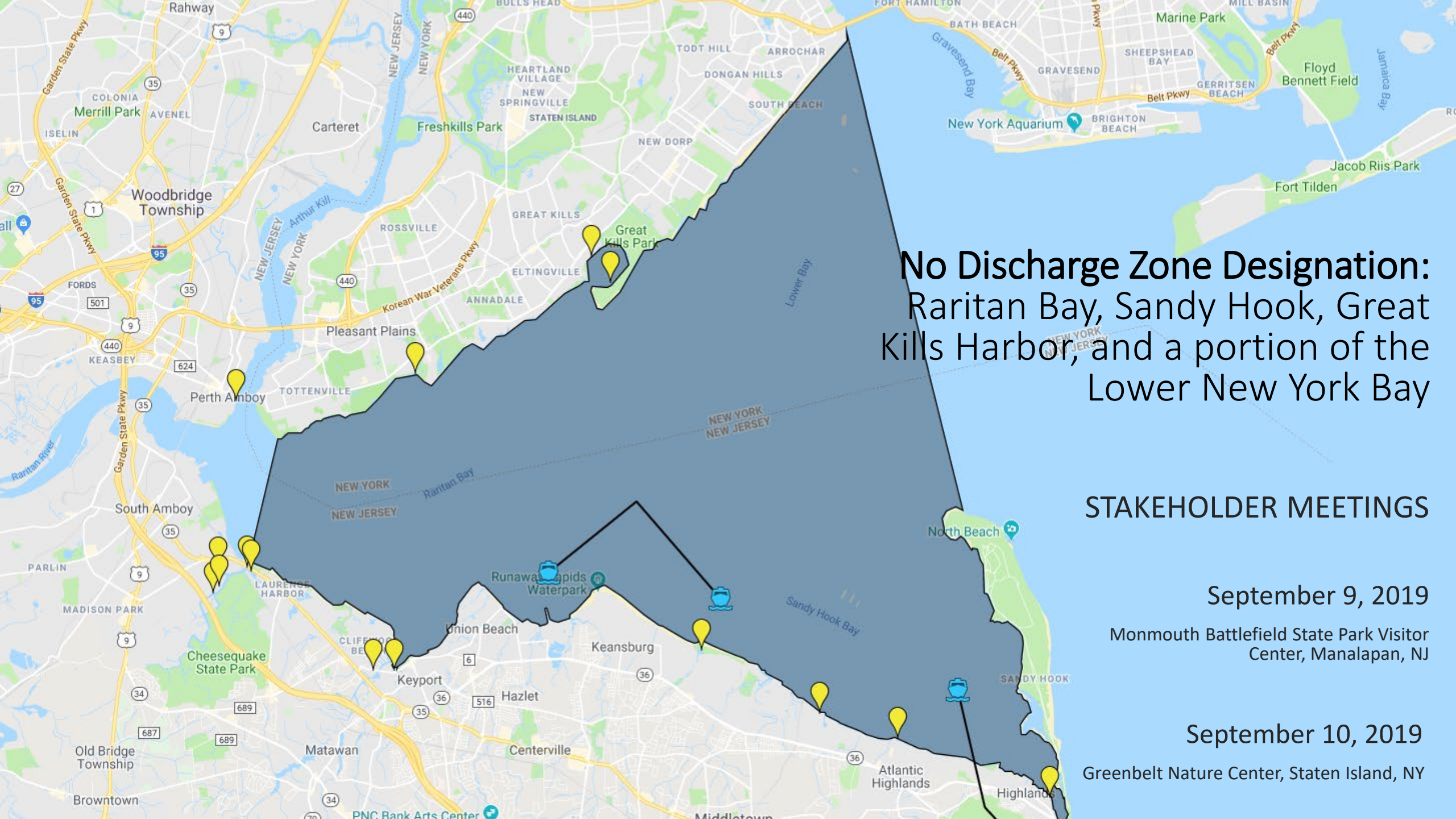


No Discharge Zone Designation:

Raritan Bay, Sandy Hook, Great Kills Harbor, and a portion of the Lower New York Bay

