS

I. LOCAL REGULATIONS

Waterfront Terminals, NYC Administrative Code, Title 22
Navigable waters; fouling; obstructing, NYC Administrative Code, 22-112

II. STATE REGULATIONS

Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42).
State Environmental Quality Review Act (ECL Article 8).
Acquisition-Parks and Recreation Law (3.09)
Environmental Conservation Law (3-0305)
Highway Law §22
Access Road, Highway Law §10 (37)
Abandoned Railway Acquisition, Transportation Law (§18)
Siting of Energy Facilities, Public Service Law (Article VII and X) and Commission Opinion 72-3, case #26108
Fish and Wildlife Management Act (ECL Article II, Title 5)
State Comprehensive Recreation Plan, Parks and Recreation Law (§3.15)
Parks and Recreation Law, §3.09 (7-a)
Environmental Protection Act (ECL Article 54)
Implementation of the Clean Water/Clean Air Bond Act of 1996 (ECL Article 56)
Construction of Projects Over State-owned Land Under Water (Chapter 791, Laws of 1992)
Plan for an Urban Cultural Park System; Parks and Recreation Law (Section 3.21)
Harbors of Refuge, Navigation Law (Article 11, Section 141)
Local Marina Facilities, Navigation Law (Article 11, Section 142)
State Marina Facilities, Navigation Law (Article 11, Section 143)
Hudson River Park Trust Act (Chapter 592, S. 7845)
New York-New Jersey Port Authority Compact of 1921

POLICY 4: ECOLOGICAL RESOURCES

I. LOCAL REGULATIONS

CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91
NYC Sustainability Plan, NYCC Chapter 1, Section 20
NYC Comprehensive Wetlands Study and Protection Strategy, NYC Administrative Code 24-528
Watershed protection plan for Jamaica bay, NYC Administrative Code 24-527
NYC DPR - NYC Administrative Code, Title 18
Department of Environmental Protection, NYCC, Chapter 57
Forever Wild Program, NYC DPR

II. STATE REGULATIONS

State Environmental Quality Review Act, Environment Conservation Law (Article 8)
Tidal Wetlands Act (ECL Article 24)
Freshwater Wetland Act (ECL Article 24)
Stream Protection Act (ECL Article 15, Title 5)
Wild, Scenic and Recreational Rivers System (ECL Article 15, Title 27)
Fish and Wildlife Management Practices Cooperative Program (ECL Article 11-0501)
New York State Park Preserve System, Parks and Recreation Law (Article 20)
State Nature and Historical Preserve Trust (ECL Article 45)
Implementation of Environmental Quality Bond Act of 1972 (ECL Article 51)
Construction of Projects Over State-owned Land Under Water (Chapter 791, Laws of 1992)
Environmental Protection Act (ECL Article 54)
Implementation of the Clean Water/Clean Air Bond Act of 1996 (ECL Article 56)

Waterfront Revitalization of Coastal Areas and Inland Waterways, Section 923 of Article 42 of the Executive Law
General Powers and Duties of the Department of Environmental Conservation (ECL Article 11, Title 3)
Other State Acquisition Powers, Parks Recreation Law (Section 3.09)
Urban Fisheries Program (ECL Article 11)
Urban Wildlife Program (ECL Article 11)
Fish and Wildlife Management Practices Cooperative Program (ECL Article 11-0501)
Acquisition of Reforestation Areas (ECL 9-0501)
NYS Open Space Plan (ECL § 49-0207)

POLICY 5

I. LOCAL REGULATIONS: WATER QUALITY

CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91
Sewage disposal to protect water supply, NYC Administrative Code 24-501
NYC Building Code, NYC Administrative Code, Title 27
DEP Green Infrastructure Plan, NYC Administrative Code 24-526
Industrial Pretreatment Program (IPP) Chapter 19 of Title 15, RCNY: Use of Public Sewers, (ADC Title 24-523 and 524, RCNY Title 15)
Emergency Spill Response Unit - Chapter 19 of Title 15, Rules of the City of New York: Use of Public Sewers, (ADC Title 24-523 and 524, RCNY Title 15)
Cross Connection Control - Chapter 20 of Title 15, Rules of the City of New York
Best Management Practices for Non-Residential Direct and Indirect Discharges of Grease to the Public Sewer System. Chapter 19, Section 11 of Title 15 of the Rules of the City of New York
Navigable waters; fouling; obstructing (NYC Administrative Code 22-112)

II. STATE REGULATIONS

Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42) Section 919
State Environmental Quality Review Act (ECL Article 18)
Coastal Erosion Hazard Areas Act (ECL Article 34)
Public Lands Law (Article 2)
Protection of Waters Act (ECL Article 15)
Tidal Wetlands Act (ECL Article 25)
Freshwater Wetlands Act (ECL Article 24)
Environmental Protection Act (ECL Article 54)
Construction of Projects Over State-owned Land Under Water (Chapter 791, Laws of 1992)
Section 923 of Article 42 of the Executive Law (Waterfront Revitalization of Coastal Areas and Inland Waterways)
State Pollutant Discharge Elimination System (ECL Article 17, Title 8)
Industrial Hazardous Waste Management (ECL Article 27, Title 9)
Substances Hazardous to the Environment, Environmental Conservation
State Certification of Public Sewage Treatment Plant Operators (ECL Article 3-0301), Public Health Law (Section 225)
Classification of Waters and Adoption of Standards, ECL (Article 17, Title 3)
Construction and Operation Grants (ECL Article 17, Title 9)
Implementation of the Clean Water/Clean Air Bond Act of 1996 (ECL Article 56)
Agreement of a Five Year Water Quality Management Program
State "208" Water Quality Management Program
Waterfront and Coastal Resources Act, Executive Law (Article 42)
Sections 33-c and 33-e of the Navigation Law
Phosphate Limits (ECL Article 35)
Realty Subdivision Approval (ECL Article 17, Title 15)
Soil and Water Conservation District Law (Section 9)
Thermal Discharge Regulation (ECL Article 17, Title 3; 6 NYCRR, Part 704)
Control of Pollution Injurious to Fish/Shell-fish (ECL Article 13-0345 and 17-0503)

