

THE NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM

**Proposed Revisions for Public Review
Pursuant to Section 197-a of the City Charter**

NYCPLANNING
DEPARTMENT OF CITY PLANNING CITY OF NEW YORK

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EXPLANATION OF PROPOSED REVISIONS

Part I, Program Description, provides an explanation of the Waterfront Revitalization Program, its planning context, a definition of the Coastal Zone, and a description of the review process. This section has been revised to provide a more detailed description of the regulatory framework and the consistency review process. In addition, a list and description of other regulations related to the implementation of the program has been added. The Part I contained in this document is intended to entirely replace the existing Part I. (Tracked changes are not indicated due to the substantial revisions that provide greater clarity.)

Part II, The Policies, is the Waterfront Revitalization Program's 10 policies. To clearly indicate the proposed changes to the existing policies, edits to this text are shown with underlines to indicate additions and ~~strikethroughs~~ to indicate text to be removed.

Part III contains the maps of the five special areas designations referred to in the policies as well as the maps of the Coastal Zone. The proposed revisions to the boundaries are indicated on the maps.

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 and Coastal Resource Management (OCRM), 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 OCRM 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 Act), previously the Waterfront Revitalization and Coastal Resources Act of 1981, authorizes the creation of the State's Coastal Management Program. The implementing regulations of the Act and New York State's coastal area policies can be found in the Department of State regulations 19 NYCRR Part 600. The 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 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 Act.

Once a local waterfront revitalization program is approved by the State 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. Accordingly, pursuant to State regulations, State agency actions which are likely to affect the achievement of New York City's WRP must be reviewed for consistency with the local coastal area management policies contained therein. Similarly, federal activities that may have a reasonably foreseeable effect on New York City's Coastal Zone are subject to the federal consistency provisions of the CZMA and 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

In response to the Federal Coastal Zone Management Act of 1972 and the New York State Waterfront Revitalization and Coastal Resources Act of 1981, New York City developed a LWRP that is responsive to local objectives and supportive of the State's coastal management 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, the U.S. Secretary of Commerce, pursuant to federal regulation, concurred with DOS's request to incorporate the WRP into the New York State Coastal Management Program on September 30, 1982. The original WRP incorporated the 44 state coastal policy explanations and guidelines contained in the State CMP, set forth an additional 12 local coastal policies, and delineated the boundary of the City's Coastal Zone. The WRP designated 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 streamlined the original WRP with a revised 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. The New WRP was adopted by the City Council in accordance with Section 197-a of the City Charter on Oct. 13, 1999. 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 2012 update to the WRP does not substantially alter the policies or structure of the program but rather seeks to incorporate considerations surrounding the waterfront that have evolved as a result of numerous 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, the original WRP and the New WRP (2002) were both approved in accordance with Section 197-a of the City Charter, which has been utilized as the approval process for a local waterfront revitalization program in New York City. Accordingly, the 2012 update will also be reviewed pursuant to, and in accordance with, the procedures set forth in Section 197-a of the City Charter.

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 & the 2012 WRP update

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*. *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. More recently the City has created over 350 acres of new waterfront parkland and rezoned 700 acres of underutilized waterfront land for productive uses such as housing and jobs. *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, 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 waterbodies, 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.

The 2012 revision to the WRP seeks to update the coastal policies in a manner that is consistent with the goals set forth in *Vision 2020*. Updating the WRP is only one of the many efforts underway to implement *Vision 2020* and is not the exclusive vehicle for realizing *Vision 2020*'s goals. *Vision 2020* is complemented by the New York City Waterfront Action Agenda, a three-year action agenda comprised of 130 funded projects including the development of more than 50 acres of new waterfront parks, creation of 14 new waterfront esplanades and introduction of new commuter ferry service.

Other Plans and Policies

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, also provide a planning context for the WRP. Adopted 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 considered in the

development of the WRP policies and continue to be consulted in assessing the consistency of proposed actions with the WRP.

COASTAL ZONE BOUNDARY

Originally mapped and adopted in 1982, the Coastal Zone Boundary defines the geographic scope of the WRP (Sectional 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:

- 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
- 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

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.

CONSISTENCY REVIEW PROCESS AND DETERMINATION

The purpose of reviewing actions for consistency with the WRP is to weigh the benefits of an activity or project affecting the Coastal Zone in light of the ten policies set forth in the program, while seeking to reconcile ways in which various uses of the waterfront area reflect competing interests. 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, as well as New York

City's Department of Parks and Recreation, Economic Development Corporation, Department of Buildings, Department of Health, and Department of Environmental Protection play a role in the redevelopment of New York City's waterfront and the protection of its water quality and may have differing mandates, missions and permit requirements for projects located within the Coastal Zone. The consistency review process facilitates coordination among local agencies and is designed to ensure that the City's coastal policies are considered by all permitting agencies involved in projects that fall within the Coastal Zone.

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 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.

Federal Activity Consistency

The federal consistency provisions of the CZMA specifically require that for any 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 a state 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, unless full consistency is prohibited by existing law applicable to the federal agency. 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 comply 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. The bases for the federal consistency reviews are the enforceable policies set forth in the state coastal policy explanations and guidelines contained in the state CMP document and the management programs for Special Management Areas, such as 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 as to their consistency with the enforceable policies of New York's CMP. In the event that DOS objects to a determination of consistency made by a federal agency with respect to its own activities, 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 State management program 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. Where DOS objects to a consistency certification made by an applicant for a required Federal permit or license, or

objects to a proposed activity requiring an application by a state agency or local government for federal financial assistance, the federal agency shall not issue the 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 coordinates its review of federal activities for consistency with state coastal policies with other state agencies and with local governments with approved Local Waterfront Revitalization Programs, such as New York City's. The City Planning Commission, acting as the City Coastal Commission, reviews those federal actions that exceed one or more of the following designated thresholds: the action requires the balancing of several different policies; the action is significantly inconsistent with waterfront policies; the action requires a federal or state EIS; or the action requires a policy interpretation. All other actions are reviewed by Department of City Planning staff on behalf of the City Coastal Commission. The findings of consistency review made by either the City Planning Commission, acting as the City Coastal Commission, or by the Department establish if the action is consistent with the policies and intent of the WRP, or if the action will not substantially hinder the achievement of the WRP policies. If the City Coastal Commission determines that the project will hinder the achievement of a WRP policy, the City Coastal Commission advises 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.

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. By way of example, permits issued by the Army Corps of Engineers (ACOE) for projects occurring within the Coastal Zone must be reviewed for consistency with the WRP. Accordingly, in order to receive permits from ACOE for activities such as dredging, filling, bulk heading, or the placement of structures, occurring in navigable waters and in tidal or freshwater wetlands that meet national designation criteria, a consistency determination must be made for a proposed project with the policies contained in the WRP.

State Action Consistency

Pursuant to state regulations, actions under state agency programs that are Type I or Unlisted, as defined in SEQRA, that have been identified by the Secretary of State as likely to affect the achievement of the policies and purposes of New York City's WRP—including those that involve: issuance of permits, licenses, certifications, and other forms of approval of land use or development; the provision of grants, loans and other funding assistance which leads to or influences land use or development; and directly under taken land use or development and planning activities—shall be undertaken in a manner that is consistent to the maximum extent practicable with the WRP.

Where a SEQRA determination is made that such an action will not have a significant effect on the environment, the State agency must submit information on the proposed action to the City Coastal Commission and, at the time of making its decision on the action, file with the Secretary a certification that the action will not substantially hinder the achievement of any of the policies and purposes contained in the WRP and, whenever practicable, will advance one or more of such policies. Where such actions may have a significant effect on the environment, as determined pursuant to SEQRA, the State agency responsible for the action must assess the consistency of the proposed action with local coastal policies, as part of the preparation and content of a full environmental impact statement.

The City Planning Commission, acting as the City Coastal Commission only reviews state actions if that action exceeds one or more of the following designated thresholds: the action requires the balancing of several different policies; the action is significantly inconsistent with waterfront policies; the action requires a federal or state EIS; or the action requires a policy interpretation. All other actions are reviewed by Department of City Planning staff acting on behalf of the City Coastal Commission. The findings of consistency review made by either the City Planning Commission, acting as the City Coastal Commission, or by the Department are forwarded to the permitting State agency. If the City Coastal Commission determines that the action is consistent with the policies and intent of the WRP, then a letter to the appropriate State agency is provided reflecting the City Coastal Commission's determination that the actions will not substantially hinder the achievement of a WRP policies and that the action is consistent with the WRP policies. However, if the City Coastal Commission determines that the project will hinder the achievement of a WRP policy, the City Coastal Commission advises whether the action has satisfied the following 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 public benefit.

If the action will substantially hinder the achievement of any policy, the State agency may proceed with the action if it certifies that the following four 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; (3) the action will advance one or more of the other coastal policies; and (4) 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 Act.

Pursuant to the Act, the Secretary of State individually and separately notifies affected State agencies of those agency actions and programs which are to be undertaken in a manner consistent with approved LVWRPs. The current official lists of actions subject to State consistency requirements may be obtained from the NYS Department of State. By way of example, permits issued by the New York State Department of Environmental Conservation (DEC) that are likely to affect the achievement of the policies and purposes of New York City's WRP shall be undertaken in a manner that is consistent to the maximum extent practicable with the WRP. Accordingly, to receive permits from DEC for activities such as draining, filling or building structures within a wetland, a consistency determination must be made for a proposed project with the policies contained in the WRP.

Local Discretionary Action Consistency

Local discretionary actions located within the Coastal Zone are reviewed for consistency with New York City's WRP, which requires that such actions will not substantially hinder the achievement of any WRP policy. The consistency review is coordinated within New York City's existing procedures established for City Environmental Quality Review. The lead agency is responsible for conducting the review and making the determination of the project's consistency with the WRP policies during an environmental assessment. Where the lead agency determines the project is consistent with the applicable WRP policies, no further analysis is required.

Where a project does not appear consistent with one or more of the relevant policies, consideration is given by the lead agency and the applicant to any practical means of altering the project to maximize its consistency with the WRP. If a project is not so altered and therefore hinders the policies and intent of the WRP, it may be found inconsistent by the lead agency. Where changes that would eliminate the

inconsistency are not possible, the lead agency should consider whether the inconsistency is of such a degree as to be significant. In making such a determination, the lead agency should balance the policies that would be furthered by the project against those that would be hindered by the project. The lead agency may thereafter determine that some inconsistencies are not significant. Because the WRP review considers many laws affecting the coastal area, consideration of a project's consistency typically requires assessment that includes different technical areas of the environmental review such as natural resources, air quality, land use and zoning, or historical resources.

Where a project would result in significant adverse impacts related to inconsistencies with the WRP, those impacts must be mitigated to the greatest extent practicable. If the impact can be appropriately mitigated, the project would be considered consistent with the WRP. The mitigation measures must be sufficient to address the project's inconsistency with the applicable coastal policy or enable the lead agency to determine that: (1) no reasonable alternatives exist that would permit the action to be taken in a manner which would not substantially hinder the achievement of such policy or purpose; (2) the action taken will minimize all adverse effects on the local policy and purpose to the maximum extent practicable; and (3) the action will result in an overriding regional or statewide public benefit.

For local action where the City Planning Commission is the lead agency, the City Planning Commission, acting as the City Coastal Commission conducts the consistency review as part of the CEQR process. For local actions that do not require approval by the City Planning Commission but do require approval by another city agency, the head of that agency makes the final consistency determination. For local actions where the City Planning Commission is an involved agency but not the lead agency, both the lead agency and the City Planning Commission make their own consistency determination and the City Planning Commission, acting as Coastal Commission, may choose to adopt either their own or the lead agency's consistency determination.

Local actions brought to the City Planning Commission via CEQR are reviewed by Department of City Planning staff and the City Planning Commission, acting as the City Coastal Commission (CCC), makes the consistency determination. Where a ULURP or 197-a project is approved by the Commission, and the project has been found consistent with the policies and intent of the WRP, language is added to the CPC report to the effect that: "The City Coastal Commission, having reviewed the waterfront aspects of this action, finds that the actions will not substantially hinder the achievement of any WRP policy and hereby determines that this action is consistent with WRP policies." Where the Commission approves a project that does not conform to existing waterfront policy, the report must reflect a CCC decision that that 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 mentioned requirements, such a certification shall constitute a determination that the action 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 relevant to that policy.

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.

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.

REGULATIONS 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.

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

Pursuant to the State Environmental Quality Review Act (SEQRA) and Mayoral Executive Order No. 91 (City Environmental Quality Review or CEQR), 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. CEQR review must be completed before the City Planning Commission, also the City Coastal Commission, may act upon a ULURP application or a zoning regulation. Similarly, the Board of Standards and Appeals will not render a decision on an application for a variance until

CEQR procedures have been complied with. As 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.

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. Throughout the 19th and the first half of the 20th century, New York's waterfront was dominated by waterborne trade, manufacturing, and the infrastructure to support these activities. However over the last half-century, changes in shipping technology, along with long-term economic trends, have greatly impacted the city's industrial sector. Industrial uses have declined, and waterfront locations are no longer advantageous for many industrial activities, resulting in stretches of vacant and underutilized land along the waterfront.

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 underutilized land and creating new housing, the rezoning of waterfront sites for housing and commercial development has created sufficient economic value to support the cleanup of contamination from bygone industry and the provision of new waterfront public access areas, and has facilitated investments in affordable housing.

~~Where traditional industrial uses have declined or relocated,~~ Many coastal areas offer opportunities for commercial and residential development that would revitalize the waterfront. ~~Benefits of redevelopment include providing new housing opportunities, fostering economic growth, and reestablishing the public's connection to the waterfront. This~~ Redevelopment should be encouraged on appropriately located vacant and underused land and with consideration of specific challenges, including the need to provide new infrastructure, to be compatible with adjacent uses and natural resources, and to address current and future risks from coastal storms. ~~not needed for other purposes, such as industrial activity or natural resources protection. New activities generated by redevelopment of the coastal area should comply with applicable state and national air quality standards and should be carried out in accordance with zoning regulations for the waterfront.~~

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.

I.1 Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

- A. Criteria to determine areas appropriate for reuse through public and private actions include: ~~the lack of importance of the location to 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; 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; and the number of jobs potentially displaced balanced against the new opportunities created by redevelopment.

- B. 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.
- I.2 Encourage non-industrial development with uses and design features that enlivensenliven the waterfront and attractsattract 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 ~~this~~ Policy 1.2. If the project is not subject to ~~zoning then the Zoning Resolution~~, the standards of Article 6 Chapter 2 of the Zoning Resolution should be used as ~~a guideline~~ guidelines for development and the inclusion of open space, visual access, upland connections, and water-related uses.
- I.3 Encourage redevelopment in the Coastal area-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 ~~upgrading the need to upgrade~~ or ~~expansion of expand~~ inadequate or deteriorated local infrastructure. ~~The city will rely solely on the City Environmental Quality Review process to identify infrastructure limitations.~~
- I.4 In areas adjacent to SMIA's, 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 SMIA's 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.
- I.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 supports is vital to the city's economy. The working waterfront includes airborne and waterborne and airborne 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.

Over the last half-century, the ports, maritime support services, and other industries that make up New York's working waterfront have changed in profound ways, both technologically and economically. Although the waterfront is no longer dominated by waterborne trade, port activities are essential to the movement of goods and materials into the New York Metropolitan Region, the largest consumer market in North America. As a result of advances in shipping technology, primarily the development of containerized shipping, waterborne freight operations have been consolidated and now occupy a smaller number of facilities, even as the total volume of goods shipped into New York has grown considerably.

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.

As manufacturing has declined, other sectors of the economy have grown, and this has brought increased demands for housing and services. It is important to find ways to maximize investment on the waterfront while preserving and/or expanding maritime activity. Other 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

These working 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

~~sixseven~~ Significant Maritime and Industrial Areas (SMiAs) ~~in the New York City Comprehensive Waterfront Plan (CWP):~~ South Bronx, Newtown Creek, Brooklyn Navy Yard, Red Hook ~~Marine Container~~ Terminal, Sunset Park/Erie Basin, ~~and Kill Van Kull, and Staten Island West Shore.~~ (See maps in Part ~~IVIII.~~) The ~~major~~ 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; ~~or relatively few residents; and~~ availability of publicly owned land. All ~~sixseven~~ of these areas exhibit combinations of most of these characteristics. ~~The operation and expansion of these activities should comply with applicable state and national air quality standards for industrial and maritime areas.~~

~~Within the SMiAs, activities which support industrial or maritime activity are consistent with this policy. If an activity satisfies the criteria contained in standard 2.1 of this policy, then it is consistent with the City's goals for these areas and need not be subject to further review.~~

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 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. These same design strategies of ecologically sensitive industrial development can be used in other areas of the city's Coastal Zone, including areas in and adjacent to SMiAs where natural resources exist in predominantly industrial areas.

Policies for the SMiAs and the ESMIA

Within the SMiAs and ESMIA, activities that support industrial or maritime activity are generally consistent with this policy, though all projects should be reviewed with consideration of a site's specific features, its location and all the relevant policies of the WRP. A principal goal of the WRP for the SMiAs and the ESMIA is to support water-dependent and heavy industrial uses, including 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 VWRP. For projects within the ESMIA, Policies 2.2 and 4.2 have priority over all other policies of the VWRP.

Because the SMIAs and the ESMIA are ideally suited for water-dependent uses, discretionary actions relating to use should prioritize y would be given to maritime uses or uses that incorporate water-dependent activities. However, since the SMIAs and ESMIA encompass much of the city's land zoned for heavy industrial uses, and since M many industrial uses essential to the functioning of the city are not water-dependent and cannot incorporate water-dependent elements, non-water-dependent industrial uses may therefore be considered appropriate in the SMIAs and ESMIA as long as the waterfront infrastructure is maintained to the extent practicable to permit subsequent water-dependent use. Under certain circumstances, the development of upland portions of a lot with non-industrial, non-water-dependent uses may be appropriate to spur site reinvestment and revitalization through job creation, the adaptive reuse of obsolete buildings, and the cleanup of brownfield sites. Such projects should maximize the possibilities for maritime activity, but this may not be practicable in every case, due to economic factors or site-specific conditions.

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 also support emergency preparedness, sustainable practices, pollution prevention, and climate resilience.

In-kind, in-place bulkhead replacement and maintenance mMaintenance dredging are-is essential to the operation and preservation of working waterfront uses and are-is consistent with the intent of this policy. Any-sSuch a project activity within an SMIA or ESMIA will be presumed-is generally consistent with Policy 2 of the VWRP, and the consistency review and determination for such a project should focus on ensuring a safe disposal 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 are consistent with the goals of this policy 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 the policies other relevant policies the VWRP. 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 consistent with the VWRP 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 this Policy 2 as long as they do not inhibit the efficient operation of maritime and industrial activities. 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 storage and handling of hazardous materials should be utilized to the extent practicable.

Working Waterfront Uses outside the ESMIA or SMIA

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. ~~All working waterfront uses should be undertaken in a manner that is in compliance with state and national air quality standards.~~

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 (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. 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 working waterfront uses, and measures that support these uses such as dredging for navigation and maintenance purposes. Actions that would inhibit the safe and efficient operation of the SMIAs as industrial or maritime areas should be avoided.
- B. Maintain sufficient manufacturing zoning in SMIAs to permit the heavy industrial and water-dependent uses that are essential to the city's economy and the operation of utilities, energy facilities and city services.

- C. 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.
- D. Promote the development of temporary and permanent maritime hubs to support maritime operations. Maritime hubs are sites which contain one or more 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.
- E. Promote remediation, redevelopment, and re-use of contaminated sites. Explore opportunities for bioremediation.
- F. Target public investment to improve transportation access for maritime and industrial operations. 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.
- G. Support the construction and operation of rail freight facilities and intermodal freight transportation.
- H. 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 SMIA's, 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.
- I. 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 VWRP goals or economic considerations, may take precedence over the preservation or improvement of shorefront infrastructure to support waterborne transportation. ~~Preserve or improve existing shorefront infrastructure, including bulkheads, wharves, and piers, to permit simultaneous or subsequent water-dependent activity and to promote flood and erosion control.~~
- J. ~~Where feasible, give priority to~~ 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.

- K. Where feasible, development on property leased or sold by public agencies should be designed so that future berthing of maritime support vessels would be possible. Discretionary actions relating to changes in land use should evaluate the proposed development of uses other than water-dependent or heavy industrial uses to spur reinvestment and revitalization with consideration of the following:
- a) To the extent practicable, development should include measures to stabilize and maintain shoreline infrastructure to support water-dependent use.
 - b) Uses that may be incompatible with industrial activities should not be located adjacent to active industrial facilities unless appropriately buffered.
 - c) Consider locating non-water-dependent uses on the upland portion of a site, or at an alternative non-waterfront site.
 - d) For actions that would facilitate the development of non-water dependent and/or non-heavy industrial uses on a site with waterfront access, an analysis must be provided that examines:
 - The site's use, currently and within the last five years;
 - the ability of the site to be used for a maritime use important to port operations;
 - whether that use is still economically viable;
 - and whether any other maritime use may be economically viable at that location.

2.2 Encourage a harmonious relationship between working waterfront uses, compatible 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. 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.
- 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-and-railroad~~ 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 SMIA's 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 ~~areas that are important to operations of water dependent industry.~~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. ~~Dredge spoils-Dredged material~~ must be ~~disposed of~~placed using an approved method at an approved site. Priority for the ~~disposal~~placement of dredged materials should be given to

beneficial uses, such as wetland creation, water quality improvements, beach nourishment, or port redevelopment, ~~that are appropriate for the material and its level of contamination.~~

- 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 CENTERS.

Introduction

~~Commercial~~ 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 ~~cruise ships, ferries,~~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 ~~and small pleasure craft~~. Such activities are compatible with many residential and commercial uses, and can locate throughout the waterfront where market and site conditions permit. ~~Passenger ship operations and~~ 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 VWP.

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, subpolicy 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. ~~For purposes of operational continuity of passenger ship operations and at maritime centers, in-place bulkhead replacement and repair, and replacement of docks or other maritime infrastructure will be considered maintenance activities not requiring VWP consistency review.~~

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.

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 ~~pleasure~~-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, ~~limiting~~managing congestion in harbors and channels, and mediating conflicts among water users. ~~When determining rights to navigable waters, priority should be given to commercial vessels.~~

3.23 Minimize conflicts between recreational, ~~commercial, boating and ocean-going freight vessels.~~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. ~~Site~~Design facilities for recreational vessels so as to ~~avoid locations with~~ protect against strong currents ~~and those prone to~~, heavy ~~wave or 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.

3.34 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 ~~r~~unoff 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 ~~central goal~~parallel goals of this policy ~~is~~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 ~~the~~ natural ecological communities. Many of these resources are presently protected as public parklands, including designated Forever Wild Preserves. ~~Guidance for activities in and adjacent to tidal and freshwater wetlands is provided by State and Federal wetlands laws, including the Freshwater Wetlands Act, the Tidal Wetlands Act, and Stream Protection Act, Section 401 Water Quality Certification, the Clean Water Act, or their successors.~~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 include~~esing~~ 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 ~~is~~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.

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. the waterfront areas along the south shore of Staten Island and Riverdale in the Bronx contain a variety of important natural resources, including Significant Coastal Fish and Wildlife Habitats, as well as upland habitats intermingled with residential development. This policy is therefore applicable to determinations of consistency for any proposed action within these two areas.

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, ~~Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.~~

- A. Avoid activities that may cause or cumulatively contribute to permanent adverse changes to the ecological ~~complexes-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 ~~the ecological complexessystems~~.
- C. To the extent practicable, remediate and restore ecological ~~complexes-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.