STAKEHOLDER MEETINGS

September 9, 2019

Monmouth Battlefield State Park Visitor Center, Manalapan, NJ

September 10, 2019

Greenbelt Nature Center, Staten Island, NY

NEW YORK
STATE OF
OPPORTUNITY

Department of
Environmental
Conservation

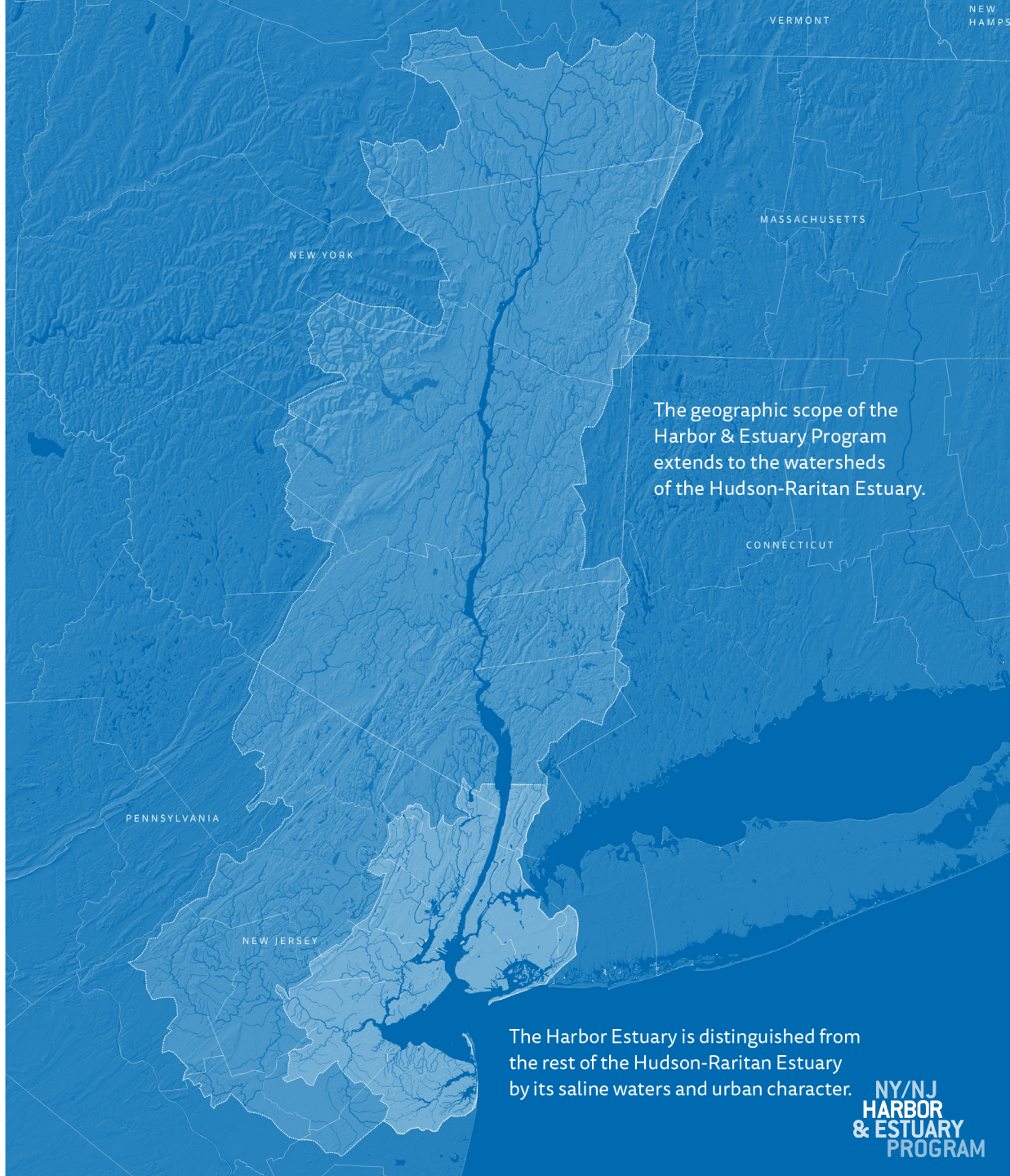
NY/NJ HARBOR & ESTUARY PROGRAM

New York-New Jersey Harbor & Estuary Program

The New York – New Jersey Harbor & Estuary Program (HEP) is one of the Nation's 28 Estuaries of National Significance.