Cross Connection Control State Sanitary Code, Part 5 Section 5-1.31

POLICY 6: FLOODING AND EROSION

I. LOCAL REGULATIONS

General Limitations on Occupancy and Construction within Special Flood Hazard Areas (§27-316 and §27:317 New York City Administrative Code, Title 28, Article 10)
NYC Office of Emergency Management Coastal Storm Plan, NYC Administrative Code 30-102
NYC Sustainability Plan, NYCC Chapter 1, Section 20
CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91
New York Panel on Climate Change, NPCC legislation (Intro No. 834-A)

II. STATE REGULATIONS

Coastal Erosion Hazard Areas Act (ECL Article 34)
Flood Plain Management Act (ECL Article 36)
Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42) Section 919
State Environmental Quality Review Act (ECL Article 18)
State and Local Natural and Man-made Disaster Preparedness Act, Executive Law (Article 2-B)
Environmental Protection Act (ECL Article 54)
Construction of Projects Over State-owned Land Under Water (Chapter 791 of the Laws of 1992)
Waterfront Revitalization of Coastal Areas and Inland Waterways, Section 923 of Article 42 of the Executive Law
Water Resources Act (ECL Article 15)

POLICY 7: HAZARDOUS MATERIALS

I. LOCAL REGULATIONS

Community Right to Know Law, (Risk Management Plan to the NYC Department of Environmental Protection), ADC Title 24-206 and 609
CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91
Non-Putrescible Solid Waste Transfer (Subchapter A of Chapter 4 of Title 16 of the Rules of the City of New York)
Industrial Pretreatment Program (IPP) (Chapter 19 of Title 15, Rules of the City of New York: Use of Public Sewers (ADC Title 24-523 and 524, RCNY Title 15))
Emergency Spill Response Unit (Chapter 19 of Title 15, Rules of the City of New York: Use of Public Sewers (ADC Title 24-523 and 524, RCNY Title 15))
Cross Connection Control (Chapter 20 of Title 15, Rules of the City of New York)
Best Management Practices for Non-Residential Direct and Indirect Discharges of Grease to the Public Sewer System (Chapter 19, Section 11 of Title 15 of the Rules of the City of New York)

II. STATE REGULATIONS

Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42)
State Environmental Quality Review Act (ECL Article 8)
Industrial Hazardous Waste Management Act (ECL 27-9)
Hazardous Waste (ECL 27 -0901 / 6 NYCRR Part 371)
Oil Storage (ECL 17-10/ 6 NYCRR 612-614)
State Pollutant Discharge Elimination System (ECL 17-8)
State Certification, Federal Water Pollution Control Act (Section 401)
Toxic Substance Monitoring Program (ECL 17-0105)
Substances Hazardous to the Environment (ECL 37-0901 and 0103 / 6 NYCRR Part 380)
Chemical Bulk Storage Regulations (ECL 37 and ECL 40/ 6NYCRR Parts 595-599)
Pesticides (ECL 33-0101 / 6 NYCRR Part 325.1)
Solid Waste Management Act (ECL 27-7 and 6 NYCRR Part 360-1.2)
Ocean and Great Lake Conservation Act (ECL 27-14)
Stream Pollution Prohibited (ECL 11-0503)
Hazardous Substances Bulk Storage (ECL Article 40)

Control of Pollution Injurious to Fish/Shellfish (ECL 13-0345 and 17-0503)
Oil Spill Prevention, Control and Compensation, Navigation Law, Article 12/6NYCRR Parts 610 and 611
Siting of Major Steam-Electric Generating Facilities (Public Service Law, Article VIII)
Sanitary Code, Public Health Law (Article 3)
Environmental Protection Act (ECL Article 54)
Liquefied Natural and Petroleum Gas (ECL 23-17)
Construction of Projects Over State-owned Land Under Water (Chapter 791, Laws of 1992)
Article X Siting of Major Electric Generating Facilities (Article X of the Public Service Law)
General Powers and Duties of the Department of Environmental Conservation, ECL 11-3
Penalties and Liabilities for Spills of Bulk Liquids (ECL 71-1941)
Transportation Law (Article 2, Section 14-F)
Implementation of the Clean Water/Clean Air Bond Act of 1996 (ECL Article 56)
Waterfront Revitalization of Coastal Areas and Inland Waterways, Section 923 of Article 42 of the Executive Law
Registration of Septic Tank Cleaners (ECL 27-3)
Freshwater and Tidal Wetlands Acts (ECL Articles 24 and 25)
Protection of Waters Law (ECL 15-5)
Coastal Erosion Hazard Areas (ECL Article 34)
Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42)
Air Pollution Control Act (ECL Article 19)
Public Health Law (Article 11)
Brownfield Clean Up (6NYCRR Part 375-6)

POLICY 8: PUBLIC ACCESS

I. LOCAL REGULATIONS

Waterfront Zoning, NYC Zoning Resolution, Article 6, Chapter 2
CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91
NYC DPR - NYC Administrative Code, Title 18
Uniform Land Use Review Procedure, NYCC Chapter 8, 197-C

II. STATE REGULATIONS

Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42)
State Environmental Quality Review Act (ECL Article 18)
Protection of Natural and Man-Made Beauty (ECL Article 49-0103.1 and 0.0314)
Wild, Scenic and Recreational Rivers System (ECL Article 15, Title 27)
New York State Historic Preservation Act of 1980, Parks & Recreation Law (Section 11.03, 11.09, 14); Public Building Law (Article 4-B); General Municipal Law (Article 5-K)
Parks and Recreation Law (Section 3.09)
State Nature and Historical Preserve Trust (ECL Article 45)
Construction of Projects Over State-owned Land Under Water (Chapter 791, Laws of 1992)
Waterfront Revitalization of Coastal Areas and Inland Waterways, Section 923 of Article 42 of the Executive Law
New York State Scenic Byways Program, Article XII-C of the Highway Law
State land acquisition (ECL 49-2)
Open Space Land Conservation Projects (ECL Article 54, Title 3)
Park, Recreation & Historic Preservation (ECL Article 54, Title 9)
Parkland alienation (Public Trust Doctrine)
Hudson River Park Trust Act (Chapter 592, S. 7845)

POLICY 9: SCENIC RESOURCES

I. LOCAL REGULATIONS

Waterfront Zoning, NYC Zoning Resolution, Article 6, Chapter 2
NYC Department of Parks and Recreation, NYC Administrative Code, Title 18
Clean Waterfront Plan, NYC Administrative Code 3-121