- 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 indigenous 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 ~~nonindigenous~~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 native 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 introductions 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 intro 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 indigenousresilient 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. 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, ~~Exploitably~~ 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).

4.4.8 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 Coastal Zone~~ area. Quality considerations include ~~both~~ management of pollution from ~~both~~ point sources and the nonpoint pollution controls mandated by the 1990 Coastal Zone Act Reauthorization Amendments 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 ~~need to comply with applicable~~ are subject to state and local water quality standards and regulations. Specific nonpoint pollution management measures are presented in ~~the~~ 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 ~~adverse~~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 ~~adverse~~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 ~~best~~sustainable stormwater management ~~practices, including strategies, such as green infrastructure, use of permeable surfaces, on-site detention, and~~ the preservation and enhancement of ~~coastal~~ 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 ~~and dredge spoil disposal~~ 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 ~~or improves aesthetic~~ 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 ~~adverse~~ 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 ~~and in order~~ to protect life, structures, ~~infrastructure~~, and natural resources ~~by reinforcing state and city~~. ~~Much of New York City's social, economic, cultural, and natural resources are located in coastal areas where risks from flooding and erosion regulations. Development in coastal areas needs to be are likely to increase due to climate change and sea level rise. These risks should be identified and managed to reduce exposure to these adaptive measures to manage these risks should be considered. 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. The NPCC projects that by the 2050s, sea levels could be 12 inches higher than they are today or, in the event of rapid melting of land-based polar ice, as much as 29 inches higher than today. By the 2080s, increases of up to 23 to 55 inches are projected. In addition, coastal floods and storms are projected to occur more frequently with higher associated storm surges.~~

~~These types of long-term projections necessarily include a degree of uncertainty regarding the rate and magnitude of sea level rise. 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.~~

~~Through PlaNYC, New York City is pursuing many initiatives to reduce greenhouse gas emissions, as well as 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. The inherent protective value of natural shorelines needs to be enhanced to ensure continuing benefits to the city, region, and state. Barrier landforms that protect significant public investment or natural resources should be maintained or restored. The benefits of erosion ~~and flooding control structures for property owners will~~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). Maintenance of bulkheads and other hard erosion protection methods is essential to the function of the Significant Maritime and Industrial Areas (SMIAs) and, within these areas, should have precedence over other erosion protection methods and other policies. 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 and non-structural measures 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, on previously bulkheaded sites,

the maintenance and replacement of bulkheads or other shoreline protective measures should take precedence. For sites with no existing bulkhead and where there has been limited disturbance to wetlands, natural shoreline measures should have precedence. It is a goal of this policy to employ measures most suited to the use and condition of differing locations. 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



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, Section 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 condition and 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 exposure to risks from flooding and other coastal hazards in the most environmentally sensitive manner 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. Unavoidable impacts that result from a project should be mitigated to the extent practicable.
- E. Maximize the flooding and erosion protective capacities of natural shoreline features ~~and minimize~~ 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. ~~Nonstructural measures have priority over structural measures, particularly within the SNWAs, unless hardened shoreline treatments are necessary (as described in 6.I.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. ~~Use vegetative~~ 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 ~~shoreline site~~ characteristics including wave action, exposure, geometry and sediment composition. ~~Use vegetative plantings~~ 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 ~~vegetative~~ plantings alone to control erosion in areas where the potential success rate for vegetative methods is high.
- G. Use ~~hard structural erosion protection measures, such as bulkheads, only~~ hardened shoreline treatments (concrete, steel, vinyl, etc) where ~~hazard avoidance of the hazard is not practical~~ 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 SMIA and Priority Marine Activity Zones where ~~these~~ such measures will either maintain support the maintenance or develop 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 by the NPCC, or any successor thereof) 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 replacement of existing facilities and projects which would neither increase the population exposed nor the level of exposure to coastal flooding—vulnerabilities to and impacts of sea level rise, coastal flooding, and storm surge over the lifespan of the proposed project should be assessed. For projects with a lifespan beyond the timeframe of any available projections, the furthest projection by the NPCC or its successor should be used. Though the considerations will vary depending on the type and geographic scope of each project, the following are examples of the types of information that may be considered in this assessment:
- Current conditions and the projections of sea level rise.
 - Features of the project likely to be vulnerable to temporary flooding, frequent inundation, wave action, or erosion.
 - The elevation of the project's major physical structures, and potentially vulnerable features. Potentially vulnerable features include, but are not limited to, residential living 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, and maritime infrastructure.

- The current flood zone as established by FEMA FIRMs, any associated base flood elevation, and the range of the projected future flood elevations based on sea level rise projections.
- The elevation and extent of flood-protective structures or salt-water-resistant materials.
- How flood waters can enter and leave without causing disruption.
- Features which increase the project's ability to withstand wind, wave action, and flooding.

B. Incorporate design techniques in projects that address the potential risks identified and/or which enhance the capacity to incorporate adaptive techniques in the future. Climate resilience techniques should aim to protect lives, minimize damage to systems and natural resources, prevent loss of property, and, if practicable, promote economic growth and provide additional benefits such as provision of public space and intertidal habitat. The appropriate technique for a given project depends on case-by-case considerations, including such factors as the project's lifespan, the costs and benefits of incorporating a technique, and potential impacts on ecological health, urban design, economic activity, and public space. To the extent that potential techniques are identified but not incorporated, an explanation should be provided as to why incorporating a potential technique is 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 potential techniques to be considered and incorporated into project design, as appropriate:

- 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 should 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 hazardous materials from 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. The project should also provide a qualitative analysis of potential adverse impacts on existing resources (including ecological systems, public access, visual quality, water-dependent uses, infrastructure, and adjacent properties) as a result of the anticipated effects of climate change. For example, if a proposed project that includes storage of hazardous materials is located in a floodplain, consideration should be given to the possibility of flooding and, to the extent warranted, the methods to prevent adverse effects on the surrounding area in such an event, such as raising or flood-proofing storage areas.

D. Projects that involve construction of new structures directly in the water or at the water line should be designed to protect inland structures and uses from flooding and storm surge when appropriate and practicable.

6.23 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 ~~only~~ 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 of significant natural resources, or protection of public open space and recreation facilities.
- 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 enhance natural habitats.

6.34 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, AND TOXIC POLLUTANTS, HAZARDOUS SUBSTANCES, 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 ~~air~~, water pollution control, or resource recovery facilities; ~~and dredge spoils~~;) 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 ~~substances~~ ~~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. ~~The proper handling, disposal and transport of these materials is most important in the SNWAs. Hazardous materials and toxic substances can contaminate soils, pollute waterways, and interact in potentially hazardous combinations, 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.~~

~~Measures to ensure public health and safety in the event of a coastal flood or storm surge should be considered for all projects that involve the storage and/or use of these materials. As discussed further in Policy 6, climate change and sea level rise will likely increase the risks of flooding and storm surge for the city's Coastal Zone. These factors could pose additional risks in areas adjacent or inland from sites where hazardous materials are present.~~

Related Regulations

Projects involving the handling, management, transportation, or discharge of solid wastes and hazardous ~~substances~~ ~~materials~~ need to comply with the applicable state and local laws or their successors. 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-~~0101~~ ~~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.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, ~~and~~ 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 ~~which 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 ~~to effectively target pest populations, herbicides, insecticides, and fertilizers~~ and to prevent direct or indirect entry ~~of pesticides~~ 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. ~~The level of clean-up may be determined by~~ Utilize best practices during the future use remediation process to ensure safe containment of contaminants in the event of the site a coastal storm.
- C. Pursuant to the NYC Community Right to Know Law and local and state water quality improvement programs, provide an adequate plan for pollution prevention, good housekeeping and control of hazardous wastes, toxic pollutants, and substances hazardous to the environment for any facility using such materials. To the extent practicable, this plan should consider the impacts of projected climate change and sea level rise on risks from flooding.
- D. Use accepted best design and management practices, including industrial pollution prevention, for the storage, use and disposal of hazardous materials, toxic pollutants, and other materials that may pose risks to the environment and public health and safety. Use best 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 storage, transfer, or use of materials 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 ~~adversenegative~~ impacts from potential oil spills by the appropriate siting of petroleum off-loading facilities and use of best practices.
- B. ~~Provide an adequate plan~~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 ~~substances-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 ~~substances-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 ~~provide~~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 ~~would be~~ 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 ~~zoning text~~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 ~~standards of the zoning resolution should~~principles elaborated in Policy 8.6 should be used as ~~a guideline~~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 risk to public health and safety or to industrial operations, this policy would encourage public parks, public piers, and ~~bikeway~~greenway routes along the industrial waterfront. 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 ~~under water~~ (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; and 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 ~~and~~, maintain ~~existing~~, and enhance physical, visual and recreational access to the waterfront.**
 - A. Protect ~~and~~, 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. ~~The requirements of the New York City Zoning Resolution should guide the location and quality of public access areas.~~

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 ~~SNW~~ AsSNWAs, the ESMIA, and Recognized Ecological Complexes, provide public access, interpretive signage, and recreation compatible with the preservation of natural resources. To minimize ~~adverse~~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 for private development in industrially zoned areas where compatible and appropriate.

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

8.3 Provide visual access to ~~coastal lands, waters and open space~~ 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. ~~The requirements of the NYC Zoning Resolution should guide the location and amount of~~ For sites where physical public access is unfeasible, visual access should be considered and provided to the extent practicable.

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

- A. When ~~acquiring-reviewing actions relating to the use of publicly owned land or the acquisition of~~ waterfront property for ~~the provision of~~ public access ~~and open space,~~, 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 ~~community district~~ area with less than ~~New York City median of 12.5~~ acres of open space per 1000 ~~population~~ 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; ~~or an Urban Cultural Park site.~~

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. Minimize interference with public trust rights to the extent practicable, when exercising riparian interests. Provide mitigation to the extent appropriate where public access would be substantially impeded by the proposed activity.

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.

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.
- 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 and storm surges.

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, or commercial vessels—as appropriate to the context—on piers, platforms, and bulkheaded shorelines. Provide ladders 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, ~~and other structures~~ 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 resources 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 ~~practical~~ 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 ~~Special Natural Area Districts (SNAD)~~, 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 ~~SNADs~~, 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, and as well as those pertaining to the discovery, investigation, and recovery of archaeological resources.

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

- A. Protect ~~designated~~ 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 resources 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; and
• ~~any resource that is a significant component of the New York City Urban Cultural Park.~~

- 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.

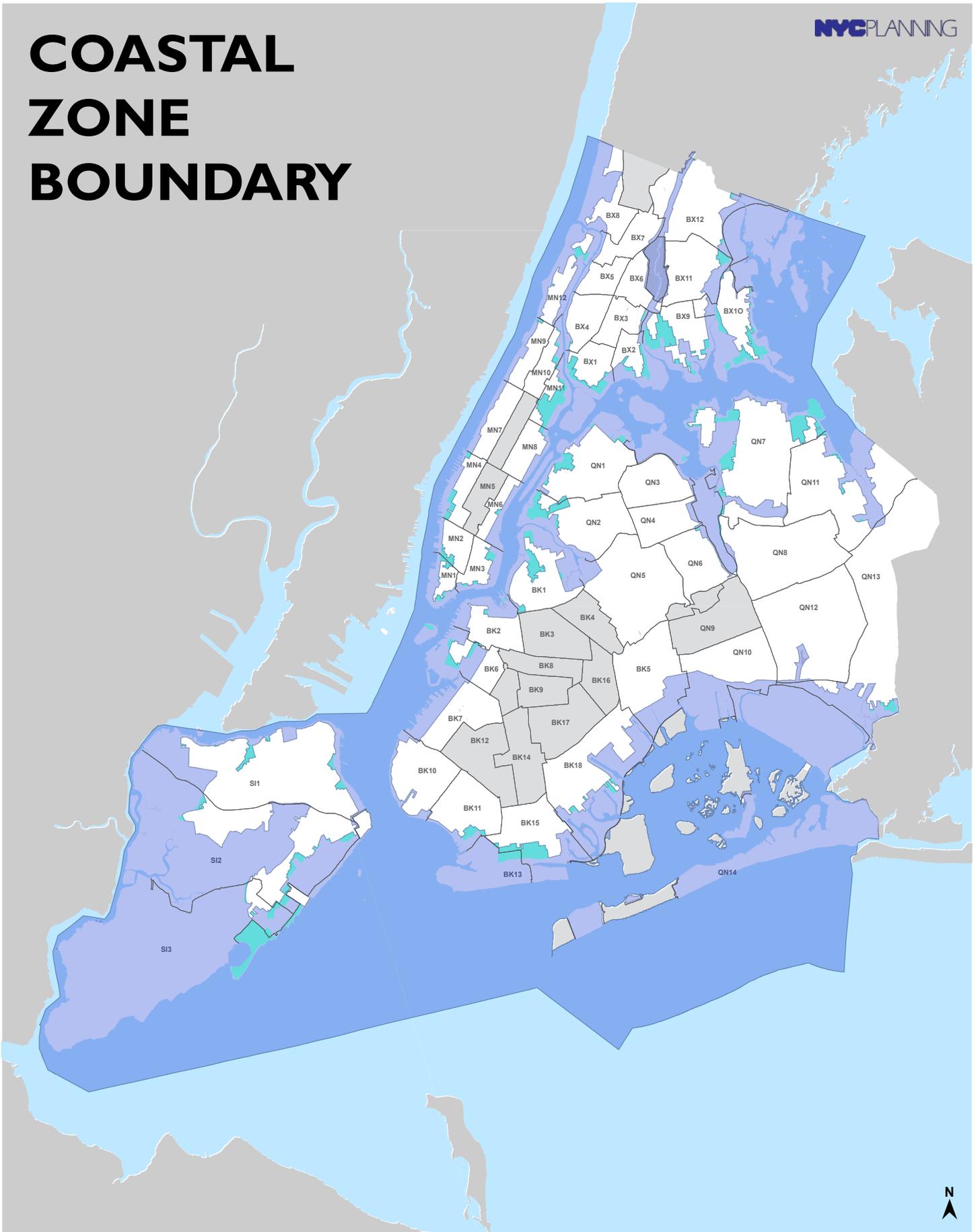
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PART III: MAPS

CONTENTS

1. Coastal Zone Boundary	63
2. Special Natural Waterfront Areas	79
3. Significant Maritime and Industrial Areas	85
4. Arthur Kill Ecologically Sensitive Maritime and Industrial Area	93
5. Priority Marine Activity Zones	95
6. Recognized Ecological Complexes	111

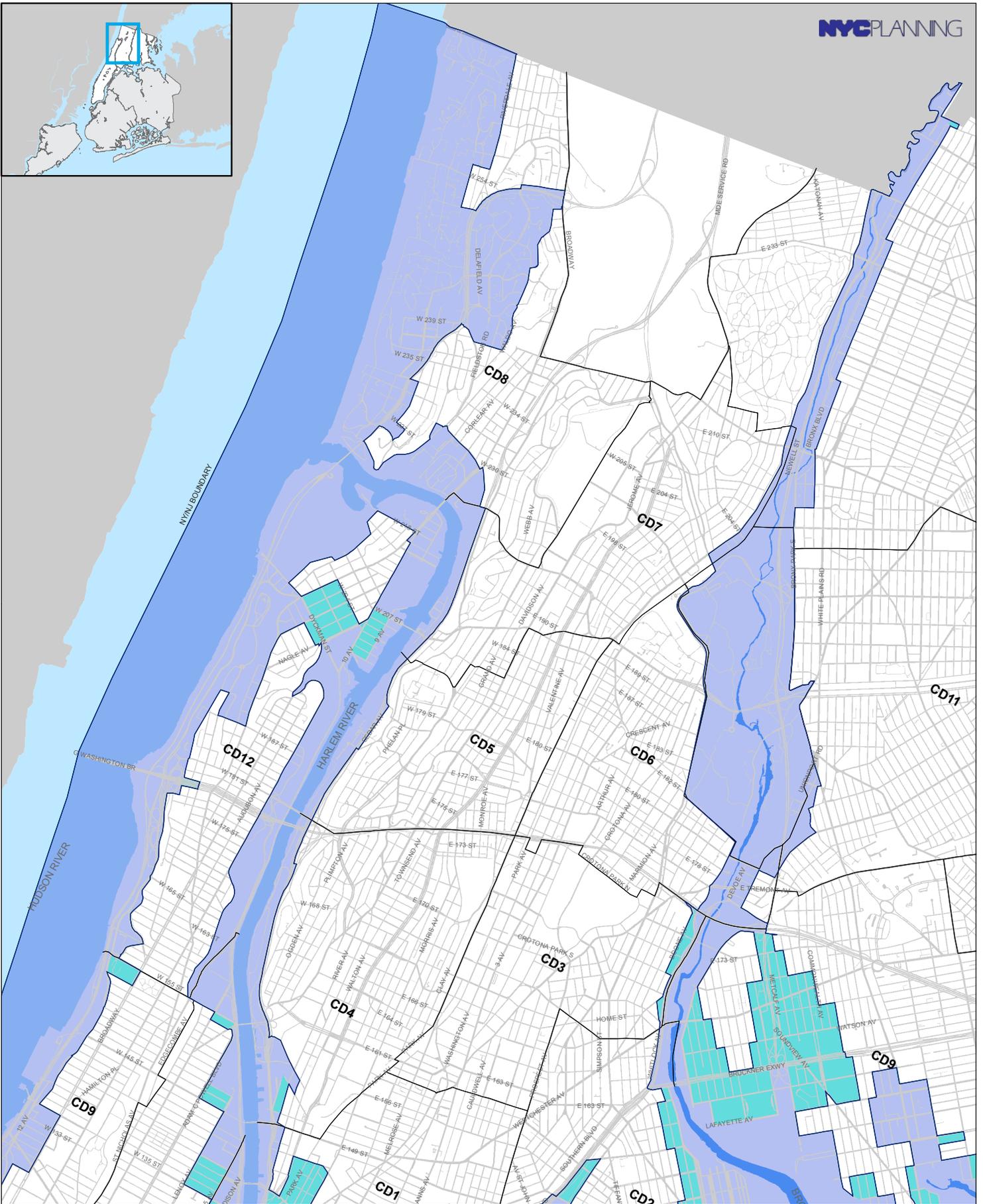
COASTAL ZONE BOUNDARY



Coastal Zone Boundary

DRAFT

- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Affected Community District

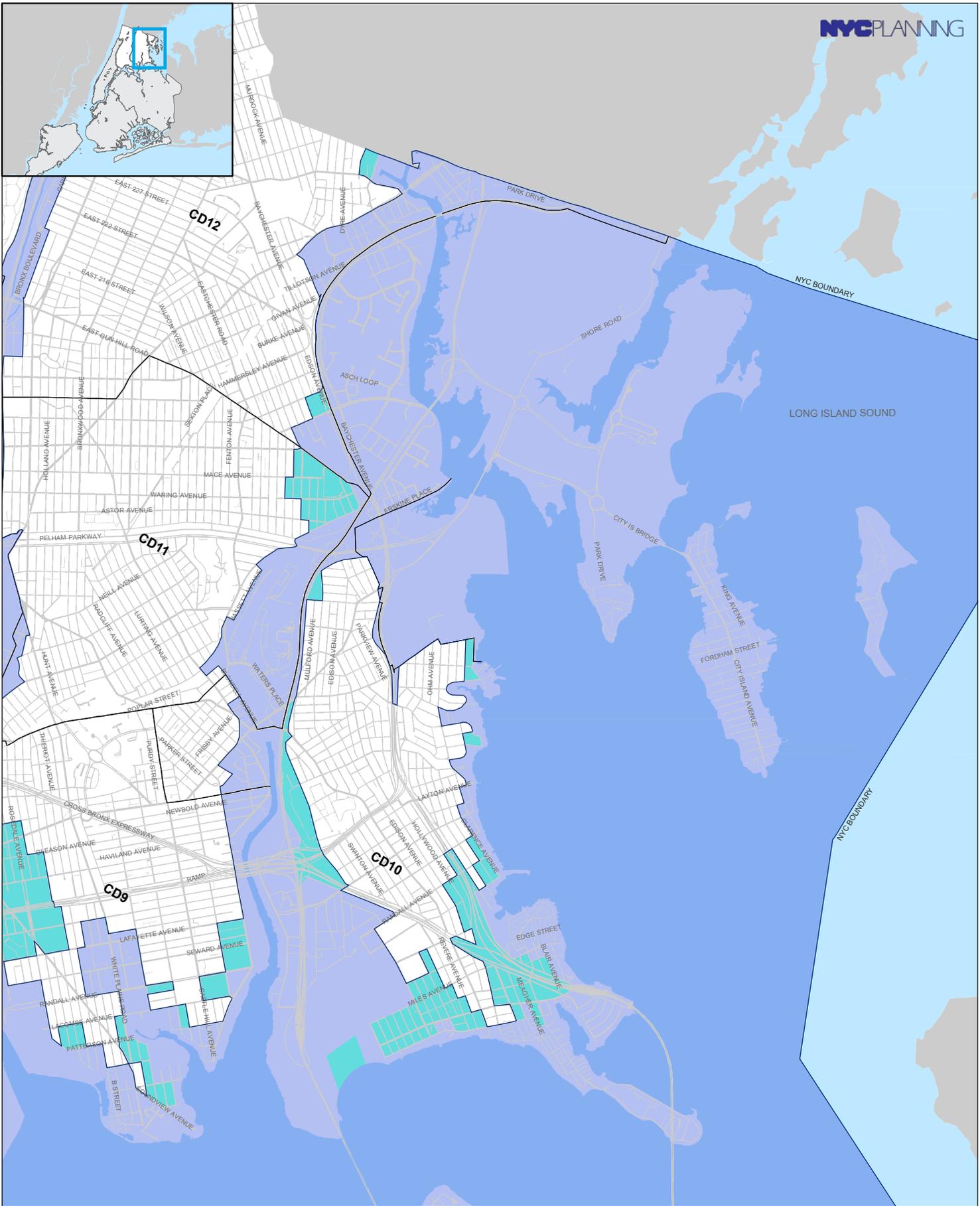


Coastal Zone Boundary

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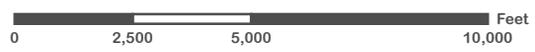
-  Coastal Zone - Land (Existing)
-  Coastal Zone - Water (Existing)
-  Coastal Zone Boundary (Proposed Additions)
-  Community Districts