HEP was created by the U.S. Environmental Protection Agency (EPA) at the request of the governors of New York and New Jersey in 1988 under the Clean Water Act as an **ongoing effort to develop and implement a consensus driven plan to protect, conserve and restore the Estuary.**

The Harbor Estuary is the biggest public resource in the nation's largest and most densely developed metropolitan area. Managing this public resource and its many services and uses is the shared responsibility of many partners that work together to implement the Action Agenda that advances progress towards five (5) long-term goals.



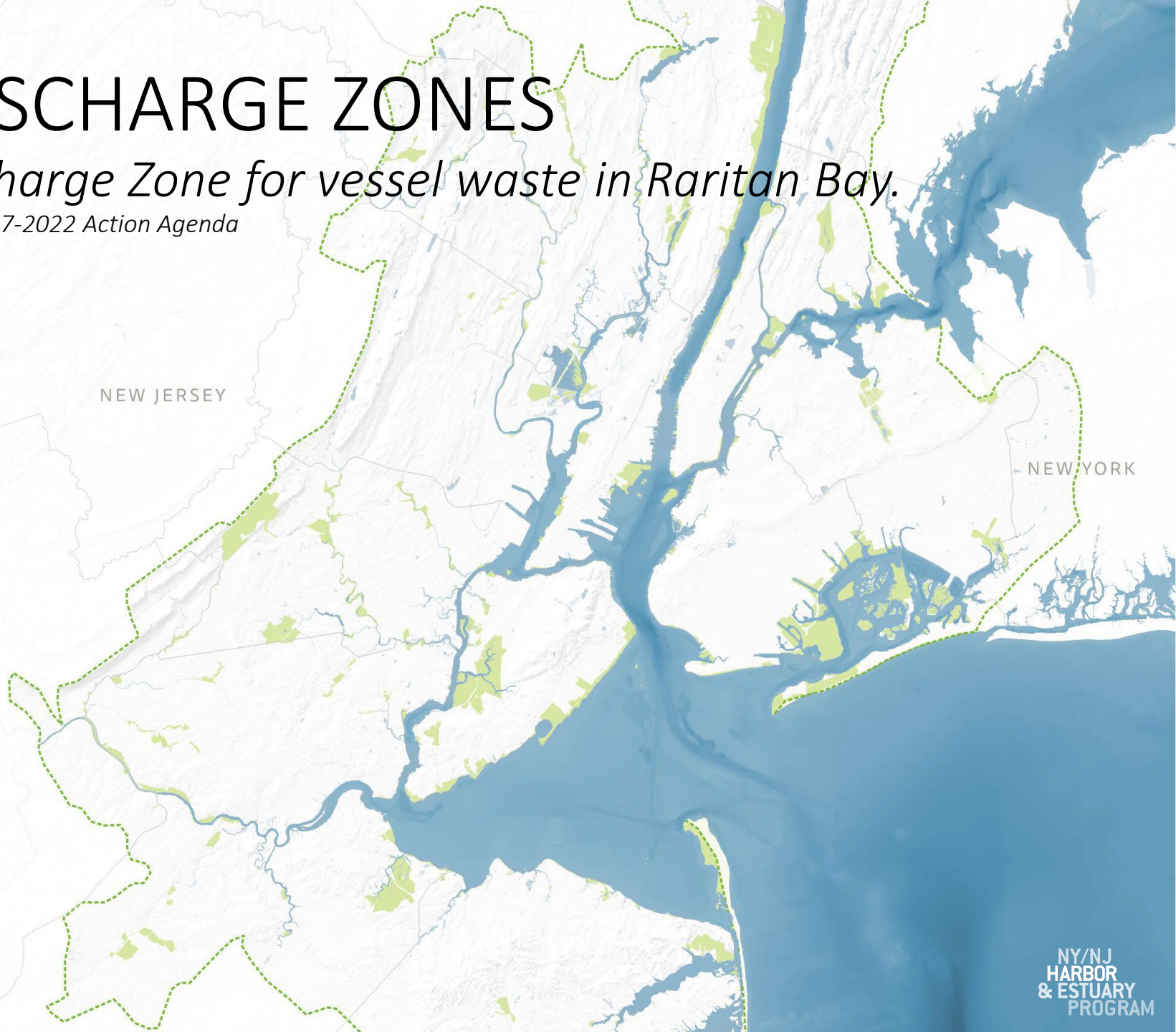
WQ-A-3: NO DISCHARGE ZONES

Help establish a No Discharge Zone for vessel waste in Raritan Bay.