II. STATE REGULATIONS

Waterfront Revitalization and Coastal Resources Act, Executive Law (Article 42)
State Environmental Quality Review Act (ECL Article 18)
Protection of Natural and Man-Made Beauty (ECL Article 49-0103.1 and 0.0314)
Water Resources Act (ECL Article 15)
Wild, Scenic and Recreational Rivers System (ECL Article 15, Title 27)
Protection of Waters (ECL Article 15, Title 5)
Tidal Wetlands Act (ECL Article 25)
Freshwater Wetlands Act (ECL Article 24)
General Powers and Duties of the Department of Environmental Conservation (ECL Article 11, Title 3)
Implementation of Environmental Quality Bond Act of 1972 (ECL Article 51)
New York State Historic Preservation Act of 1980, Parks & Recreation Law (Section 11.03, 11.09, 14); Public Building Law (Article 4-B); General Municipal Law (Article 5-K)
Parks and Recreation Law (Section 3.09)
State Nature and Historical Preserve Trust (ECL Article 45)
Utility Transmission Facility Siting Act, Public Service Law (Article VII and Article X)
Environmental Protection Act (ECL Article 54)
Implementation of the Clean Water/Clean Air Bond Act of 1996 (ECL Article 56)
Construction of Projects Over State-owned Land Under Water (Chapter 791, Laws of 1992)
Waterfront Revitalization of Coastal Areas and Inland Waterways, Section 923 of Article 42 of the Executive Law
New York State Scenic Byways Program--Article XII-C of the Highway Law
State land acquisition (ECL 49-2)
Open Space Land Conservation Projects (ECL Article 54, Title 3)
Park, Recreation & Historic Preservation (ECL Article 54, Title 9)

POLICY 10: HISTORIC AND CULTURAL RESOURCES

I. LOCAL REGULATIONS

Landmarks Preservation and Historic Districts, New York City Administrative Code §25-303
CEQR, Title 62 of the Rules of the City of New York, Chapter 5 and Executive Order 91

II. STATE REGULATIONS

New York State Historic Preservation Act of 1980, Parks & Recreation Law (Section 11.03, 11.09, 14); Public Building Law (Article 4-B); General Municipal Law (Article 5-K)
Parks and Recreation Law (Section 3.09)
State Nature and Historical Preserve Trust (ECL Article 45)
Waterfront Revitalization and Coastal Resources Act; Executive Law (Article 42)
State Environmental Quality Review Act (ECL Article 13)
Environmental Protection Act (ECL Article 54)
Section 923 of Article 42 of the Executive Law (Waterfront Revitalization of Coastal Areas and Inland Waterways)
New York State Scenic Byways Program--Article XII-C of the Highway Law
Park, Recreation & Historic Preservation (ECL Article 54, Title 9)

APPENDIX C:
GUIDELINES FOR NOTIFICATION AND REVIEW OF FEDERAL AGENCY AND NEW YORK STATE AGENCY ACTIONS

C. GUIDELINES FOR NOTIFICATION AND REVIEW OF FEDERAL AGENCY AND NEW YORK STATE AGENCY ACTIONS[1]

Guidelines for Notification and Review of State Agency Actions Where Local Waterfront Revitalization Programs are in Effect

I. PURPOSES OF GUIDELINES

A. The Waterfront Revitalization of Coastal Areas and Inland Waterways Act (the Act) (Article 42 of the Executive Law) and the Department of State's regulations (19 NYCRR Part 600) require certain state agency actions identified by the Secretary of State to be consistent to the maximum extent practicable with the policies and purposes of approved Local Waterfront Revitalization Programs (LWRPs). These guidelines are intended to assist state agencies in meeting that statutory consistency obligation.

B. The Act also requires that state agencies provide timely notice to the affected local government whenever an identified action will occur within an area covered by an approved LWRP. These guidelines describe a process for complying with this notification requirement. They also provide procedures to assist local governments in carrying out their review responsibilities in a timely manner.

C. The Secretary of State is required by the Act to confer with state agencies and local governments when notified by a local government that a proposed state agency action may conflict with the policies and purposes of its approved LWRP. These guidelines establish a procedure for resolving such conflicts.

II. DEFINITIONS

A. **Action** means:

1. A "Type 1" or "Unlisted" action as defined by the State Environmental Quality Review Act (SEQRA);

2. Occurring within the boundaries of an approved LWRP; and

3. Being taken pursuant to a state agency program or activity which has been identified by the Secretary of State as likely to affect the policies and purposes of the LWRP.

B. **Consistent to the maximum extent practicable** means that an action will not substantially hinder the achievement of any of the policies and purposes of an approved LWRP and, whenever practicable, will advance one or more of such policies. If an action will substantially hinder any of the policies or purposes of an approved LWRP, then the action must be one:

1. For which no reasonable alternatives exist that would avoid or overcome any substantial hindrance;

2. That will minimize all adverse effects on the policies or purposes of the LWRP to the maximum extent practicable; and

3. That will result in an overriding regional or statewide public benefit.

C. **Local Waterfront Revitalization Program** or **LWRP** means a program prepared and adopted by a local government and approved by the Secretary of State pursuant to Executive Law, Article 42; which program contains policies on the management of land, water and man-

[1] This appendix appears in the form provided by the New York State Department of State.

made resources, proposed land uses and specific projects that are essential to program implementation.

D. **Municipal chief executive officer** is the City Mayor, or City Manager in cities where an appointed city manager is the administrative head of the city; the Village Mayor; or the Town Supervisor. The NYS DOS Local Government Handbook provides more information about who would be considered the chief executive officer under various municipal executive structures.[2]

E. **Local program coordinator** of a municipality with an approved LWRP could be a designated person or a Committee responsible for the preliminary review of proposed actions within the waterfront area for consistency with an approved LWRP and consistency recommendations for the final determination of consistency that will be made by the local government.

III. NOTIFICATION PROCEDURE

A. When a state agency is considering an action as described in II.DEFINITIONS, the state agency shall notify the affected local government.