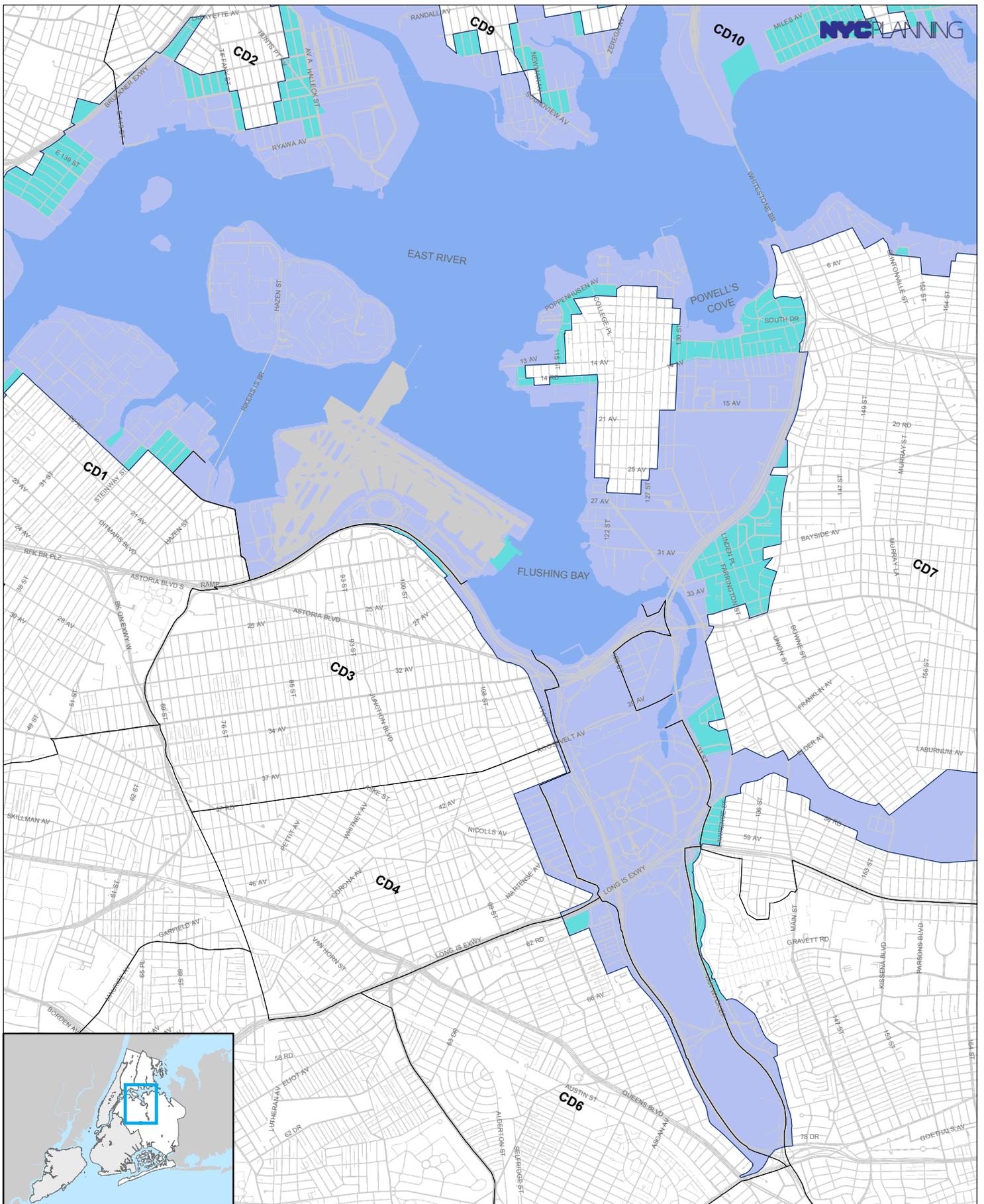




Coastal Zone Boundary

- DRAFT
- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts



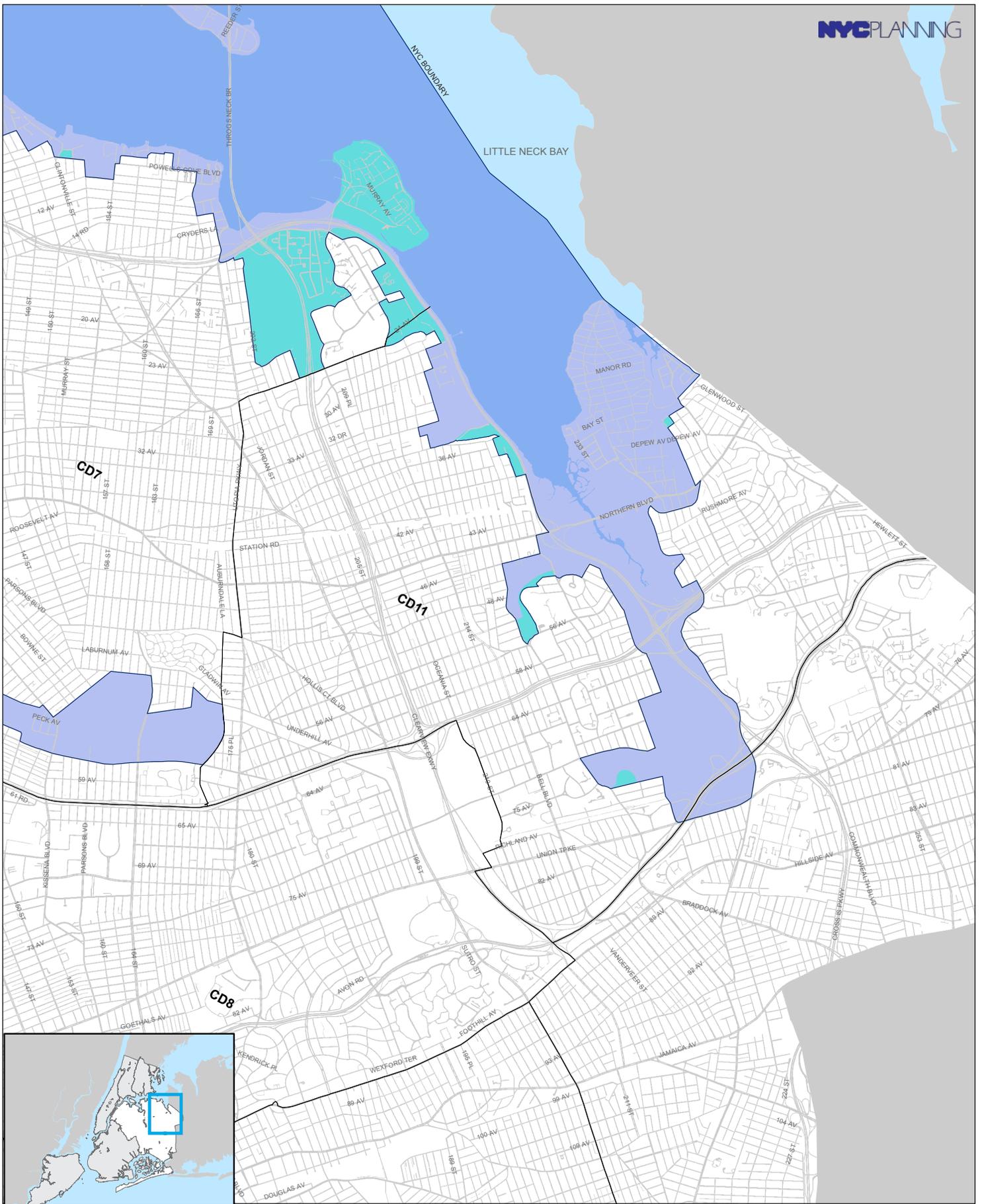


Coastal Zone Boundary

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- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts



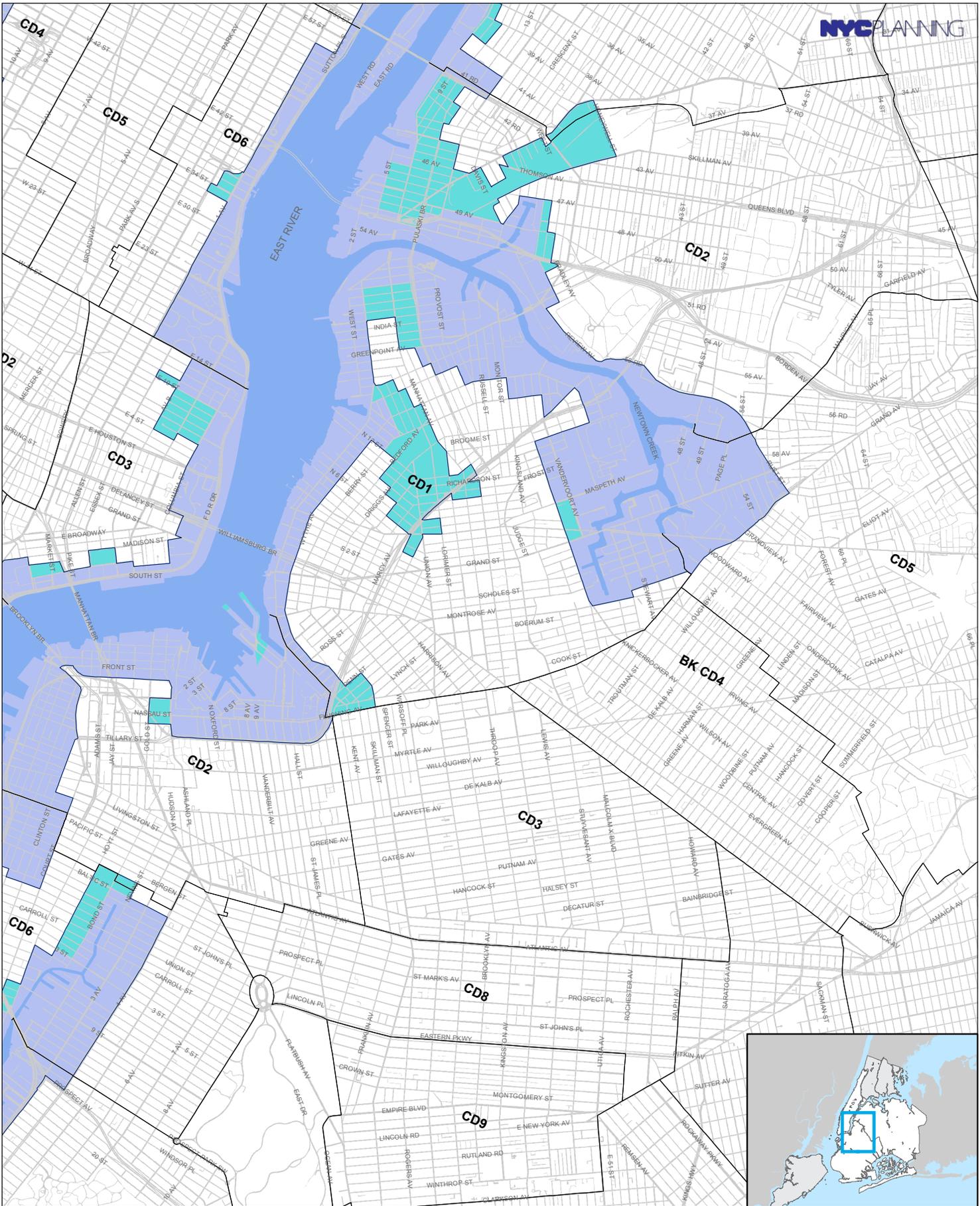


Coastal Zone Boundary

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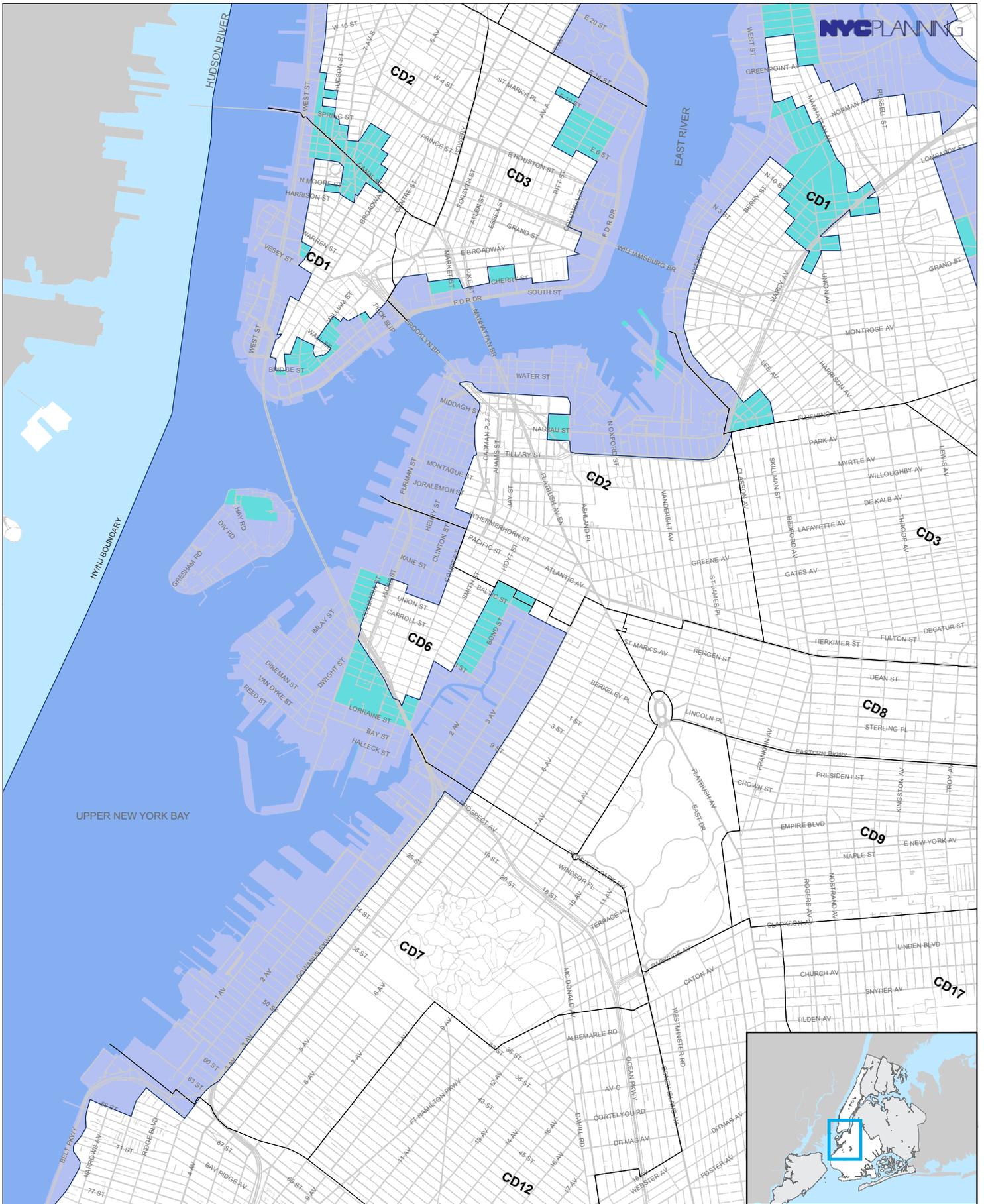
- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts





Coastal Zone Boundary

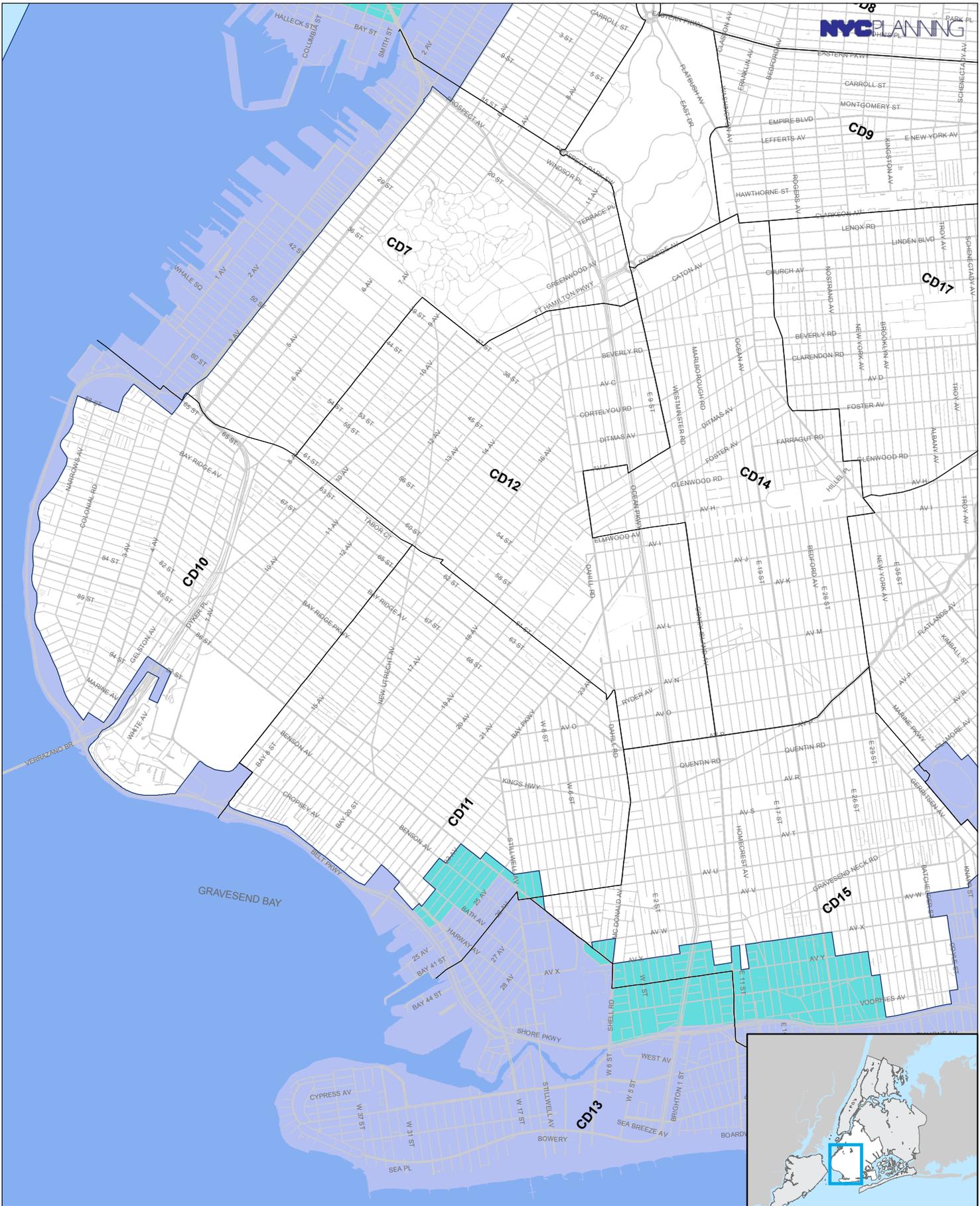
- DRAFT
- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts



Coastal Zone Boundary

DRAFT Coastal Zone - Land (Existing) Coastal Zone - Water (Existing) Coastal Zone Boundary (Proposed Additions) Community Districts



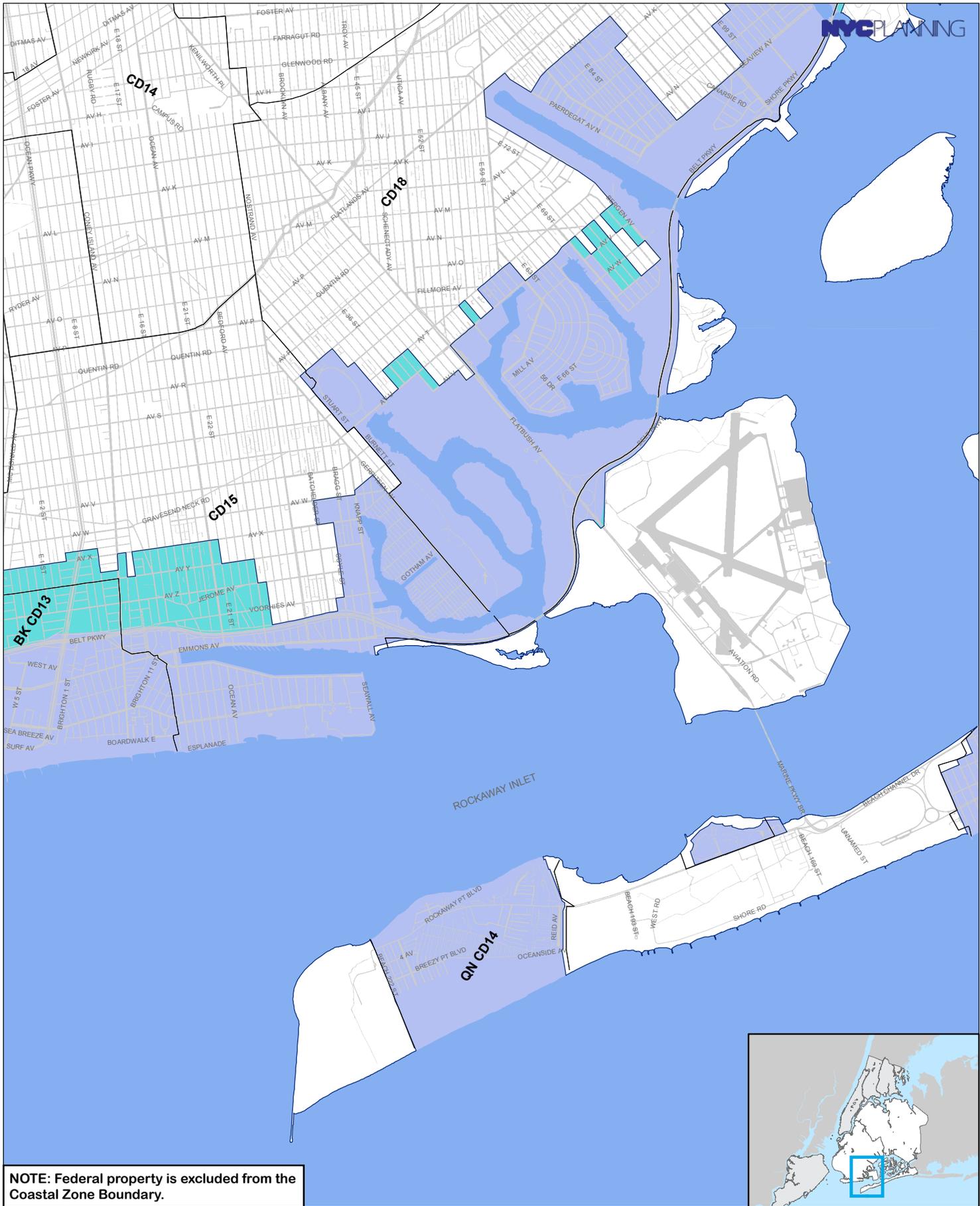


Coastal Zone Boundary

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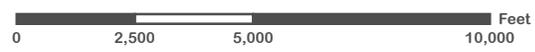
- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts





Coastal Zone Boundary

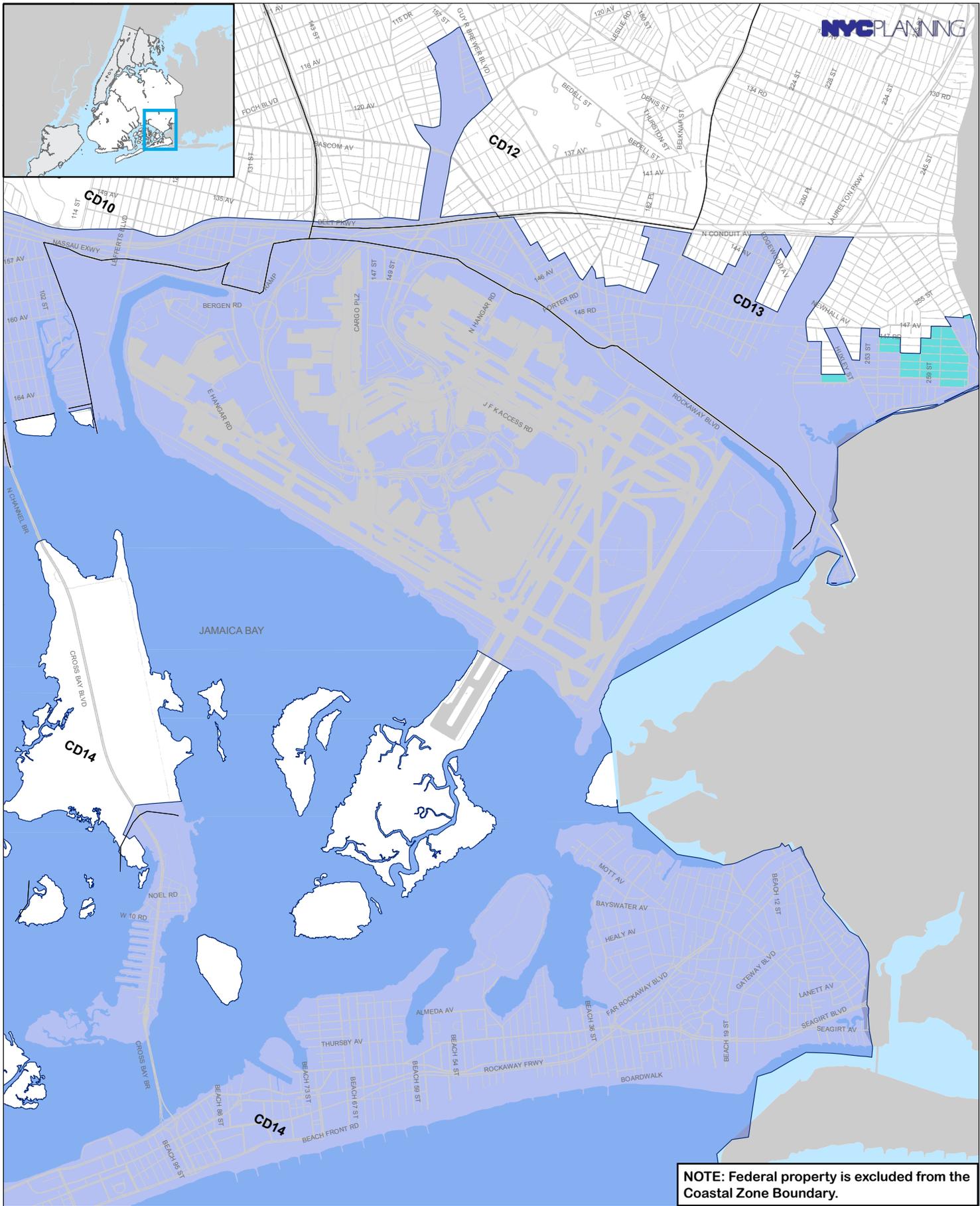
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- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts





Coastal Zone Boundary

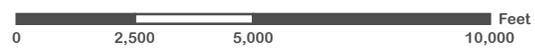
- DRAFT**
- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts

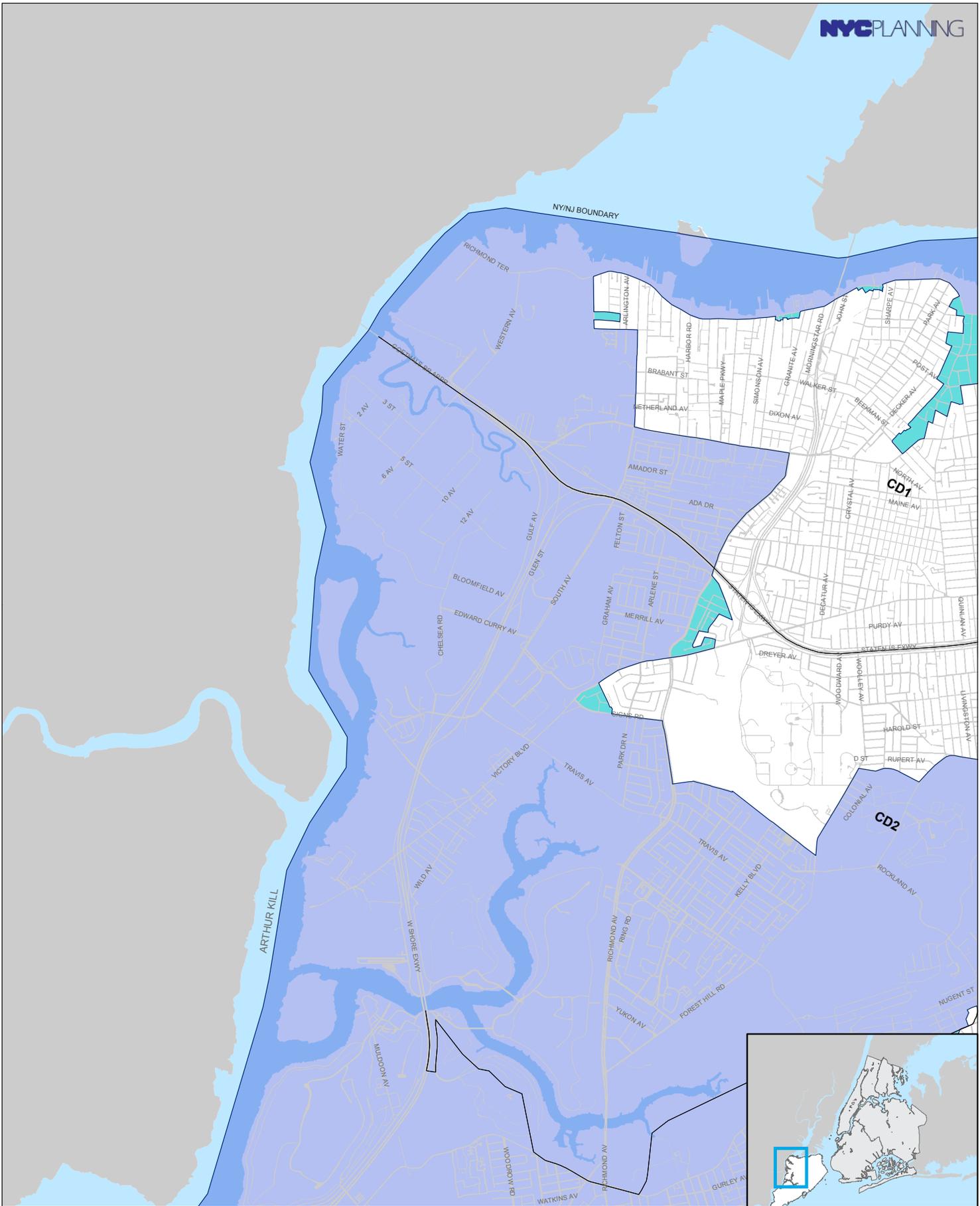


NOTE: Federal property is excluded from the Coastal Zone Boundary.

Coastal Zone Boundary

- DRAFT**
- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts

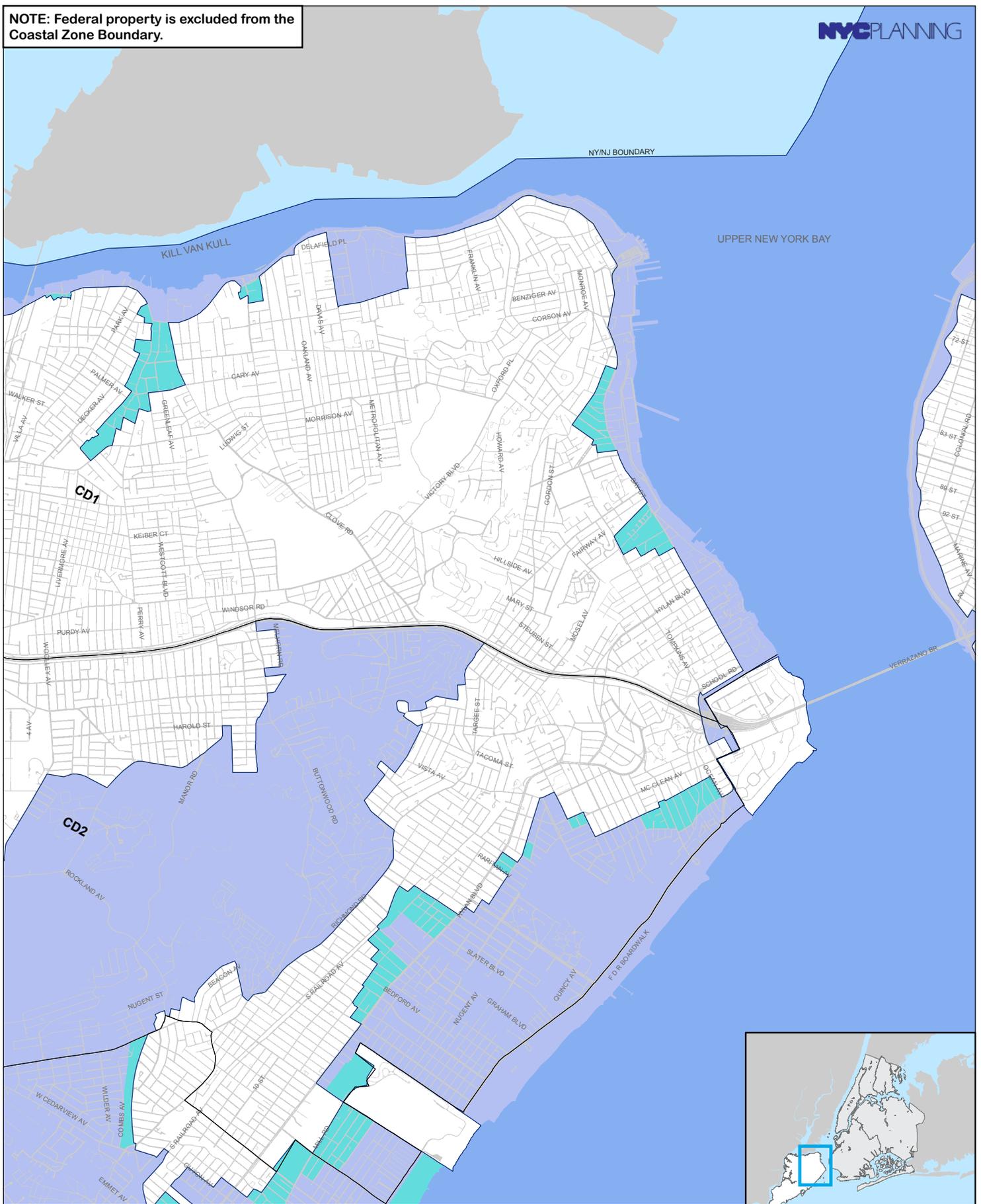




Coastal Zone Boundary

- DRAFT**
- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts

NOTE: Federal property is excluded from the Coastal Zone Boundary.



Coastal Zone Boundary

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- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts

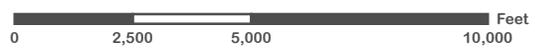




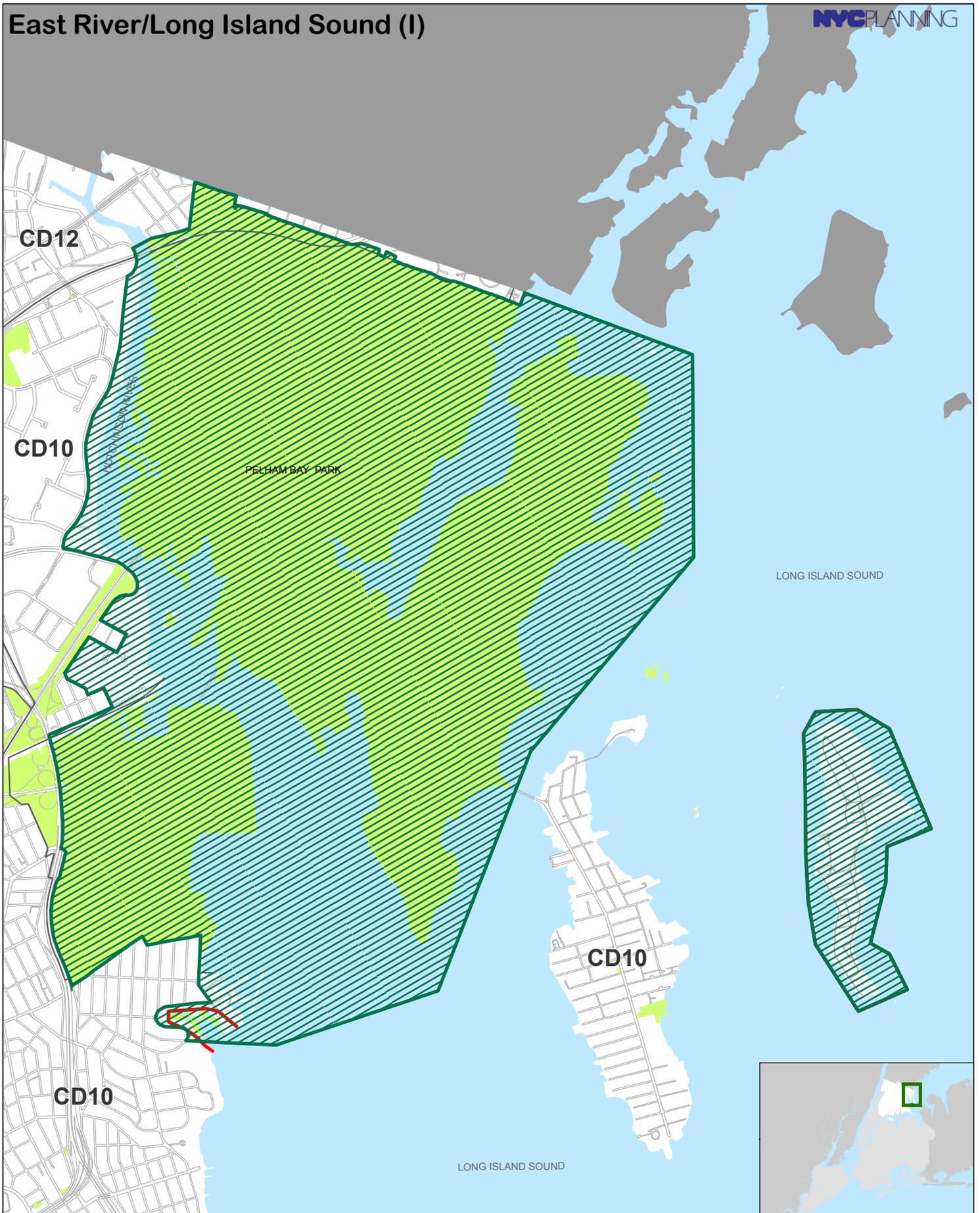
Coastal Zone Boundary

DRAFT

- Coastal Zone - Land (Existing)
- Coastal Zone - Water (Existing)
- Coastal Zone Boundary (Proposed Additions)
- Community Districts



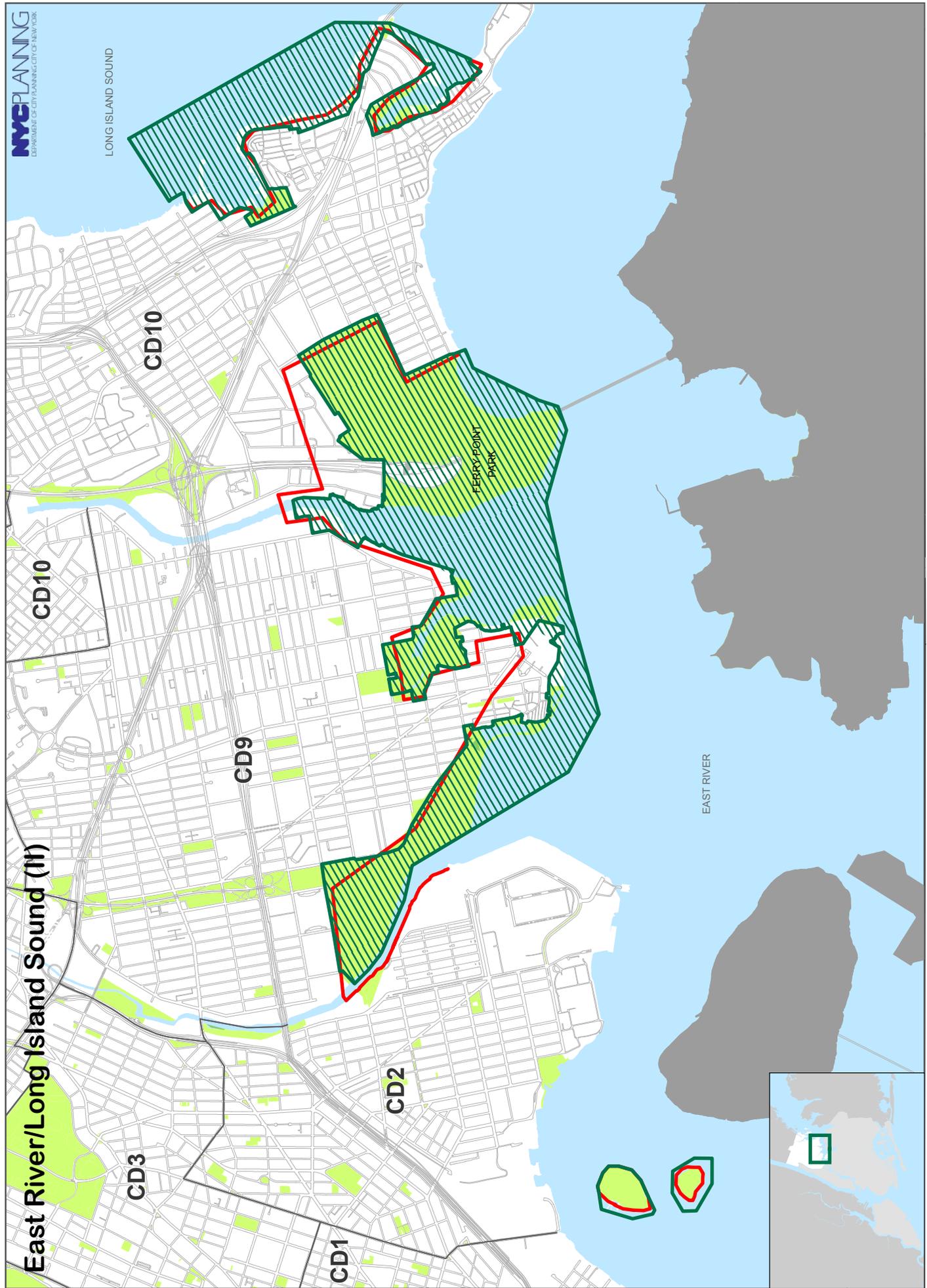
SPECIAL NATURAL WATERFRONT AREAS



Special Natural Waterfront Areas

0 1,250 2,500 5,000 Feet

DRAFT  Proposed SNWA Boundary  Existing SNWA Boundary  NYS Parks  NYC Parks



East River/Long Island Sound (II)

LONG ISLAND SOUND

CD10

CD10

CD9

CD2

CD3

CD1

FERRY POINT
PARK

EAST RIVER

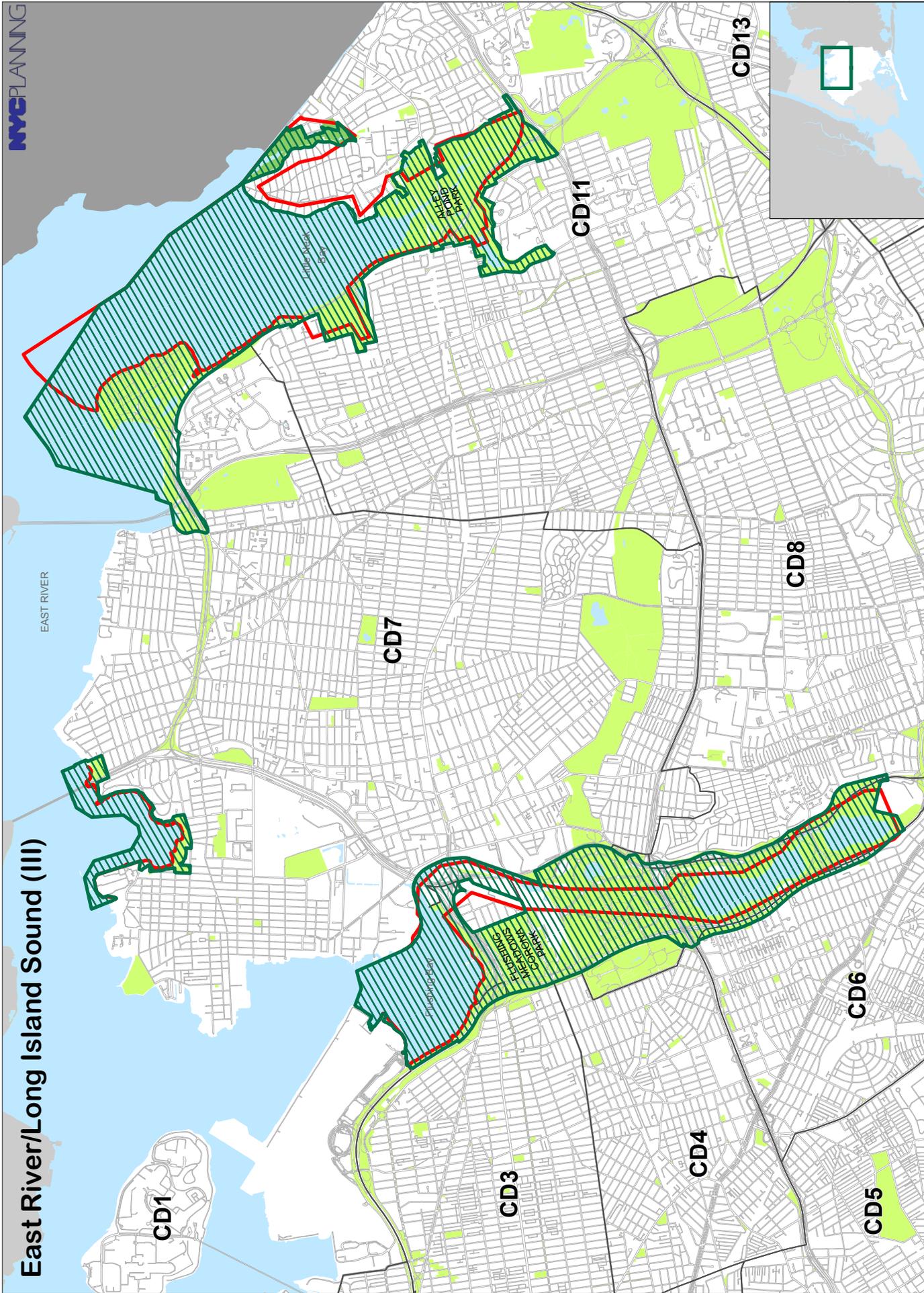


Special Natural Waterfront Areas

- Proposed SNWA Boundary
- Existing SNWA Boundary
- New York State Parks
- New York City Parks

DRAFT

East River/Long Island Sound (III)