B. Notification of a proposed action by a state agency:

1. Shall fully describe the nature and location of the action;

2. Shall be accomplished by use of existing state agency notification procedures, or through an alternative procedure agreed upon by the state agency and local government;

3. Should be provided to the local official identified in the LWRP of the affected local government as early in the planning stages of the action as possible, but in any event at least 30 days prior to the agency's decision on the action. The timely filing of a copy of a

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[2] Excerpts from the NYS DOS Local Government Handbook 6th Edition (2009) related to chief executive officers:

I. Cities: "In general, city government falls into four broad categories:

- council-manager, under which an appointed professional manager is the administrative head of the city, the council is the policymaking body and the mayor, if the position exists, is mainly a ceremonial figure. The manager usually has the power to appoint and remove department heads and to prepare the budget, but does not have veto power over council actions;
- strong mayor-council, under which an elective mayor is the chief executive and administrative head of the city, and the council is the policy making body. The mayor usually has the power to appoint and remove agency heads, with or without council confirmation; to prepare the budget; and to exercise broad veto powers over council actions. This form sometimes includes a professional administrator appointed by the mayor and is then called the "mayor-administrator plan;"
- weak mayor-council, under which the mayor is mainly a ceremonial figure. The council is not only the policy making body, it also provides a committee form of administrative leadership. It appoints and removes agency heads and prepares budgets. There is generally no mayoral veto power; and
- commission, under which commissioners are elected by the voters to administer the individual departments of the city government and together form the policy making body. In some cases one of the commissioners assumes the ceremonial duties of a mayor, on a rotating basis. This plan sometimes includes a professional manager or administrator." P. 53

II. New York City: "The mayor serves as the chief executive officer of the city, and with the assistance of four deputy mayors, presides over many departments, offices, commissions and boards. The mayor may create, modify or abolish bureaus, divisions or positions within the city government. The mayor, who may be elected to serve a maximum of two four-year terms, is responsible for the budget and appoints and removes the heads of city agencies and other non-elected officials." P. 57

III. Towns: "The supervisor is more of an administrator than an executive. The supervisor's duties under law are to: act as treasurer and have care and custody of monies belonging to the town; disburse monies; keep an accurate and complete account of all monies; make reports as required; pay fixed salaries and other claims; and lease, sell, and convey properties of the town, when so directed by the town board." and "By delegating a few more specific powers, the Suburban Town Law gives the supervisor a bit more authority. Although designated as "chief executive officer," however, the Suburban Town supervisor has no major new executive powers." P. 62

IV. Villages: "The chief executive officer of most villages in New York State is the mayor." P. 70

completed Coastal/Waterfront Assessment Form with the municipal chief executive officer should be considered adequate notification of a proposed action.

C. If the proposed action will require the preparation of a draft environmental impact statement, the filing of this draft document with the municipal chief executive officer can serve as the state agency's notification to the affected local government.

IV. LOCAL GOVERNMENT REVIEW PROCEDURE

A. Upon receipt of notification from a state agency, the affected local government will be responsible for evaluating a proposed action against the policies and purposes of its approved LWRP. Upon request of the local program coordinator identified in the LWRP, the state agency should promptly provide the affected local government with whatever additional information is available which will assist the affected local government to evaluate the proposed action.

B. If the affected local government cannot identify any conflicts between the proposed action and the applicable policies and purposes of its approved LWRP, it should inform the state agency in writing of its finding. Upon receipt of the local government's finding, the state agency may proceed with its consideration of the proposed action in accordance with 19 NYCRR Part 600.

C. If the affected local government does not notify the state agency in writing of its finding within the established review period, the state agency may then presume that the proposed action does not conflict with the policies and purposes of the municipality's approved LWRP.

D. If the affected local government notifies the state agency in writing that the proposed action does conflict with the policies and/or purposes of its approved LWRP, the state agency shall not proceed with its consideration of, or decision on, the proposed action as long as the Resolution of Conflicts procedure established in V. RESOLUTION OF CONFLICTS shall apply. The local government shall forward a copy of the identified conflicts to the Secretary of State at the time when the state agency is notified. In notifying the state agency, the local government shall identify the specific policies and purposes of the LWRP with which the proposed action conflicts.

V. RESOLUTION OF CONFLICTS

A. The following procedure applies whenever a local government has notified the Secretary of State and state agency that a proposed action conflicts with the policies and purposes of its approved LWRP:

1. Upon receipt of notification from a local government that a proposed action conflicts with its approved LWRP, the state agency should contact the local program coordinator to discuss the content of the identified conflicts and the means for resolving them. A meeting of state agency and local government representatives may be necessary to discuss and resolve the identified conflicts. This discussion should take place within 30 days of the receipt of a conflict notification from the local government.

2. If the discussion between the local government and the state agency results in the resolution of the identified conflicts, then, within seven days of the discussion, the local government shall notify the state agency in writing, with a copy forwarded to the Secretary of State, that all of the identified conflicts have been resolved. The state agency can then proceed with its consideration of the proposed action in accordance with 19 NYCRR Part 600.

3. If the consultation between the local government and the state agency does not lead to the resolution of the identified conflicts, either party may request, in writing, the assistance of the Secretary of State to resolve any or all of the identified conflicts. This request must be received by the Secretary within 15 days following the discussion

between the local government and the state agency. The party requesting the assistance of the Secretary of State shall forward a copy of their request to the other party.

4. Within 30 days following the receipt of a request for assistance, the Secretary, or a Department of State official or employee designated by the Secretary, will discuss the identified conflicts and circumstances preventing their resolution with appropriate representatives from the state agency and local government.

5. If agreement among all parties cannot be reached during this discussion, the Secretary shall, within 15 days, notify both parties of his/her findings and recommendations.

6. The state agency shall not proceed with its consideration of, or decision on, the proposed action as long as the foregoing Resolution of Conflicts procedures shall apply.

Procedural Guidelines for Coordinating NYS Department of State (DOS) and LWRP Consistency Review of Federal Agency Actions

I DIRECT ACTIONS

A. After acknowledging the receipt of a consistency determination and supporting documentation from a federal agency, DOS will forward copies of the determination and other descriptive information on the proposed direct action to the program coordinator and other interested parties.

B. This notification will indicate the date by which all comments and recommendations must be submitted to DOS and will identify the Department's principal reviewer for the proposed action.

C. The review period will be about twenty-five (25) days. If comments and recommendations are not received by the date indicated in the notification, DOS will presume that the municipality has "no opinion" on the consistency of the proposed direct federal agency action with the LWRP policies.

D. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality, DOS will contact the municipality to discuss any differences of opinion or questions prior to agreeing or disagreeing with the federal agency's consistency determination on the proposed direct action.

E. A copy of DOS' "agreement" or "disagreement" letter to the federal agency will be forwarded to the local program coordinator.

II PERMIT AND LICENSE ACTIONS

A. DOS will acknowledge the receipt of an applicant's consistency certification and application materials. At that time, DOS will forward a copy of the submitted documentation to the local program coordinator and will identify the Department's principal reviewer for the proposed action.

B. Within thirty (30) days of receiving such information, the local program coordinator will contact the principal reviewer for DOS to discuss: (a) the need to request additional information for review purposes; and (b) any possible problems pertaining to the consistency of a proposed action with the LWRP policies.

C. When DOS and the local program coordinator agree that additional information is necessary, DOS will request the applicant to provide the information. A copy of this information will be provided to the local program coordinator upon receipt.

D. Within thirty (30) days of receiving the requested information or discussing possible problems of a proposed action with the principal reviewer for DOS, whichever is later, the local program coordinator will notify DOS of the reasons why a proposed action may be inconsistent or consistent with the LWRP policies.

E. After the notification, the local program coordinator will submit the municipality's written comments and recommendations on a proposed permit action to DOS before or at the conclusion of the official public comment period. If such comments and recommendations are not forwarded to DOS by the end of the public comment period, DOS will presume that the municipality has "no opinion" on the consistency of the proposed action with the LWRP policies.

F. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality on a proposed permit action, DOS will contact the local program coordinator to discuss any differences of opinion prior to issuing a letter of "concurrence" or "objection" to the applicant.

G. A copy of DOS' "concurrence" or "objection" letter to the applicant will be forwarded to the local program coordinator.

III FINANCIAL ASSISTANCE ACTIONS

A. Upon receiving notification of a proposed federal financial assistance action, DOS will request information on the federal financial assistance action from the applicant for consistency review purposes. As appropriate, DOS will also request the applicant to provide a copy of the application documentation to the local program coordinator. A copy of this letter will be forwarded to the local program coordinator and will serve as notification that the proposed action may be subject to review.

B. DOS will acknowledge the receipt of the requested information and provide a copy of this acknowledgement to the local program coordinator. DOS may, at this time, request the applicant to submit additional information for review purposes.

C. The review period will conclude thirty (30) days after the date on DOS' letter of acknowledgement or the receipt of requested additional information, whichever is later. The review period may be extended for major federal financial assistance actions.

D. The local program coordinator must submit the municipality's comments and recommendations on the proposed federal financial assistance action to DOS within twenty days (or other time agreed to by DOS and the local program coordinator) from the start of the review period. If comments and recommendations are not received within this period, DOS will presume that the municipality has "no opinion" on the consistency of the proposed federal financial assistance action with the LWRP policies.

E. If DOS does not fully concur with and/or has any questions on the comments and recommendations submitted by the municipality, DOS will contact the local program coordinator to discuss any differences of opinion or questions prior to notifying the applicant of DOS' consistency decision.

F. A copy of DOS' consistency decision letter to the applicant will be forwarded to the local program coordinator.

APPENDIX D:

NEW YORK CITY PANEL ON CLIMATE CHANGE 2015 REPORT, CHAPTER 2: SEA LEVEL RISE AND COASTAL STORMS

D. NEW YORK CITY PANEL ON CLIMATE CHANGE 2015 REPORT, CHAPTER 2: SEA LEVEL RISE AND COASTAL STORMS

This chapter, containing New York City's current projections of climate change and sea level rise at the time of publication, has been included by permission of the New York Academy of Sciences.

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New York City Panel on Climate Change 2015 Report Chapter 2: Sea Level Rise and Coastal Storms

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Introduction

New York City's low-lying areas are home to a large population, critical infrastructure, and iconic natural, economic and cultural resources. These areas are currently exposed to coastal flooding by warm-season tropical storms such as Hurricane Sandy[a] (Box 2.1) and cold-season nor'easters. Sea level rise increases the frequency and intensity of coastal flooding. For example, the ∼12 inches of sea level rise in New York City since 1900 may have expanded Hurricane Sandy's flood area by approximately 25 square miles, flooding the homes of more than 80,000 *additional* people[b] in New York and New Jersey alone (Climate Central 2013, as reported in Miller *et al.*, 2013; see also Chapter 3, NPCC, 2015).

This chapter presents an overview of observed sea level rise and coastal storms for the New York metropolitan region, sea level rise projection methods and results, coastal storm projections, and recommendations for future research.

[a]We hereafter refer to Sandy as a hurricane or tropical cyclone, although it also can be referred to as a hybrid storm. The storm completed its transition to an extratropical storm just prior to making landfall in New Jersey (Blake *et al.*, 2013).

[b]Relative to the number of people who would have experienced flooding in the absence of the ∼12 inches of sea level rise since 1900.

2.1 Observed changes

This section describes observed sea level rise and coastal storms.

Sea level rise

Since 1900, the global rate of sea level rise has averaged 0.5 to 0.7 inches per decade (Church *et al.*, 2013; Hay *et al.*, 2015; Church and White, 2011). As with temperature, the long-term upward trend in sea level has varied over the decades. For example, there were lower rates of increase during the early part of the 20th century and much of the 1960s and 1970s; sea level rise increased more rapidly during the 1930s through the 1950s. Since 1993, satellite observations and tide gauges show a global sea level rise of $\sim 1.3 \pm 0.1$ inches per decade (Church *et al.*, 2013; Nerem *et al.*, 2010). There may be a small, yet statistically significant global sea level acceleration of 0.004 ± 0.002 inches per decade between 1900 and 2009 (Church and White, 2011).

There are multiple processes that contribute to sea level rise, including changes in ocean mass distribution and density; changes in the mass of glaciers, ice caps, and ice sheets; water storage on land; vertical land movements; and gravitational, elastic, and rotational effects resulting from ice mass loss. Historically, the majority of the observed rise in global mean sea level has been attributed to thermal expansion. More recently, the contribution of land-based ice loss to global mean sea level rise has begun to rival that of thermal expansion (Church *et al.*, 2011; 2013).

Each of these processes has a unique local signature. Sea level rise in New York City has averaged 1.2 inches per decade since 1900 (Fig. 2.1).