Special Natural Waterfront Areas

DRAFT



Proposed SNWA Boundary



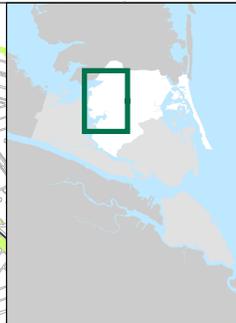
Existing SNWA Boundary

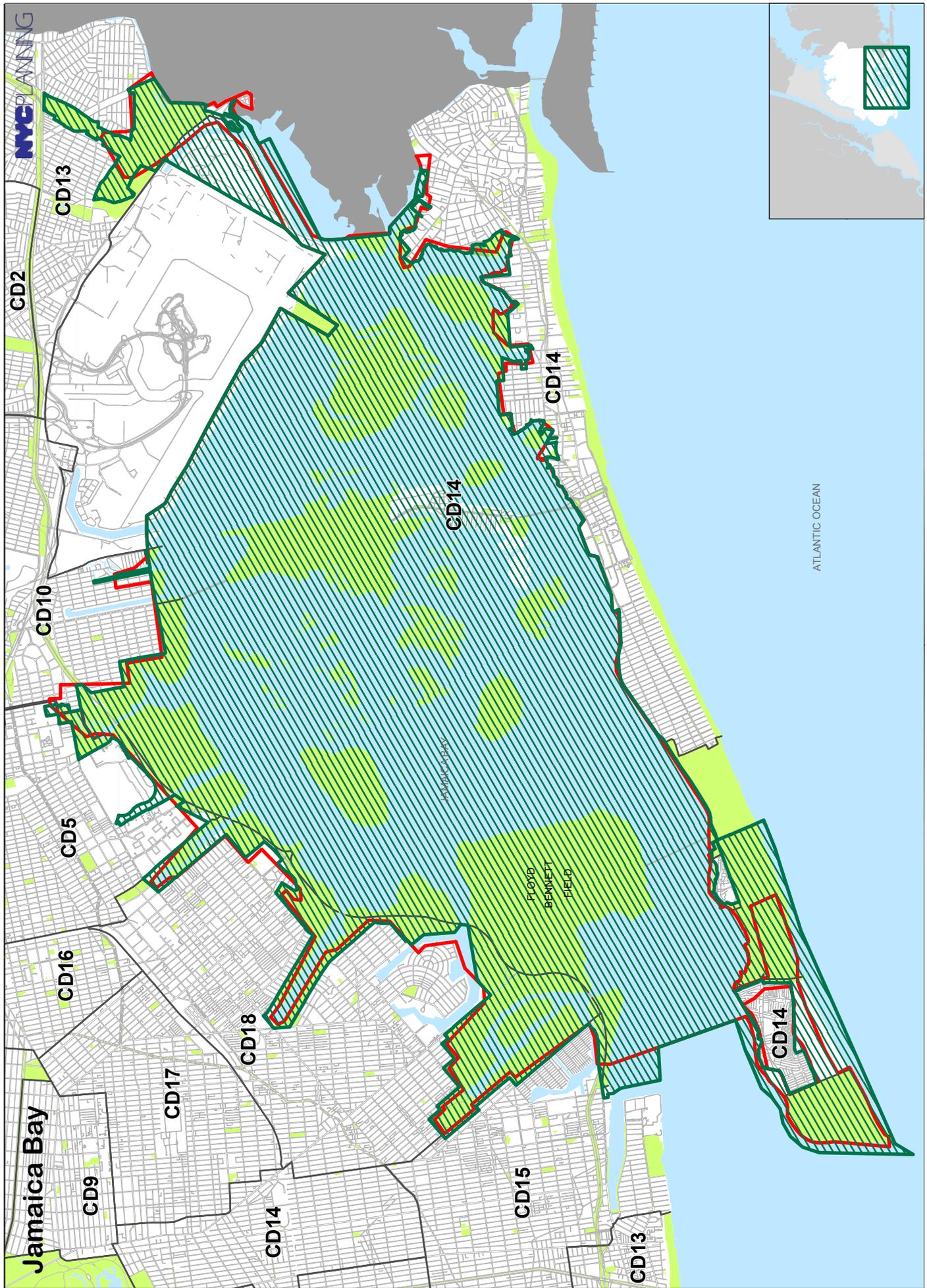


New York State Parks



New York City Parks



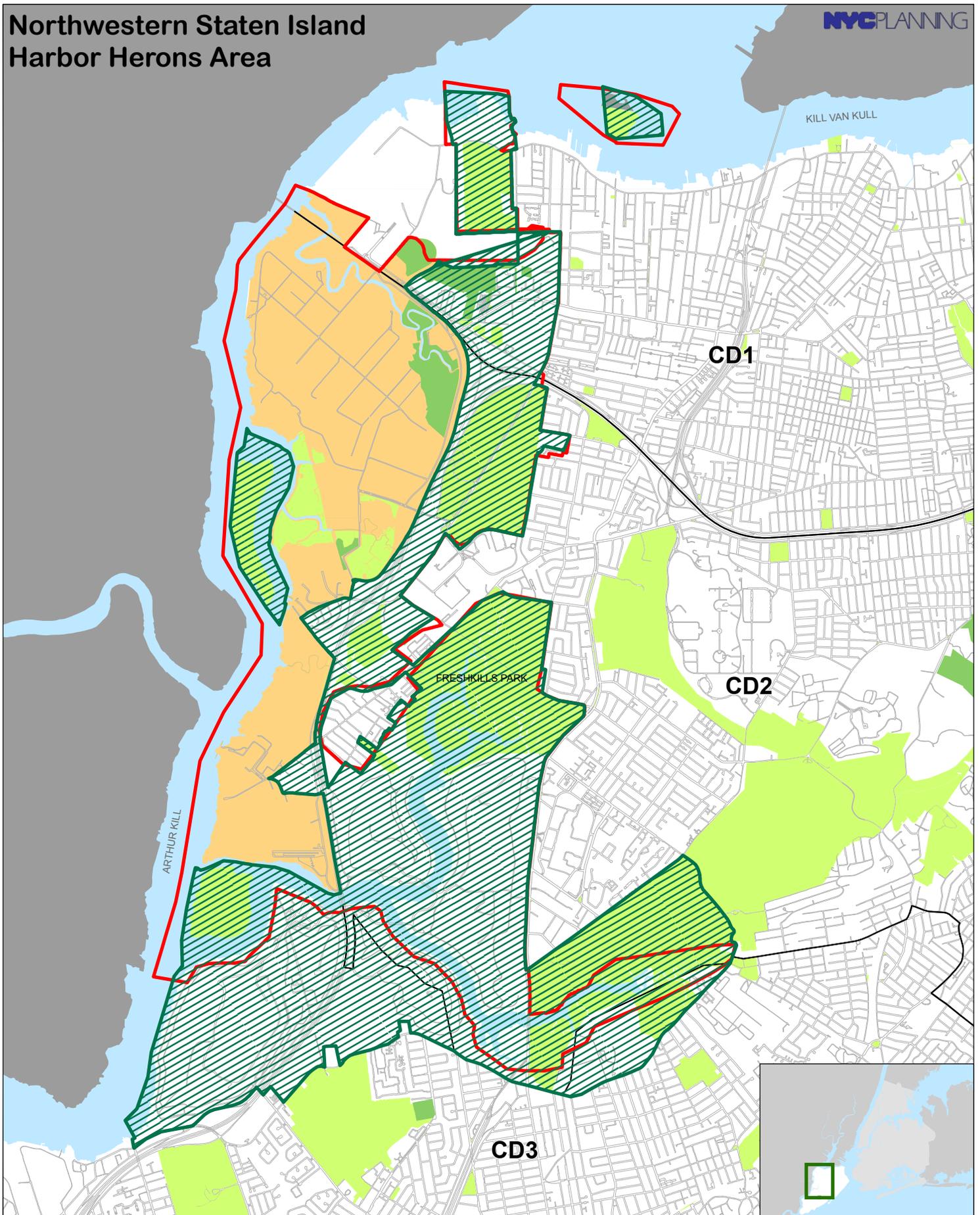


Special Natural Waterfront Areas
DRAFT

- Proposed SNWA Boundary
- Existing SNWA Boundary
- New York State Parks
- New York City Parks

Feet
 0 5,000 10,000 20,000

Northwestern Staten Island Harbor Herons Area



Special Natural Waterfront Areas

DRAFT



Proposed SNWA Boundary



Existing SNWA Boundary



NYS Parks



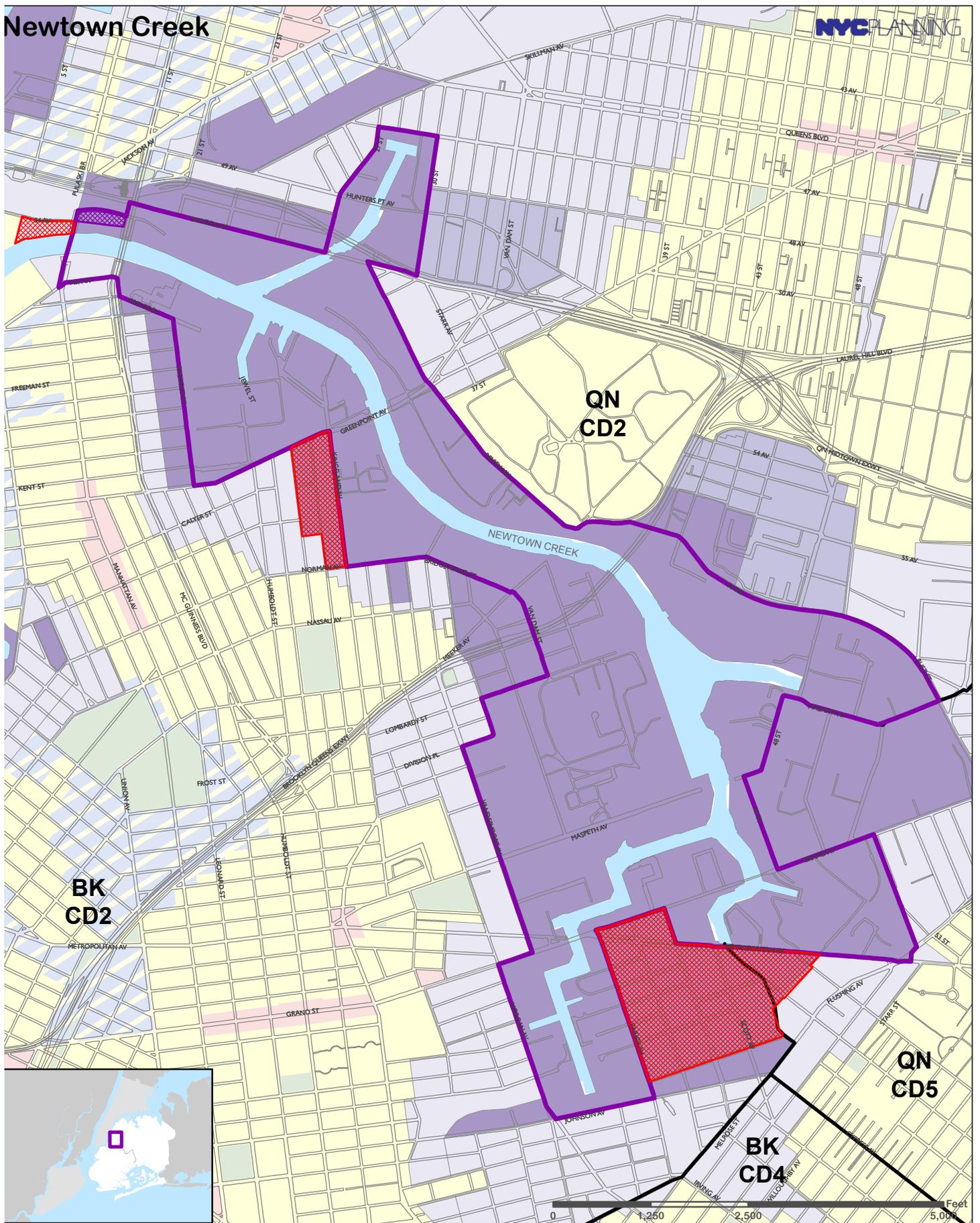
NYC Parks



ESMIA



SIGNIFICANT MARITIME AND INDUSTRIAL AREAS

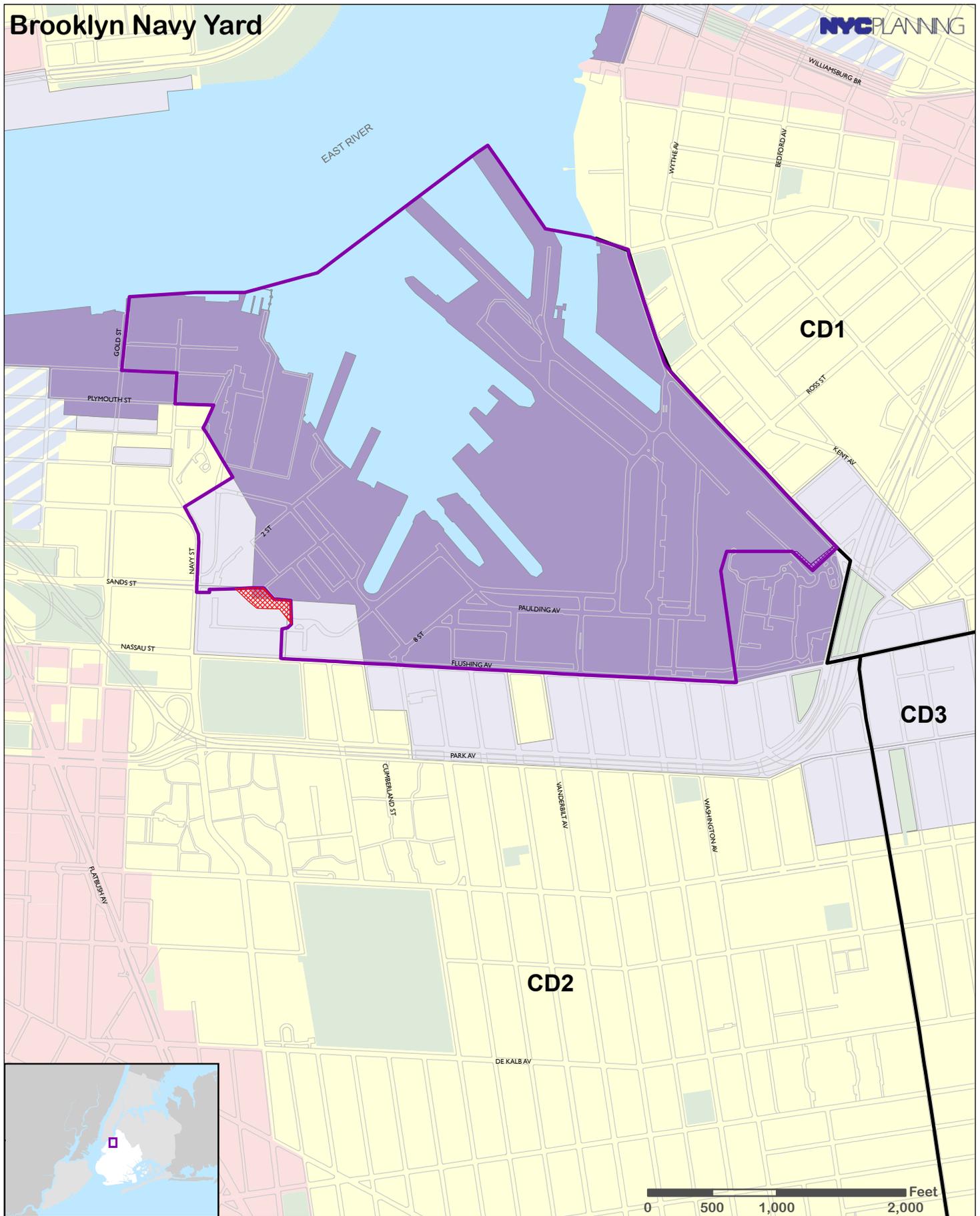


Significant Maritime and Industrial Areas

- RAFT
- Proposed SMIA Boundary
- Proposed SMIA Addition
- Proposed SMIA Elimination

Zoning Districts

- Residential
- Commercial
- Park
- Mixed Use
- M1
- M2
- M3

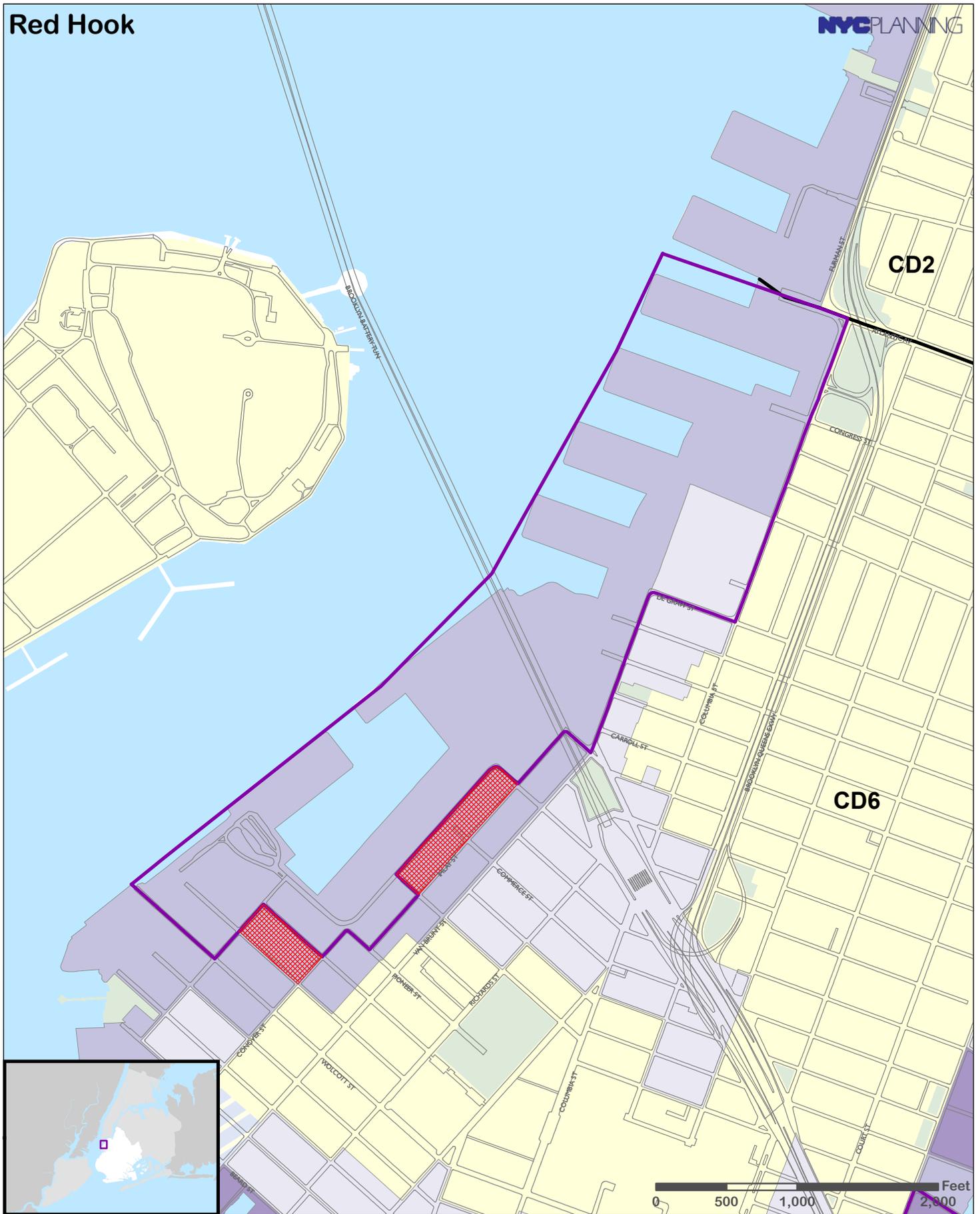


Significant Maritime and Industrial Areas

- DRAFT**
- Proposed SMIA Boundary
- Proposed SMIA Addition
- Proposed SMIA Elimination

- #### Zoning Districts
- | | | |
|--|--|---|
| Residential | Park | M1 |
| Commercial | Mixed Use | M2 |
| | | M3 |





Significant Maritime and Industrial Areas

DRAFT

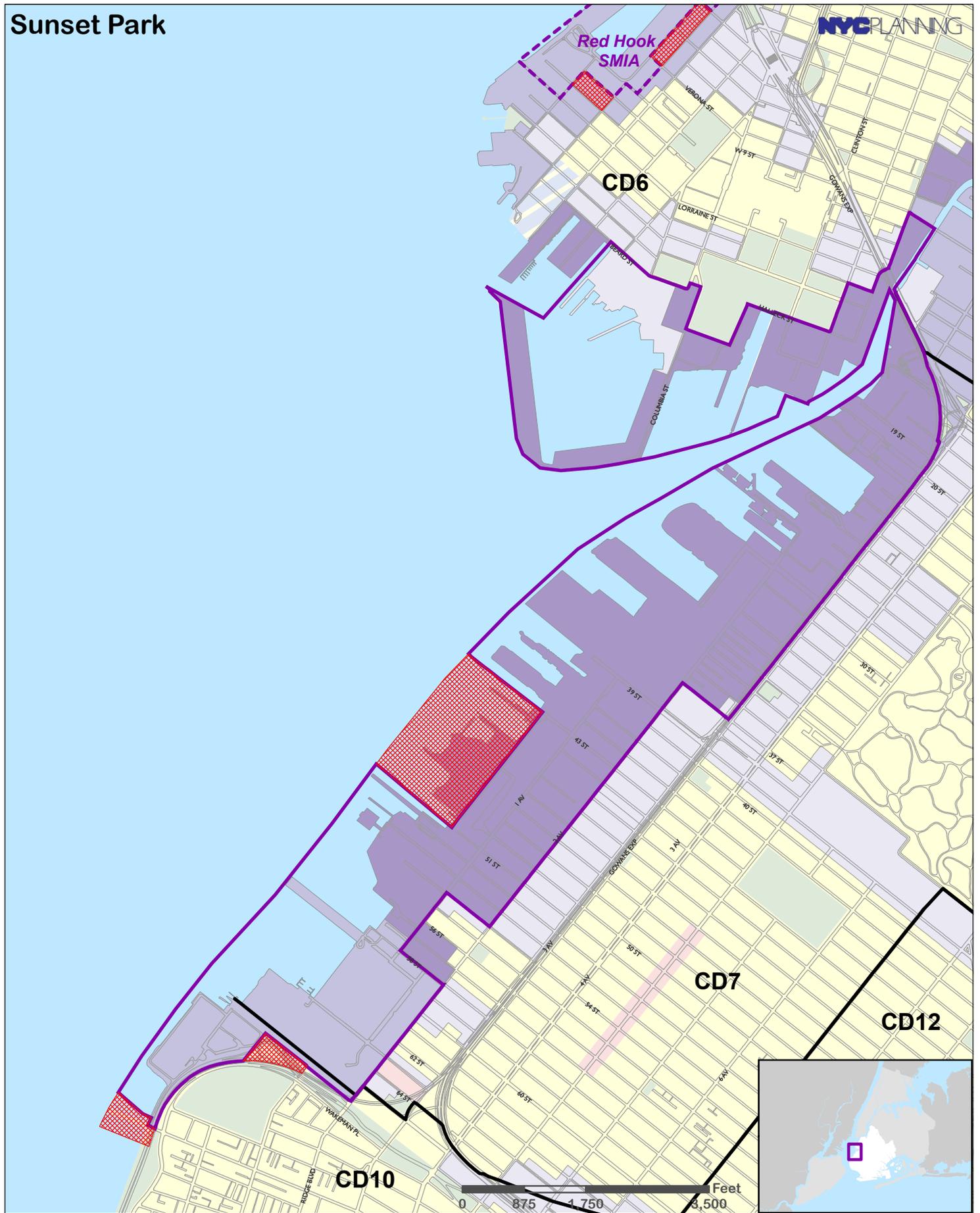
- Proposed SMIA Boundary
- Proposed SMIA Addition