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Box 2.1. Hurricane Sandy

Hurricane Sandy was directly responsible for approximately 150 deaths (Blake *et al.*, 2013) and $70 billion in losses (NOAA, 2013). About half of the deaths occurred in the Caribbean and half in the United States, including 44 in New York City (Blake *et al.*, 2013). Sandy's 14.1-foot elevation (above mean low low water; MLLW) set the record at the Battery tide gauge (Blake *et al.*, 2013). Several factors caused the extreme surge. Sandy's minimum pressure was the lowest ever recorded[c] at landfall north of Cape Hatteras, NC. With a tropical storm-force wind field of close to 1000 miles in diameter, Sandy was among the largest storms as well. Hurricane Sandy's unusual westward-turning track also concentrated storm surge, wind, and waves in the New York metropolitan region. Part of the extensive coastal flooding was due to the fact that Sandy's peak surge coincided with high tide.

This is nearly twice the observed global rate. In New York City, approximately 40% of the observed sea level rise is due to land subsidence,[d] with the remaining sea level rise driven by climate-related factors (Peltier, 2004; Engelhart and Horton, 2012).

A faster rate of *local* New York City sea level rise has also been observed in recent decades relative to earlier in the 20th century. Tide gauges along the Atlantic coast show a distinct regional sea level acceleration "hotspot" from Cape Cod to Cape Hatteras since the early 1990s (Sallenger *et al.*, 2012; Boon, 2012; Ezer and Corlett, 2012), although the acceleration is still too short to attribute to climate change because of high interannual-multidecadal ocean variability (Kopp, 2013).

Coastal storms

The two types of storms with the largest influence on the coastal areas of the New York metropolitan region are tropical cyclones (hurricanes and tropical storms) and nor'easters. Tropical cyclones strike New York City very infrequently, generally between July and October, and can produce large storm surges and wind damage (Lin *et al.*, 2010). Nor'easters, which tend to occur during the cold season (November to April), are generally associated with smaller surges and weaker winds than hurricanes. Nevertheless, nor'easters affect New York City more frequently (several times a year) than do hurricanes (Karvetski *et al.*, 2009), and their impacts can be large, in part because their lengthy duration leads to longer periods of high winds and high water than are experienced during tropical cyclones.

The greatest coastal inundation occurs when the surge caused by a storm's wind and wave effects coincides with high astronomical (or "non-storm") tides. At the Battery, the mean range of tide[e] is 4.5 feet but can be as large as 7.7 feet[f] during the most extreme spring tides[g] (NOAA Tides and Currents, 2013; Orton *et al.*, 2012).

Because of the complexity of the New York City coastline, there is often a large spatial variation in the extent and timing of flooding associated with any particular storm. High tides and waves associated with nor'easters can lead to significant flooding and beach erosion (Hondula and Dolan, 2010). In the case of Hurricane Sandy (see Box 2.1), one of the reasons coastal flooding was so devastating for southern parts of New York City was that the peak storm surge occurred near high tide. Had the storm struck a few hours earlier or later than it did, coastal flood damage would have been much higher elsewhere, including other parts of the city such as Hunts Point in the Bronx.

[c] The 1938 hurricane probably had lower pressure at landfall, but it went unrecorded.

[d] Land can subside or "sink" for many reasons. At the Battery, the primary cause is a process known as glacial isostatic adjustment, whereby the land is still responding to the retreat of the ice sheets during the last ice age.

[e] The mean range of tide is defined as the difference in height between mean high water and mean low water (NOAA Tides and Currents, 2013).

[f] The maximum range of tide is defined as the difference in height between NOAA's highest astronomical tide (HAT) and lowest astronomical tide (LAT).

[g] A tide near the time of a new or full moon, when there is the greatest difference between high and low water.

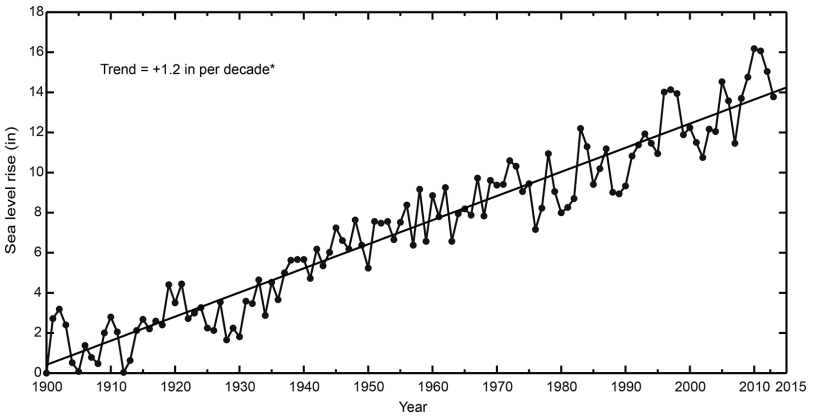

Figure 2.1. Observed sea level rise in New York City (the Battery) from 1900 to 2013. Data are from Permanent Service for Mean Sea Level (PSMSL). *Trend is significant at the 99% level.

Observed changes in the frequency and intensity of coastal storms can also be provided for large geographic regions. There has been an increase in the overall strength of hurricanes and in the number of strong (category 4 and 5) hurricanes in the North Atlantic Basin since the early 1980s (Melillo *et al.*, 2014). However, it is unclear how much of the observed trend is due to natural variability (Seniveratne *et al.*, 2012), increases in greenhouse gas (GHG) concentrations (Hegerl *et al.*, 2007), and/or other changes such as a reduction in aerosol pollution[h] in recent decades (Booth *et al.*, 2012). There is also some evidence of an overall increase in storm activity near the northeastern U.S. coastline during the second half of the 20th century from 1950 to 2010 (Melillo *et al.*, 2014). Studies have also noted increases in coastal flooding during the past century along the United States East Coast (Grinsted *et al.*, 2012) and in the New York metropolitan region (Talke *et al.*, 2014). Coastal flooding has been influenced by historical changes in sea level in addition to changes in storm frequency and intensity.

[h]Aerosols can influence hurricanes both by blocking sunlight from heating the upper ocean and through local changes in cloud formation.

2.2 Sea level rise and coastal storm projections

This section describes the methods used to project future sea level rise for New York City and presents the projections (see Appendix I for infographics of projections and Appendix IIB for details of the methods (NPCC, 2015)).