- Proposed SMIA Elimination

Zoning Districts

- Residential
- Commercial
- Park
- Mixed Use
- M1
- M2
- M3

Sunset Park



Significant Maritime and Industrial Areas

DRAFT

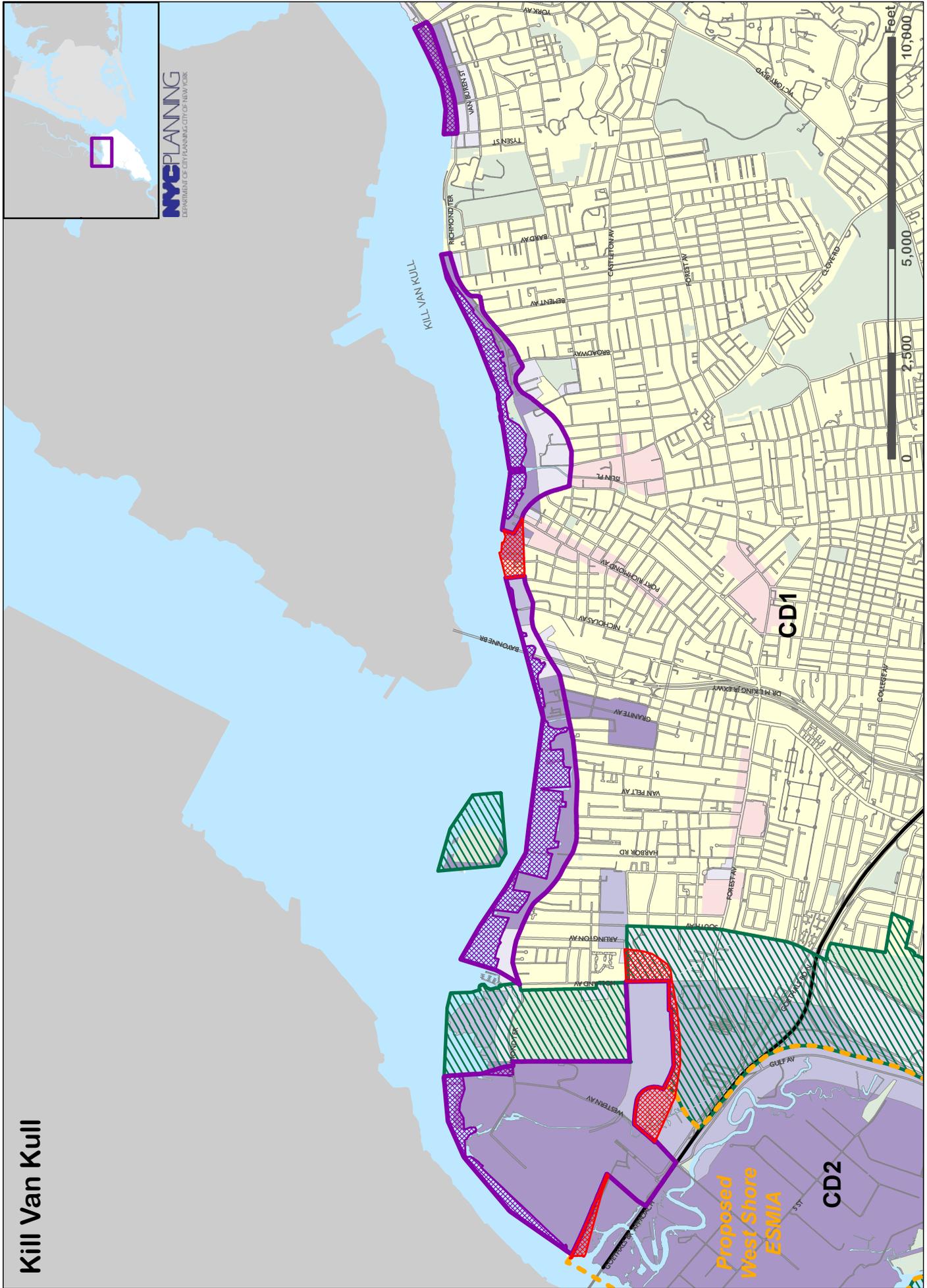
- Proposed SMIA Boundary
- Proposed SMIA Addition
- Proposed SMIA Elimination

Zoning Districts

- Residential
- Commercial
- Park
- Mixed Use
- M1
- M2
- M3

Kill Van Kull

NYC PLANNING
DEPARTMENT OF CITY PLANNING, CITY OF NEW YORK



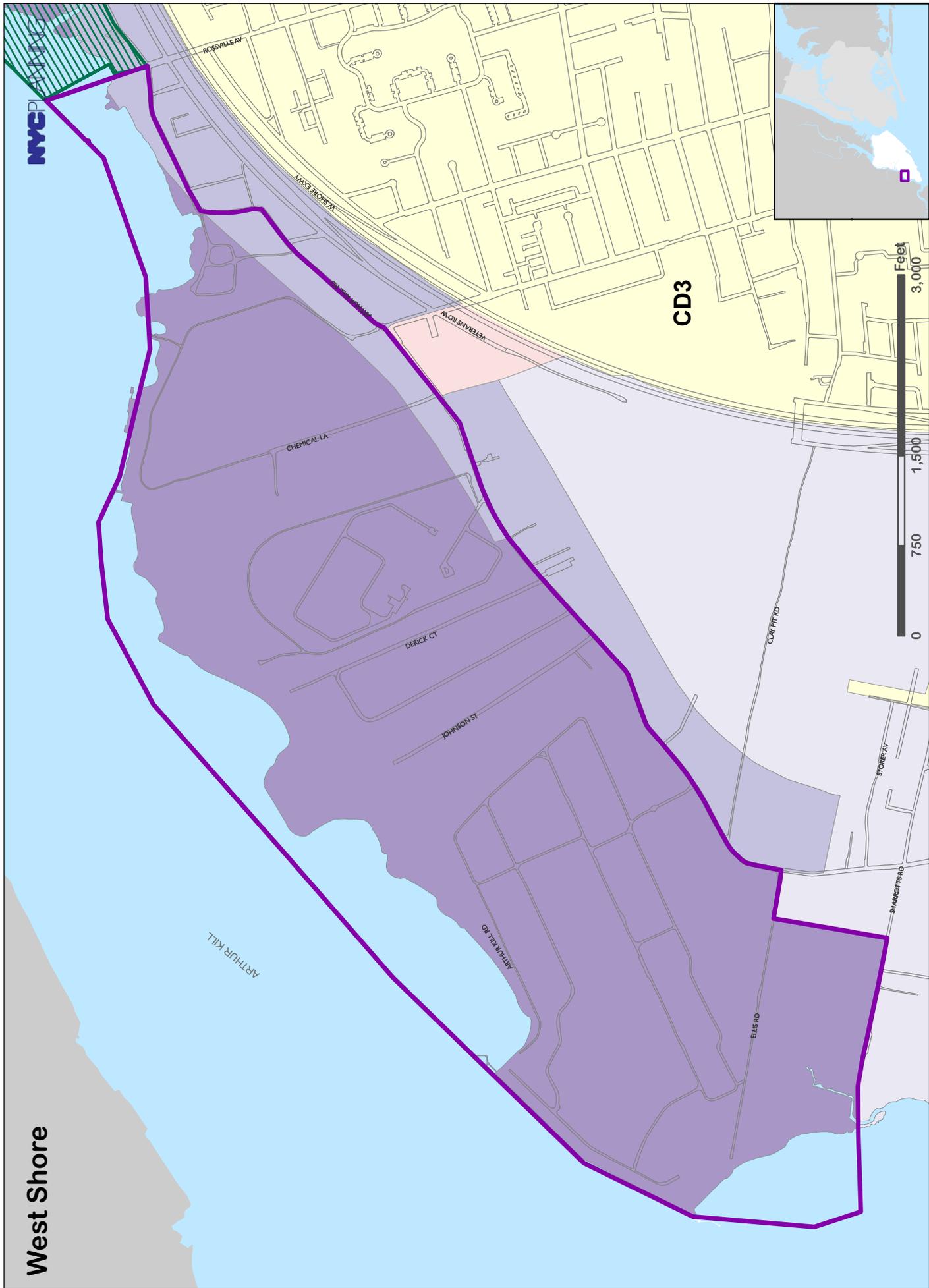
Significant Maritime and Industrial Areas

- Proposed SMIA Boundary (Purple outline)
- Proposed SMIA Addition (Purple hatched area)
- Proposed SMIA Elimination (Red hatched area)
- Proposed SNWA Boundary (Green hatched area)

Zoning Districts

- M1 (Light purple)
- M2 (Medium purple)
- M3 (Dark purple)
- Residential (Yellow)
- Commercial (Pink)
- Park (Green)
- Mixed Use (Blue and green)

DRAFT



Significant Maritime and Industrial Areas

- DRAFT**
- Proposed SMIA Boundary
- Proposed SMIA Addition
- Proposed SMIA Elimination

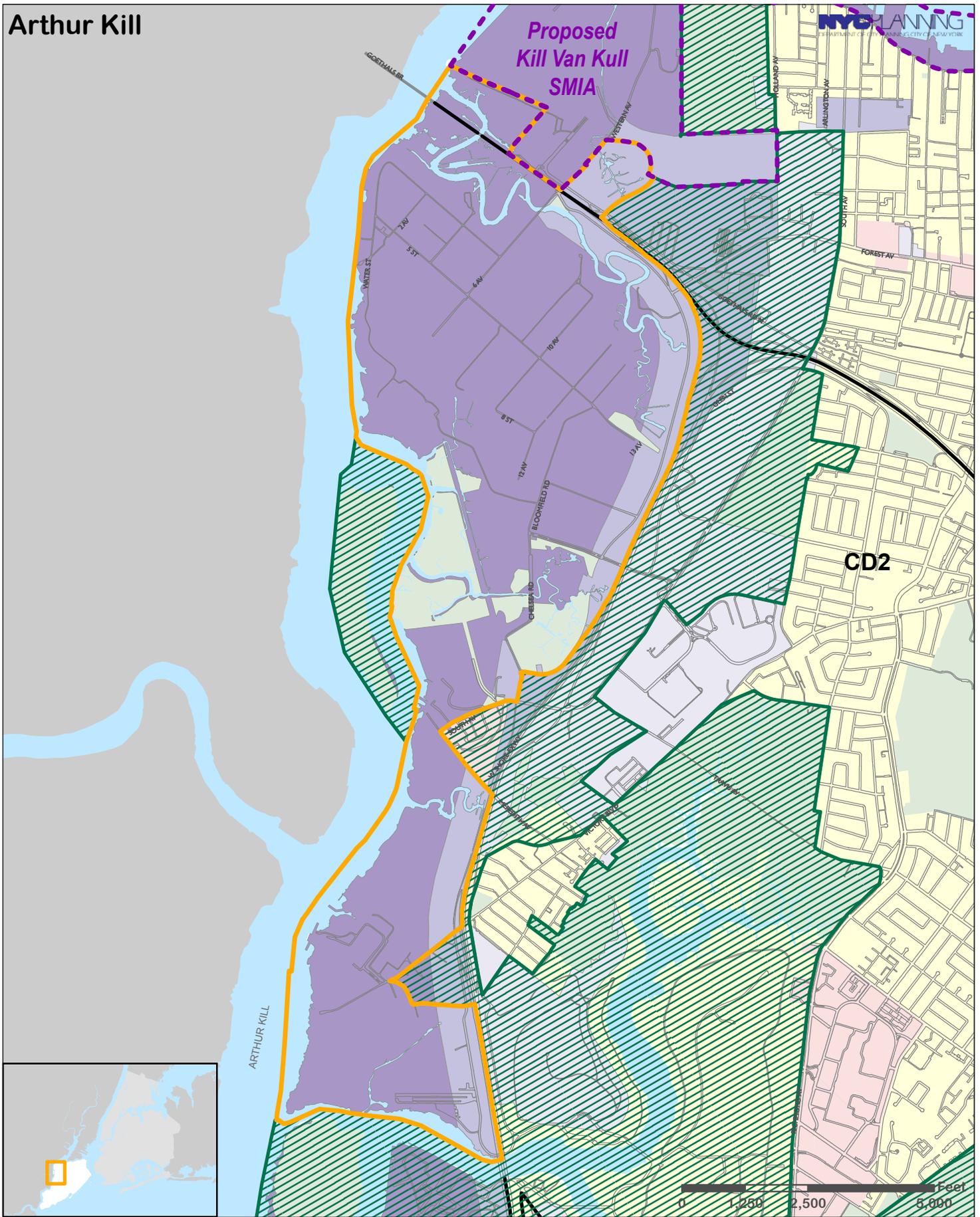
Zoning Districts

- M1
- M2
- M3
- Residential
- Commercial
- Park
- Mixed Use

Proposed SNWA Boundary

**ARTHUR KILL
ECOLOGICALLY
SENSITIVE
MARITIME
AND
INDUSTRIAL
AREA**

Arthur Kill



Ecologically Sensitive Maritime and Industrial Area

- DRAFT** Proposed ESMIA Boundary
- Proposed SMIA Boundary
- Proposed SNWA Boundary

Zoning Districts

- Residential
- Commercial
- Park
- Mixed Use
- M1
- M2
- M3

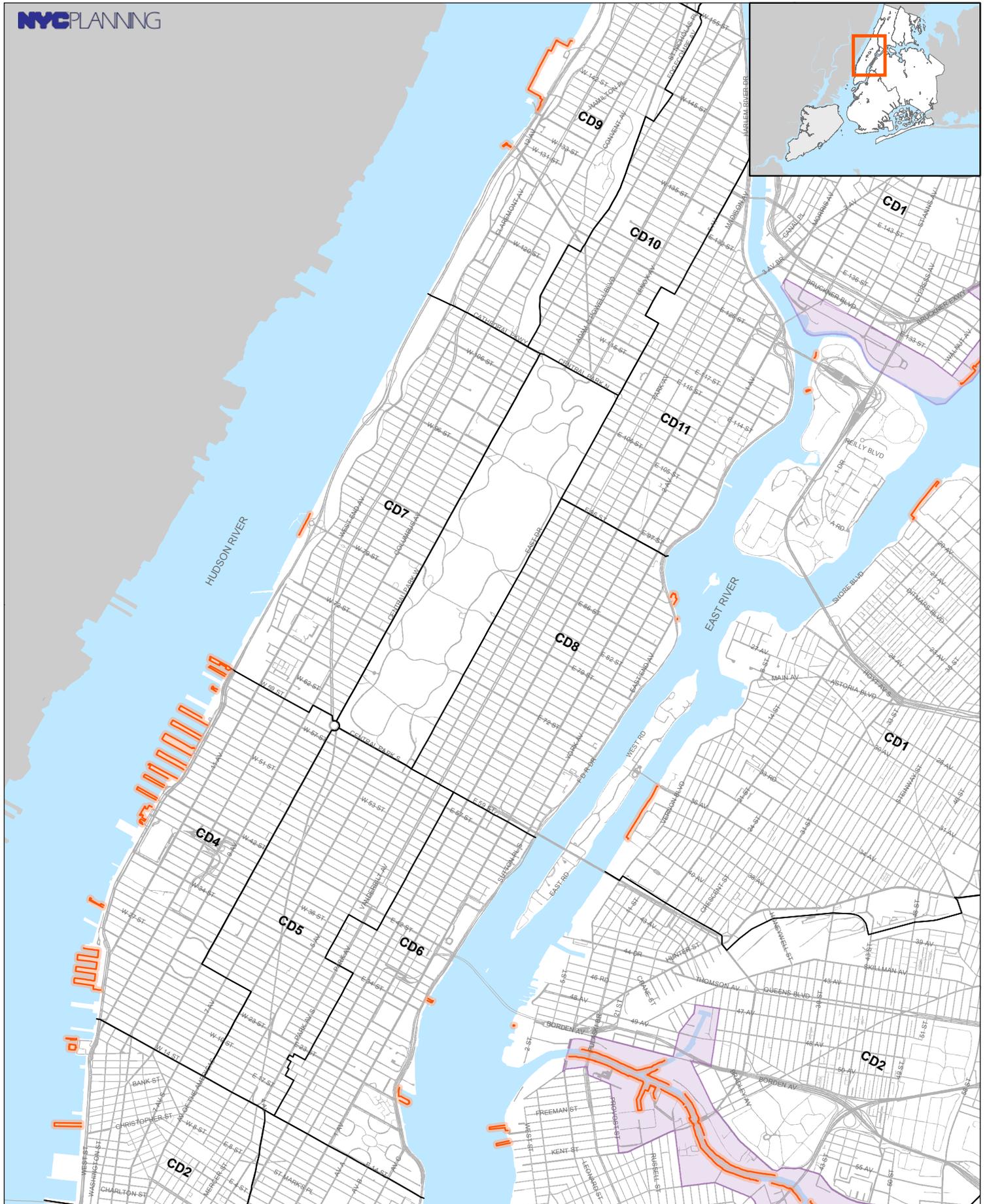
PRIORITY MARINE ACTIVITY ZONES



Priority Marine Activity Zones

DRAFT Priority Marine Activity Zones (Proposed) SMIA Boundaries (Proposed) Community Districts

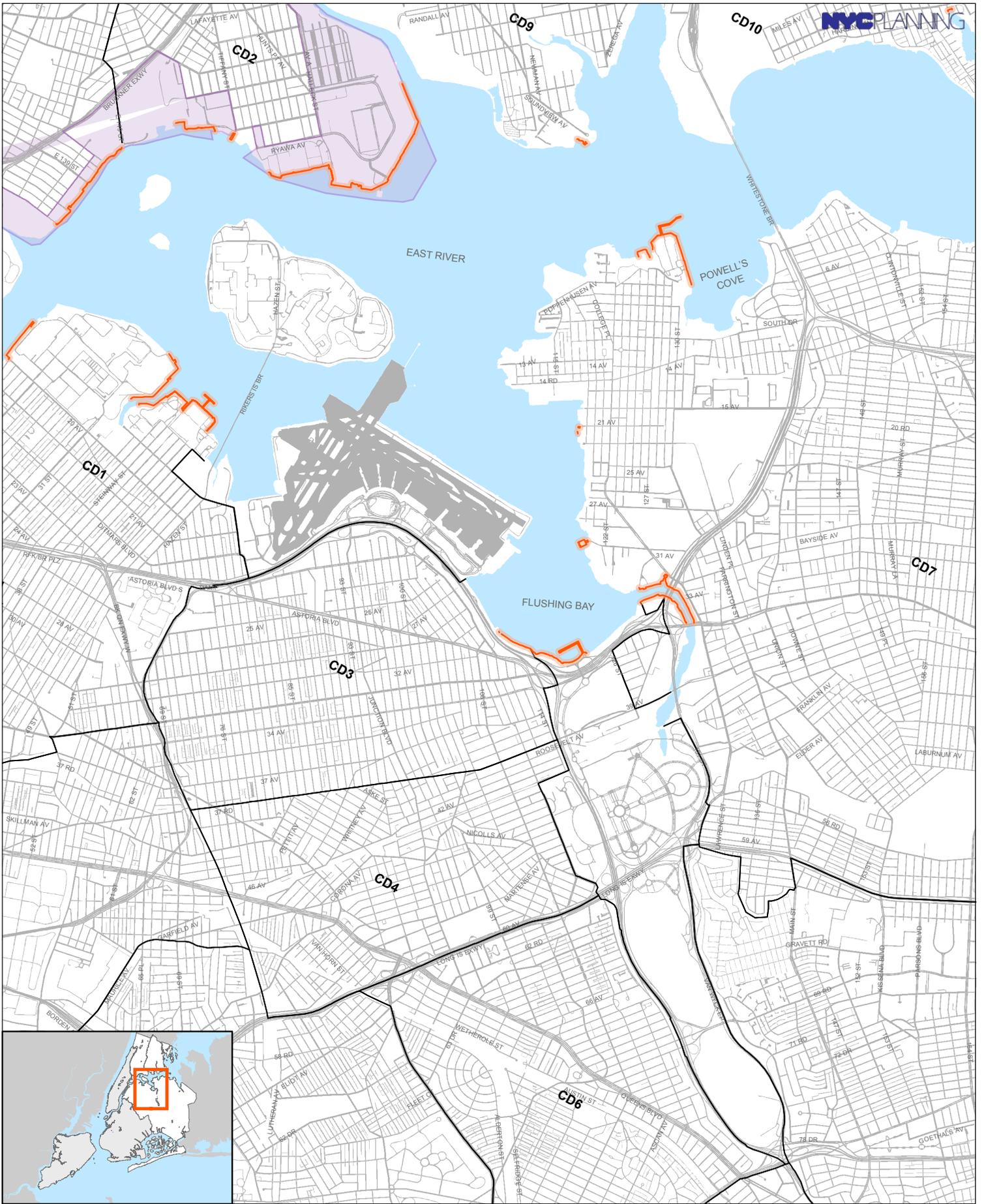




Priority Marine Activity Zones

DRAFT  Priority Marine Activity Zones (Proposed)  SMIA Boundaries (Proposed)  Community Districts





Priority Marine Activity Zones

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— Priority Marine Activity Zones (Proposed)
 SMIA Boundaries (Proposed)
 Community Districts

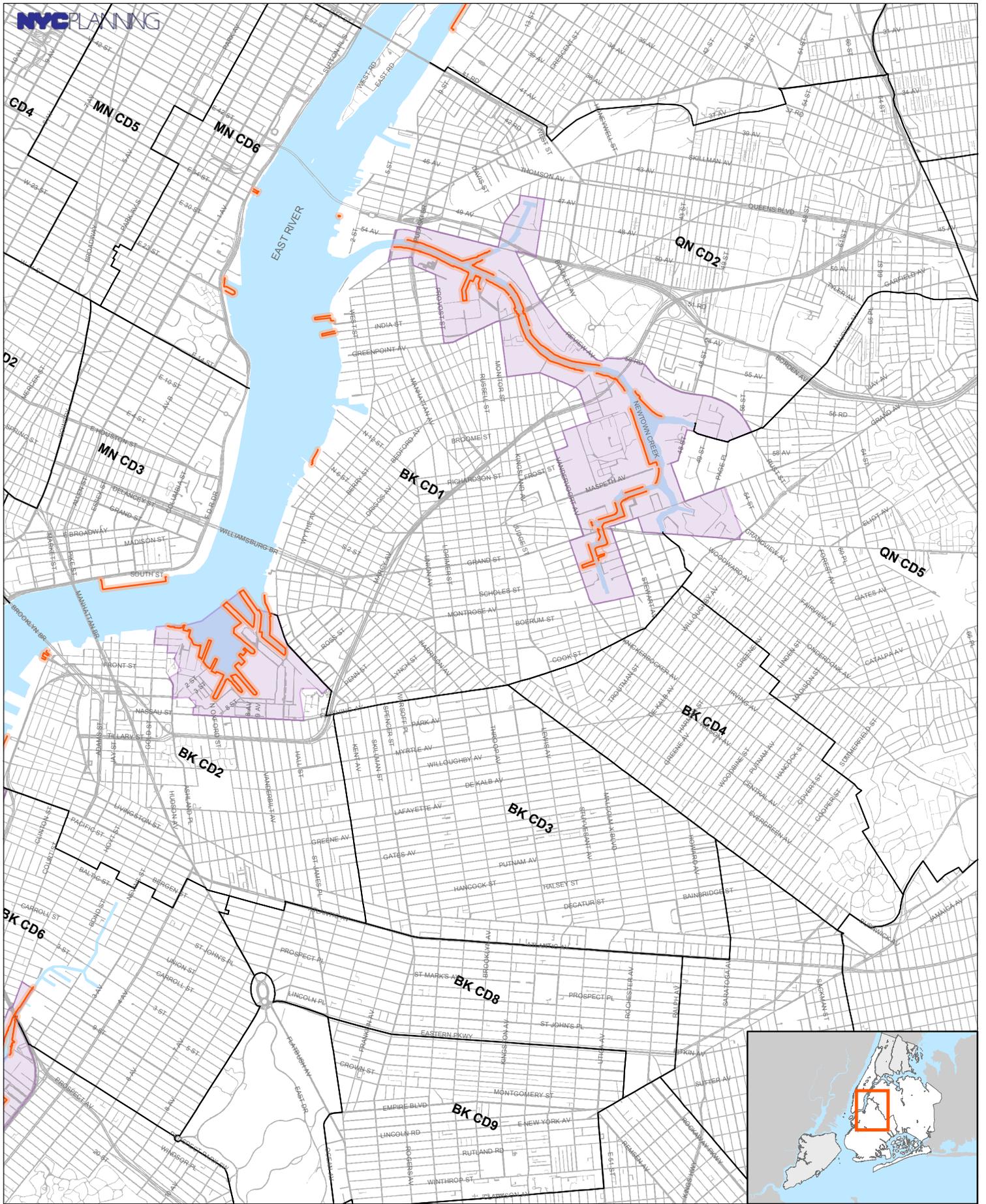




Proposed Priority Marine Activity Zones



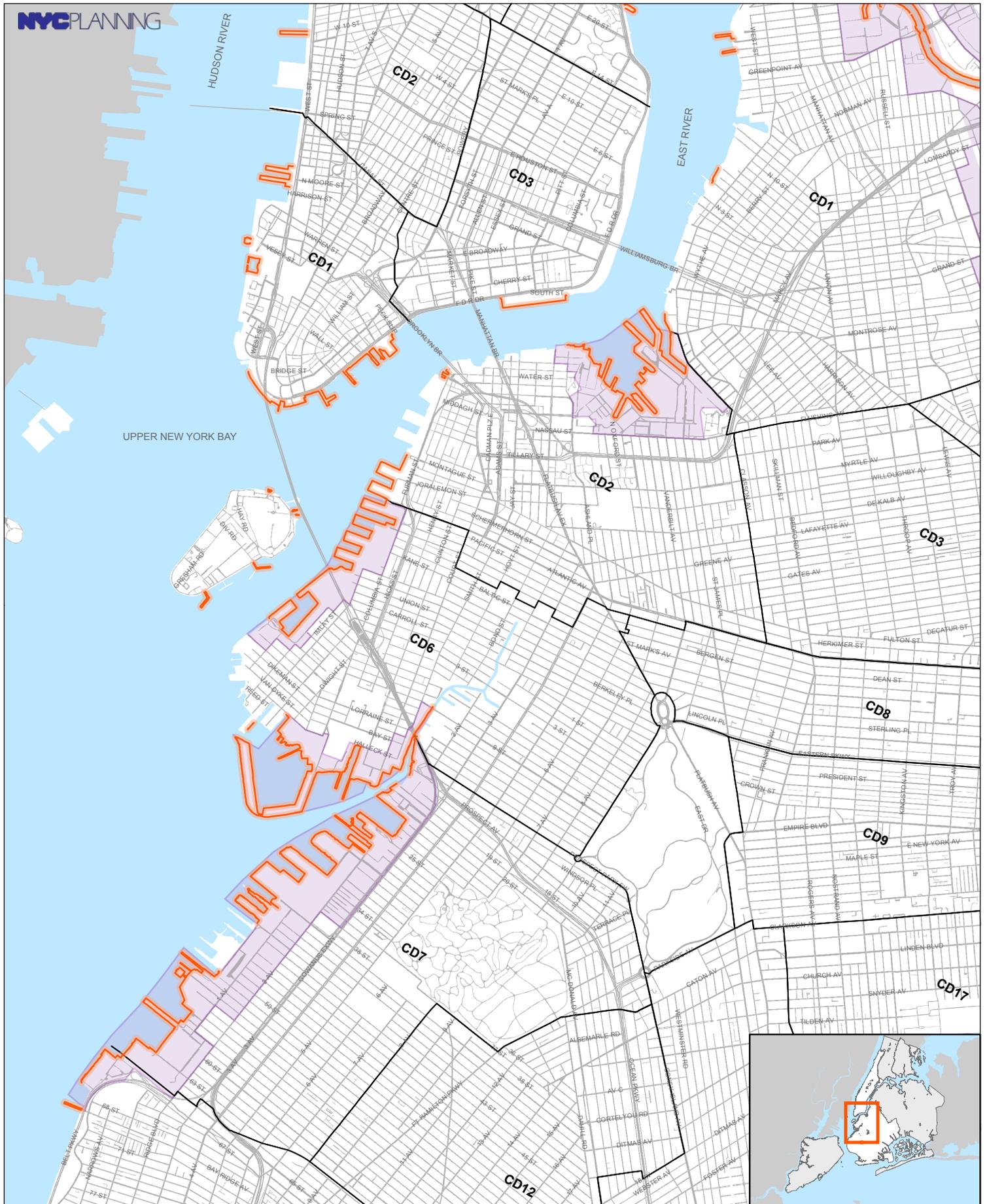
DRAFT — Priority Marine Activity Zones (Proposed) SMIA Boundaries (Proposed) Community Districts



Priority Marine Activity Zones

DRAFT  Priority Marine Activity Zones (Proposed)  SMIA Boundaries (Proposed)  Community Districts





Priority Marine Activity Zones

DRAFT

Priority Marine Activity Zones (Proposed)

SMIA Boundaries (Proposed)

Community Districts





Priority Marine Activity Zones

DRAFT

— Priority Marine Activity Zones (Proposed)
 SMIA Boundaries (Proposed)
 Community Districts





Priority Marine Activity Zones

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Priority Marine Activity Zones (Proposed)



SMIA Boundaries (Proposed)

Community Districts

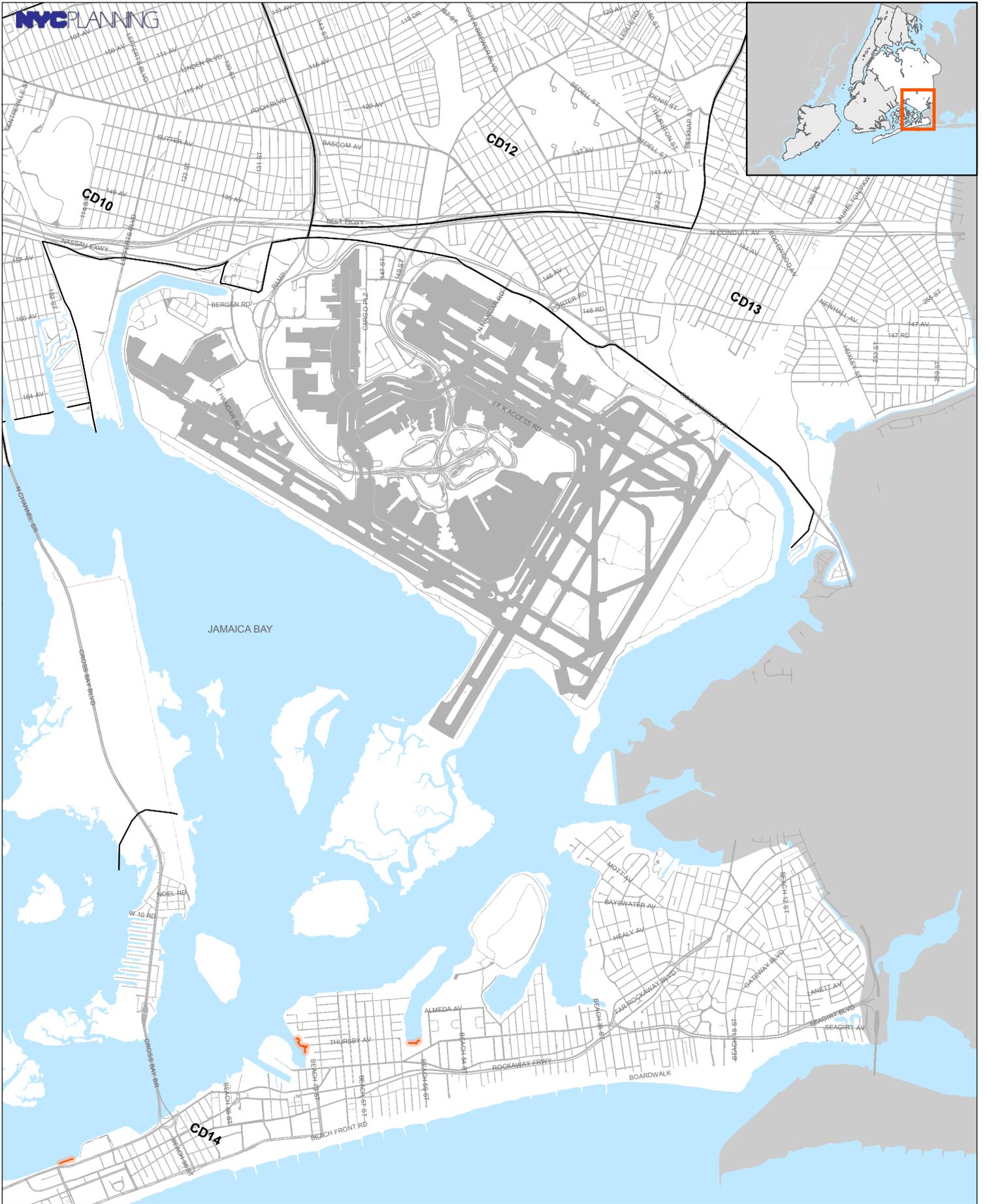




Priority Marine Activity Zones

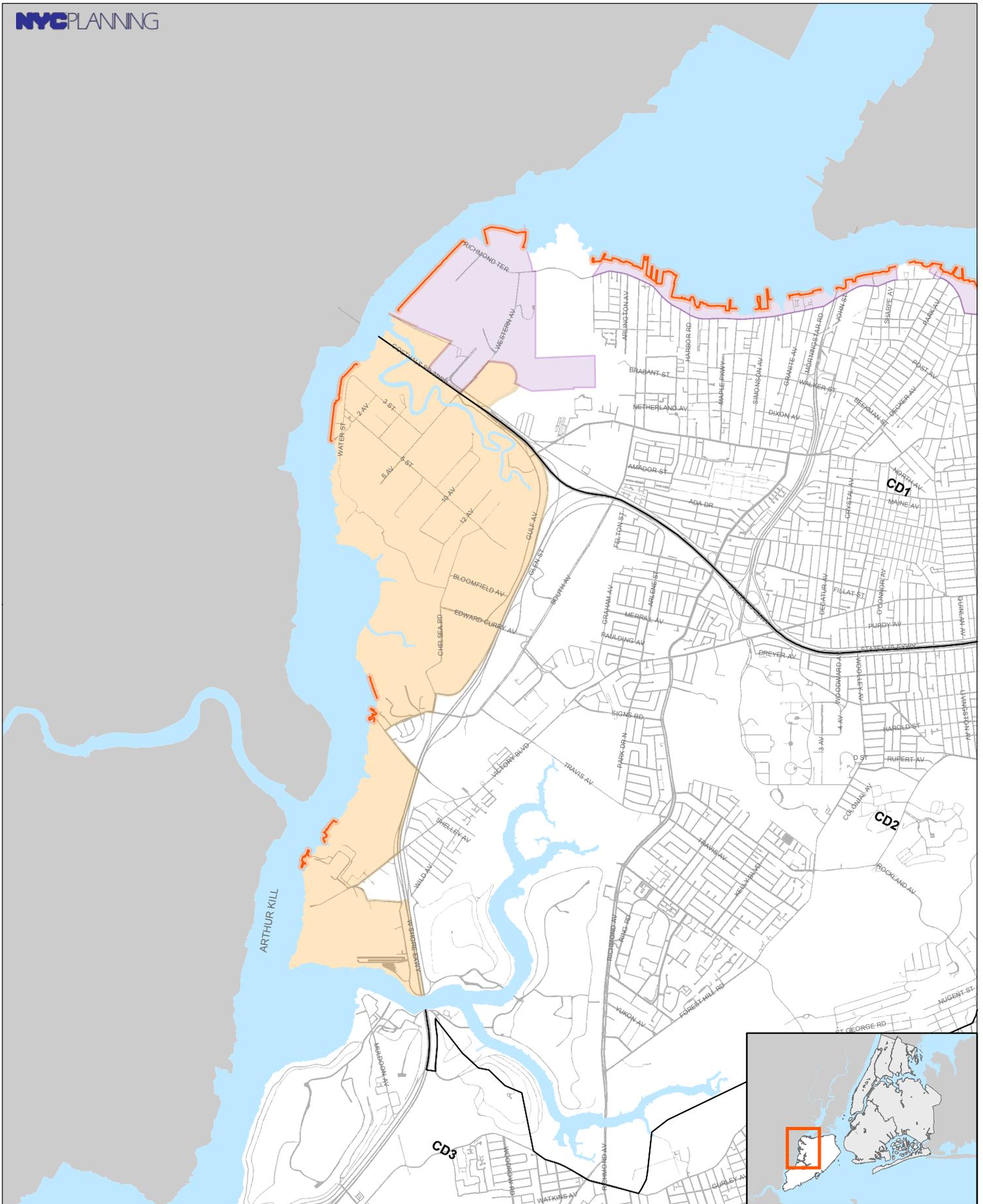
DRAFT — Priority Marine Activity Zones (Proposed) ■ SMIA Boundaries (Proposed) — Community Districts





Priority Marine Activity Zones

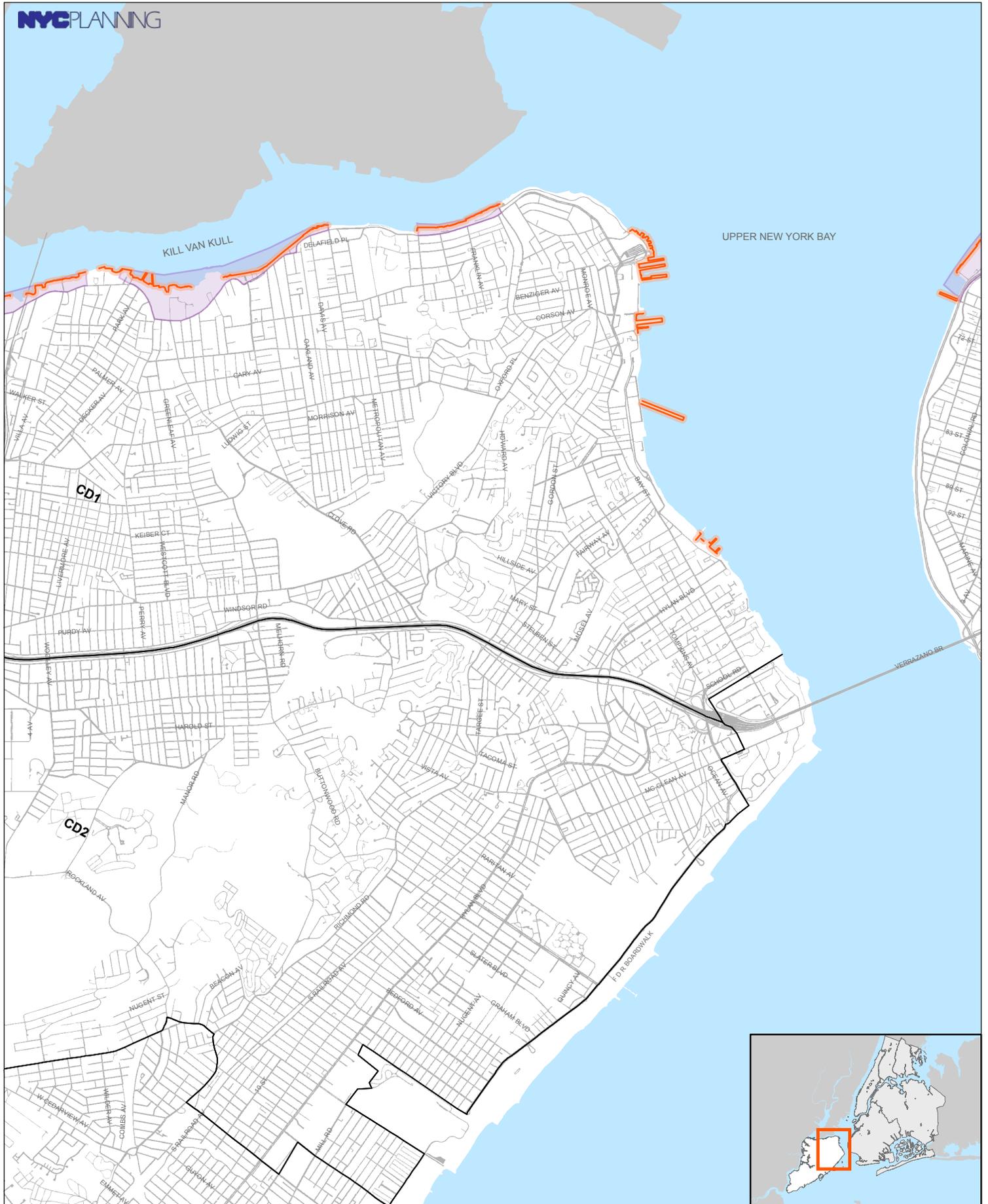
DRAFT Priority Marine Activity Zones (Proposed) SMIA Boundaries (Proposed) Community Districts



Priority Marine Activity Zones

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Priority Marine Activity Zones

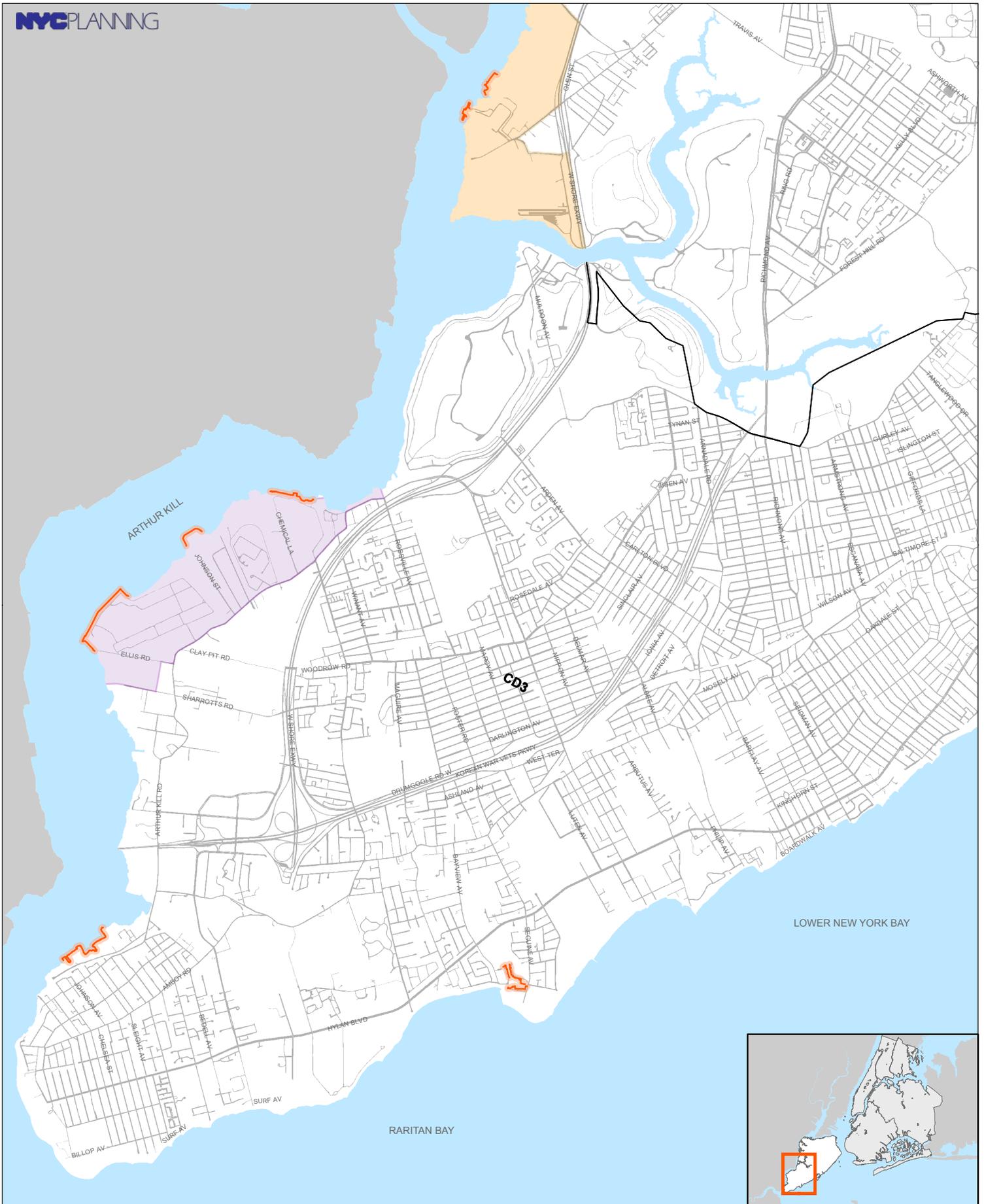
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Priority Marine Activity Zones (Proposed)

SMIA Boundaries (Proposed)

Community Districts





Priority Marine Activity Zones

DRAFT — Priority Marine Activity Zones (Proposed) — SMIA Boundaries (Proposed) — ESMIA Boundaries (Proposed)



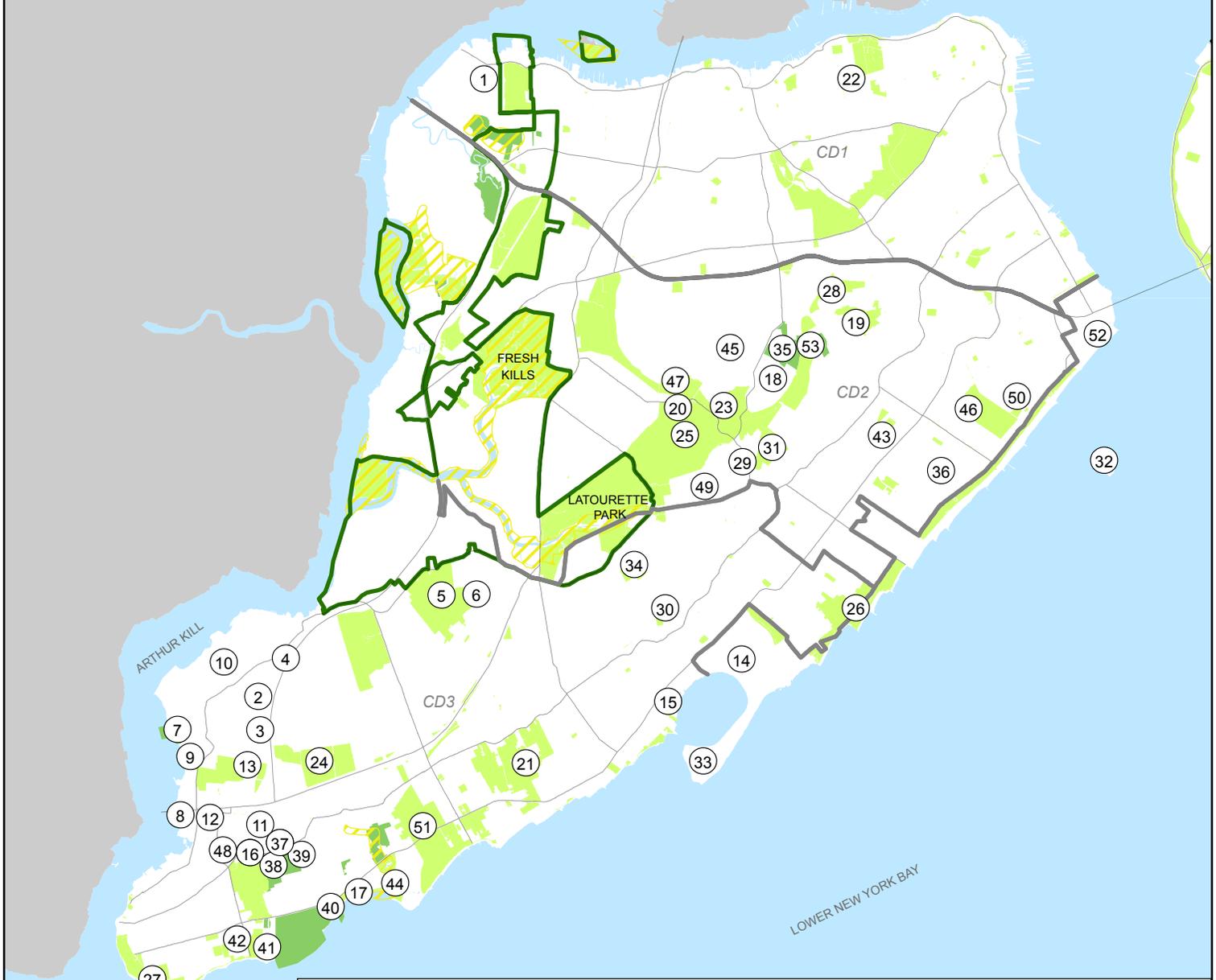


Priority Marine Activity Zones

DRAFT Priority Marine Activity Zones (Proposed) SMIA Boundaries (Proposed) Community Districts