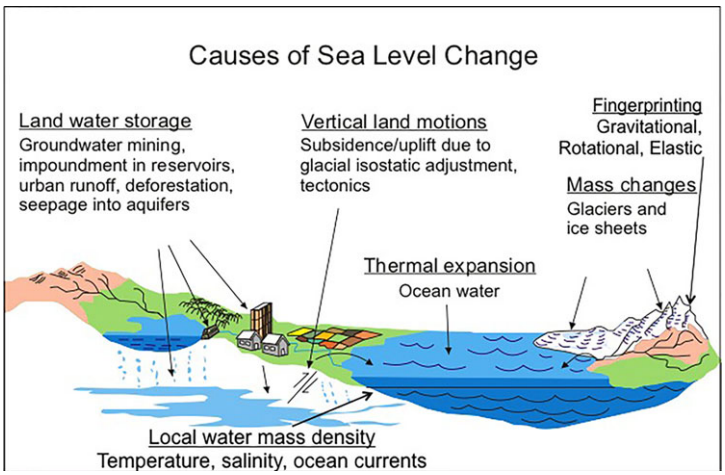

Figure 2.2. Causes of sea level change.

Table 2.1. Sea level rise projection components

Sea level rise component	Scale	Description	Method	Sources
Global thermal expansion	Global	Ocean water expands as it warms	Single globally-averaged value from CMIP5 models	http://cmip-pcmdi.llnl.gov/cmip5
Local changes in ocean height	Local	Changes in ocean water density and circulation	Local values from CMIP5 models	http://cmip-pcmdi.llnl.gov/cmip5
Loss of ice from Greenland and Antarctic ice sheets	Global	Addition of freshwater to the ocean	Bamber and Aspinall expert elicitation surveys of 26 ice sheet experts, with additional probabilistic analysis	Bamber and Aspinall, 2013
Loss of ice from glaciers and ice caps	Global	Addition of freshwater to the ocean	Range from two recent analyses	Radić *et al.*, 2014; Marzeion *et al.*, 2012
Gravitational, rotational, and elastic "fingerprints"* of ice loss	Local	Regional sea level changes due to ice mass change are modified by gravitational, rotational, and "fast" (elastic) isostatic responses	Ice loss from each ice sheet and the glaciers/ice caps is multiplied by a local NYC coefficient reflecting the aggregate effect	Mitrovica *et al.*, 2009; Perrette *et al.*, 2013; Gomez *et al.*, 2010
Vertical land movements/glacioisostatic adjustments (GIA)	Local	Local land subsidence is an ongoing slow response to the last deglaciation	Peltier's Glacial Isostatic Adjustment (GIA model)	Peltier, 2004
Land-water storage	Global	Addition or subtraction of freshwater stored in reservoirs and groundwater	Global estimates derived from recent literature	Church *et al.*, 2011; Milly *et al.*, 2010

* See Appendix IIB for a full description of the "fingerprints."

Sea level rise methods and components

The NPCC2 sea level rise projections for New York City have been developed using a component-by-component analysis (Fig. 2.2; Table 2.1).

Other published studies (e.g., Kopp *et al.*, 2014; Perrette *et al.*, 2013; Slangen *et al.*, 2012) have taken a similar regionalized approach to sea level rise projections using different sources of information (e.g., set of climate models) and assumptions (e.g., for vertical land motion and ice sheet mass loss).

For each of the components of sea level change, the NPCC2 estimated the 10th, 25th, 75th, and 90th percentiles of the distribution. The sum of all components at each percentile is assumed to give the aggregate sea level rise projection.

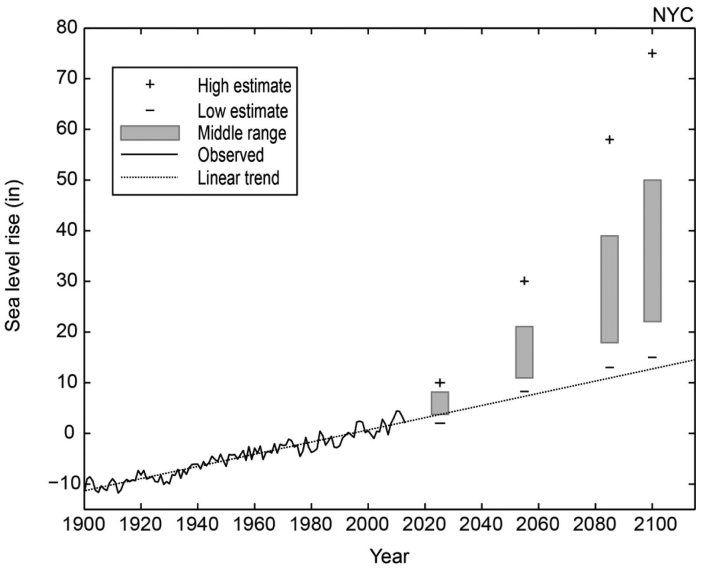

Figure 2.3. New York City sea level rise trends and projections. Projections shown are the low estimate (10th percentile), middle range (25th to 75th percentiles), and the high estimate (90th percentile). The historical trend is also included. Projections are relative to the 2000 to 2004 base period.

Projections for sea level rise are relative to the 2000 to 2004 base period. The three time slices for sea level rise (2020s, 2050s, 2080s) are centered on a given decade. For example, the 2050s time slice refers to the decadal period from 2050 to 2059. Decadal time slices were used for sea level rise (in contrast to the 30-year periods used for the climate variables; see Chapter 1) because natural variability of sea level is lower than that of temperature and precipitation. The sea level rise projections were also extended to 2100 (the methodology is described in Appendices IIA and IIB).

The NPCC2 90th percentile projections are generally comparable to the rapid ice melt scenario of NPCC 2010. Whereas NPCC 2010 included two sea level rise projection techniques, NPCC2 consolidates the projections for all percentiles into a single methodology.

Future sea level rise

As shown in Table 2.2 and Figure 2.3, the middle-range (25th to 75th percentile) sea level rise projection in New York City is an increase of 4 to 8 inches in the 2020s, 11 to 21 inches in the 2050s, 18 to 39 inches in the 2080s, and 22 to 50 inches by 2100. Sea level rise is projected to accelerate as the century progresses and could reach as high as 75 inches by 2100 under the high estimate (90th percentile). New York City's sea level rise projections exceed the global average, primarily due to local land subsidence and global climate model projections that ocean height along the Northeast coastline may increase faster than global average ocean height due in part to projected weakening of the Gulf Stream current (Yin *et al.*, 2009, 2010). The range of projected sea level rise grows as the century progresses, primarily because of uncertainties about how much the ice sheets will melt as temperatures rise.