RECOGNIZED ECOLOGICAL COMPLEXES

Staten Island



- | | | |
|---|---|-----------------------------------|
| 1. Bridge Creek | 18. Pouch Camp | 35. Kingfisher Park |
| 2. Clay Pit Ponds State Park | 19. Reed Basket Willow Swamp | 36. Sea View Avenue Wetlands |
| 3. Clay Pit Ponds State Park Additions – Englewood Boundary | 20. Great Swamp Forest Hill Greens | 37. Mill Creek Wetlands |
| 4. Clay Pit Ponds State Park Additions – North Eastern Woodland | 21. Blue Heron Park Preserve | 38. Mount Loretto Woods |
| 5. Arden Heights Woods | 22. Northshore Greenbelt / Goodhue / Children's Aid | 39. North Mount Loretto Woods |
| 6. Arden Heights Woods Additions | 23. Blood Root Valley | 40. Mount Loretto Shorelines |
| 7. Sharrots Road Shorelands | 24. Bloomingdale Woods | 41. Butler Manor Woods |
| 8. Outerbridge Shorelands | 25. Bucks Hollow | 42. Paw Paw Hybrid Oak Woods |
| 9. Kreisher Cove | 26. Cedar Grove / South Beach Southern Wetlands / Oakwood Beach | 43. Last Chance Pond |
| 10. Port Mobil Swamp Forest and Tidal Wetlands | 27. Conference House Park | 44. Lemon Creek Park |
| 11. Canada Hill Woods | 28. Deer Park | 45. Northern Sea View |
| 12. Outerbridge Ponds and Woodland | 29. Egbertville Ravine | 46. Ocean Breeze Park |
| 13. Charleston Woods / Kreisher Hill | 30. Evergreen Park | 47. Open Fields at Farm Colony |
| 14. Great Kills Harbor Park | 31. High Rock Park | 48. Page Avenue Wetlands |
| 15. Great Kills Harbor Park – Nelson Ave Addition | 32. Verrazano Narrows/Hoffman Island/Swinburne Island | 49. Richmond Creek and Wetlands |
| 16. Long Pond | 33. Crookes Point | 50. South Beach Northern Wetlands |
| 17. MIV Triangle/ St. Edward's Campground | 34. Kaufman Camp | 51. Wolfe's Pond Park |
| | | 52. Fort Wadsworth Beach |

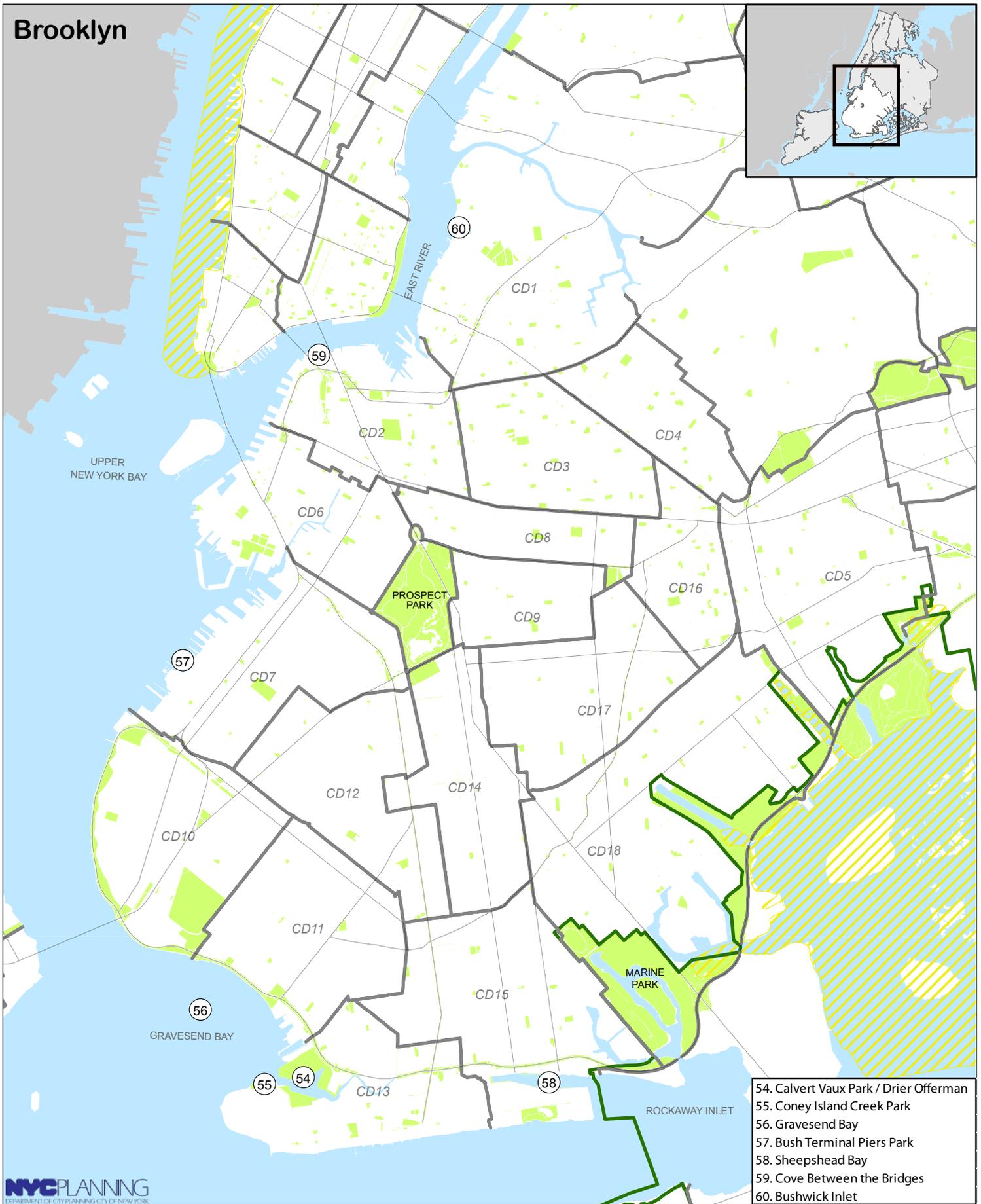


Recognized Ecological Complexes

- DRAFT**
- ① Recognized Ecological Complex
- Special Natural Waterfront Area (Proposed)
- Significant Coastal Fish & Wildlife Habitat
- NYS Parks
- NYC Parks



Brooklyn



- 54. Calvert Vaux Park / Drier Offerman
- 55. Coney Island Creek Park
- 56. Gravesend Bay
- 57. Bush Terminal Piers Park
- 58. Sheepshead Bay
- 59. Cove Between the Bridges
- 60. Bushwick Inlet

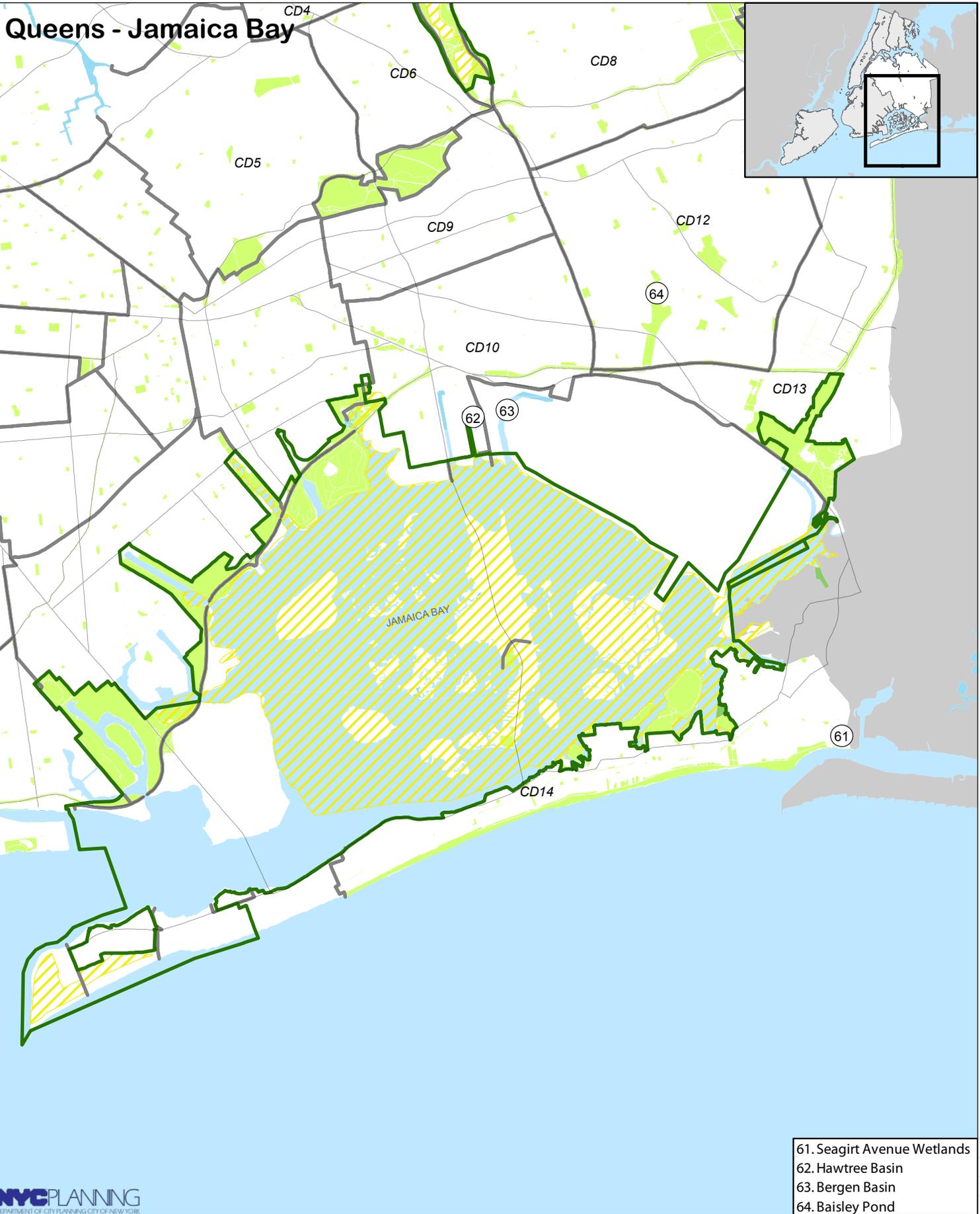
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Recognized Ecological Complexes

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- ① Recognized Ecological Complex
- Special Natural Waterfront Area (Proposed)
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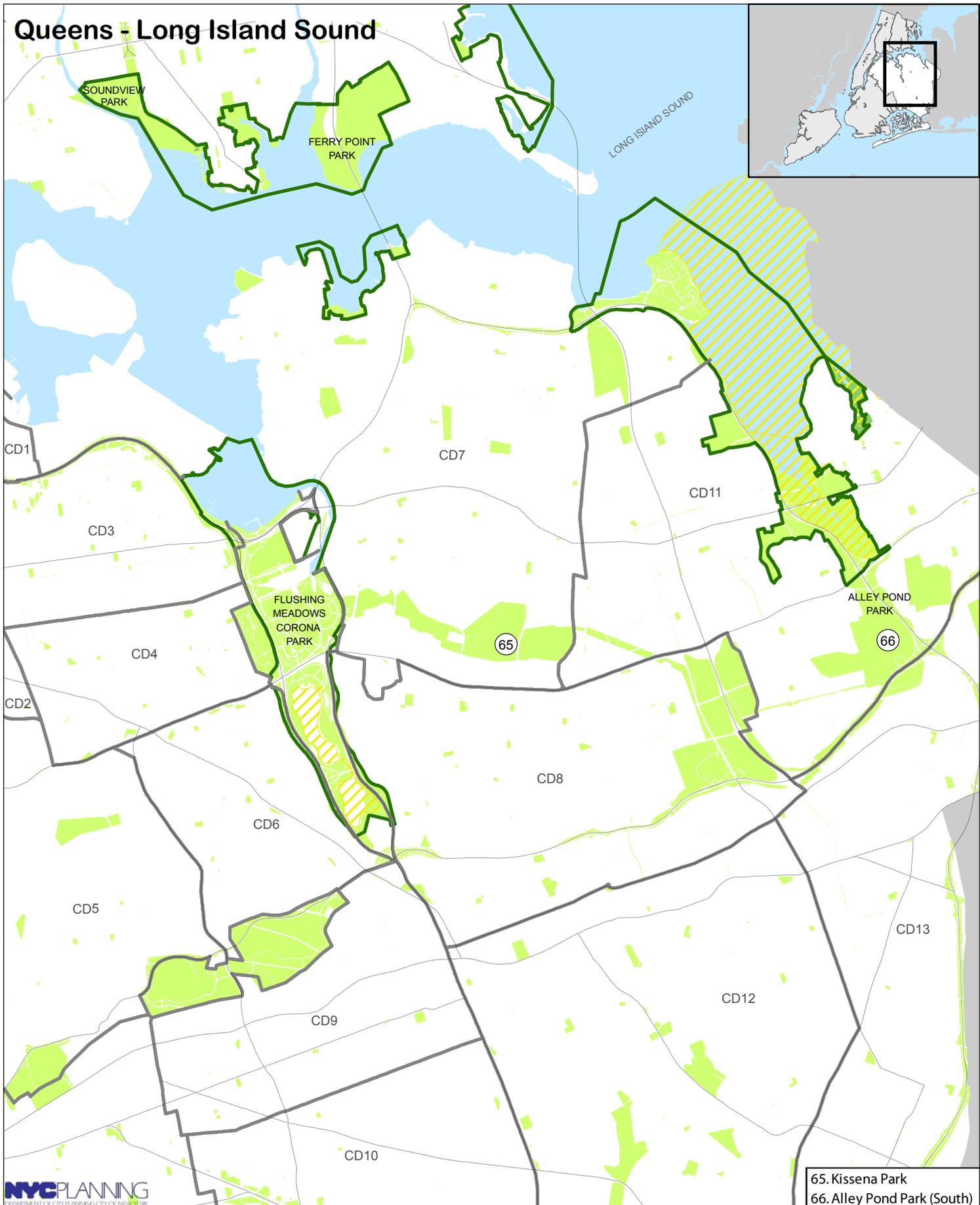
Recognized Ecological Complexes

DRAFT

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Queens - Long Island Sound

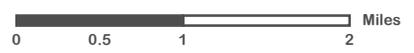


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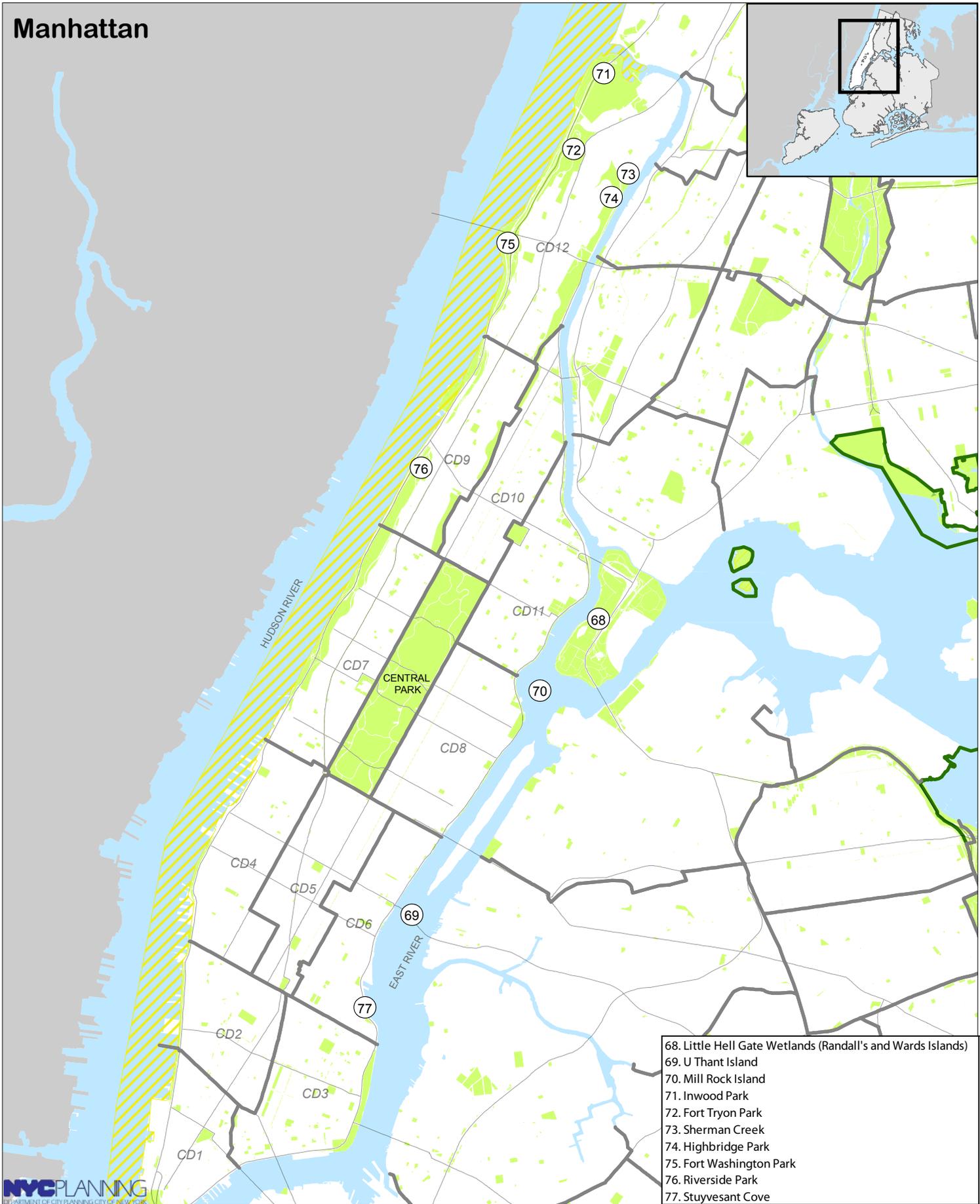
65. Kissena Park
66. Alley Pond Park (South)

Recognized Ecological Complexes

DRAFT ① Recognized Ecological Complex Special Natural Waterfront Area (Proposed) Significant Coastal Fish & Wildlife Habitat NYS Parks NYC Parks



Manhattan



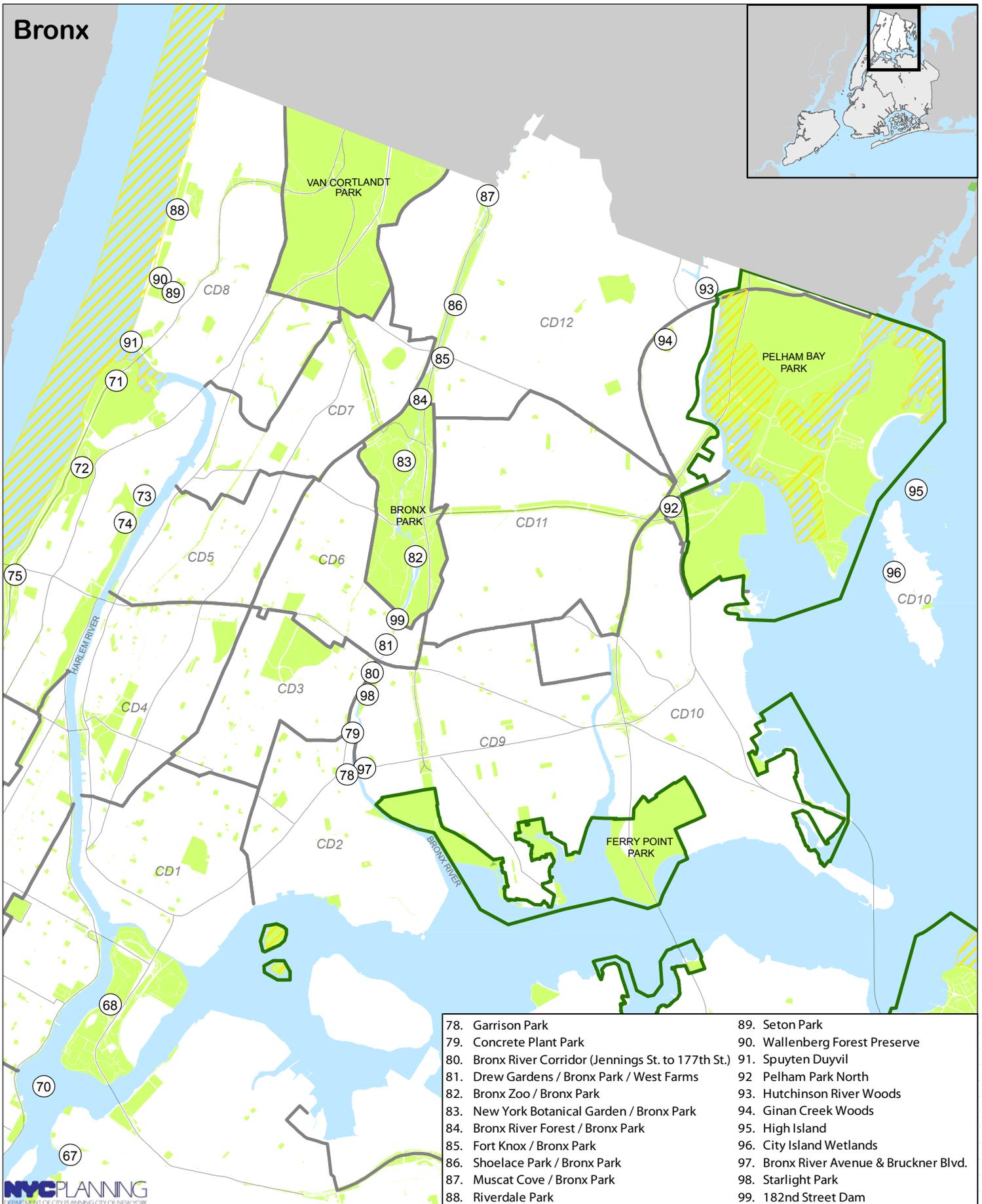
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Recognized Ecological Complexes

DRAFT

- 1 Recognized Ecological Complex
- Special Natural Waterfront Area (Proposed)
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- NYS Parks
- NYC Parks





- | | |
|--|---|
| 78. Garrison Park | 89. Seton Park |
| 79. Concrete Plant Park | 90. Wallenberg Forest Preserve |
| 80. Bronx River Corridor (Jennings St. to 177th St.) | 91. Spuyten Duyvil |
| 81. Drew Gardens / Bronx Park / West Farms | 92. Pelham Park North |
| 82. Bronx Zoo / Bronx Park | 93. Hutchinson River Woods |
| 83. New York Botanical Garden / Bronx Park | 94. Ginan Creek Woods |
| 84. Bronx River Forest / Bronx Park | 95. High Island |
| 85. Fort Knox / Bronx Park | 96. City Island Wetlands |
| 86. Shoelace Park / Bronx Park | 97. Bronx River Avenue & Bruckner Blvd. |
| 87. Muscat Cove / Bronx Park | 98. Starlight Park |
| 88. Riverdale Park | 99. 182nd Street Dam |

Recognized Ecological Complexes

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