At the 90th percentile, the NPCC2 late-century sea level rise projections are higher than those of Kopp *et al.* (2014). This is primarily due to (1) differing representation of the tail of the sea level rise distribution in Kopp *et al.*, which is based on a combination of Bamber and Aspinall's (2013) estimate and that of IPCC AR5 (Church *et al.*, 2013), and (2) the assumption by Kopp *et al.* that sea level rise components are independent.

Flood heights and recurrence intervals

Sea level rise is projected to yield large changes in the frequency and intensity of coastal flooding, even if storms themselves do not change at all (Table 2.3). By the 2050s, the middle range sea level rise projections are associated with approximately a doubling of the probability of the historical 100-year coastal flood (the 100-year coastal flood event refers to the

Table 2.2. New York City sea level rise projections

Baseline (2000–2004) 0 in	Low estimate (10th percentile)	Middle range (25th to 75th percentile)	High estimate (90th percentile)
2020s	2 in	4–8 in	10 in
2050s	8 in	11–21 in	30 in
2080s	13 in	18–39 in	58 in
2100	15 in	22–50 in	75 in

Note: Projections are based on a six-component approach that incorporates both local and global factors. The model-based components are from 24 global climate models and two representative concentration pathways. Projections are relative to the 2000–2004 base period.

Table 2.3. Future coastal flood heights and recurrence intervals at the Battery, New York

	Low estimate (10th percentile)	Middle range (25th to 75th percentile)	High estimate (90th percentile)
2020s			
Annual chance of today's 100-year flood (1%)	1.1%	1.1–1.4%	1.5%
Flood heights associated with 100-year flood (11.3 ft)	11.5 ft	11.6–12.0 ft	12.1 ft
2050s			
Annual chance of today's 100-year flood (1%)	1.4%	1.6–2.4%	3.6%
Flood heights associated with 100-year flood (11.3 ft)	12.0 ft	12.2–13.1 ft	13.8 ft
2080s			
Annual chance of today's 100-year flood (%)	1.7%	2.0–5.4%	12.7%
Flood heights heights associated with 100-year flood	12.4 ft	12.8–14.6 ft	16.1 ft

Note: Flood heights are derived by adding the sea level–rise projections for the corresponding percentiles to the baseline values. Baseline flood heights associated with the 100-year flood are based on the FEMA stillwater elevations (i.e., without wave height). Flood height elevations are referenced to the NAVD88 datum.

flood with a 1% annual chance of occurrence). By the 2080s under the middle range, the historical 100-year event is projected to occur approximately 2 to 4 times more often. Even under the low sea level rise estimate, coastal flood frequency would approximately double by the 2080s. Under the high sea level rise estimate, coastal flood frequency would increase more than ten-fold, turning the 100-year flood into an approximately once per eight year event. The next section addresses potential changes in coastal storms themselves.

Coastal storms

The balance of evidence suggests that the strongest hurricanes in the North Atlantic Basin may become more frequent in the future, although the total number of tropical storms may decrease slightly (Christensen *et al.*, 2013; see Table 2.4).[i] The implications for the New York metropolitan region, however, are unclear because individual storm tracks are highly variable, and potential changes in tropical cyclone tracks are poorly understood (Kozar *et al.*, 2013; Christensen *et al.*, 2013). As the ocean and atmosphere continue to warm, intense precipitation from

[i] A few recent studies based on downscaled CMIP5 global climate models have projected an increase in the number of 21st-century tropical storms (Emanuel, 2013), at least through midcentury (Villarini and Vecchi, 2012; 2013).

Table 2.4. Projected changes in coastal storms

	Spatial scale of projection	Direction of change by the 2080s	Likelihood
Tropical cyclones			
Total number	North Atlantic Basin	Unknown	—
Number of intense hurricanes	North Atlantic Basin	Increase	More likely than not[a]
Extreme hurricane winds	North Atlantic Basin	Increase	More likely than not
Intense hurricane precipitation	North Atlantic Basin	Increase	More likely than not
Nor'easters (number and intensity)	New York City metropolitan region	Unknown	—

[a] >50% probability of occurrence
Sources: Melillo, 2014; IPCC, 2012; Colle et al., 2013.

hurricanes will more likely than not increase on a global scale (Knutson *et al.*, 2010; IPCC, 2012), although the implications for the more limited New York metropolitan region are unclear because so few tropical cyclones impact the region. It is unknown how nor'easters in the region may change in the future.[j]

2.3 Conclusions and recommendations

Sea level rise in the New York metropolitan region is projected to accelerate as the century progresses and could reach as high as 75 inches by 2100 under the NPCC2 high estimate. New York City's sea level rise is projected to exceed the global average due to land subsidence and changes in ocean circulation, increasing the hazard posed to the New York metropolitan region's coastal population, infrastructure, and other built and natural assets. Although projected changes in coastal storms are uncertain, it is virtually certain (>99% probability of occurrence) that sea level rise alone will lead to an increased frequency and intensity of coastal flooding as the century progresses.

Although these sea level rise projections are New York region specific, projections based on similar methods would not differ greatly throughout the coastal corridor from Boston to Washington, DC (see e.g., Tebaldi *et al.*, 2012; Kopp *et al.*, 2014). Exceptions would include locations experiencing more rapid changes in local land height, such as land subsidence due to excess groundwater extraction.

In the face of uncertainty about the future frequency and intensity of coastal storms, two critical messages are that (1) New York City is highly vulnerable to coastal storms today, and (2) even low-end sea level projections can be expected to increase the frequency and intensity of coastal flooding, absent any changes in storms themselves.

Although the NPCC projections have focused on the 21st century, sea level rise is projected to accelerate into the 22nd century even if heat-trapping GHG concentrations stabilize later this century. Reducing GHG emissions in the near term is critical to minimizing that long-term acceleration.

More research is needed on how the Greenland and West Antarctic ice sheets will respond to climate change because these ice sheets are the largest long-term source of "high-end" uncertainty. Future research efforts should also explore the relationship between the different sea level rise components as well as the relationship between those sea level rise components and coastal storm risk. For example, research is needed on the potential correlation between dynamic sea level along the northeastern U.S. coast and coastal storm risk (Horton and Liu, 2014).

As understanding grows of how coastal storms may change with climate change, it will become possible to combine changing storm and sea level hazards into integrated projections of coastal flood exposure. Another important area of research is how sea level rise may impact coastal flooding and wave damage associated with a given coastal storm.

[j] One recent study (Colle *et al.*, 2013) using CMIP5 models projects that nor'easter tracks could shift to the west.

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