Reference: NY/NJ Harbor & Estuary Program 2017-2022 Action Agenda

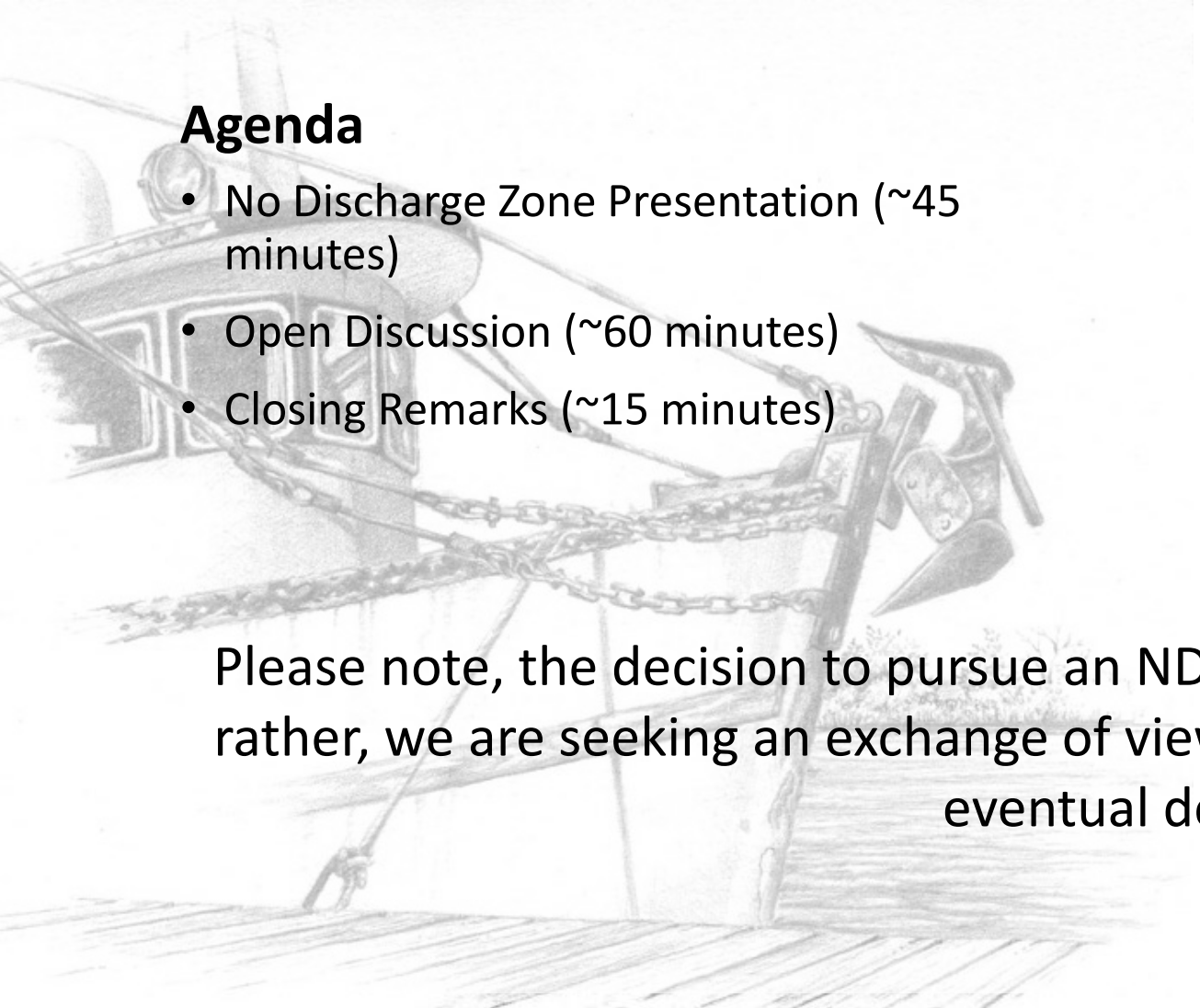
Microbial pathogens from sewage wastes pose direct threats to human health and limit shellfishing and recreational uses. While wastes discharged by vessels to surface water are often treated by marine sanitation devices, they still pose some risk and contain chemical additives, such as chlorine.

No Discharge Zone (NDZ) designations are a key component of larger strategies for protecting navigable waters and educating the public about water quality. HEP will work with the two states, EPA and other partners to advance establishment of a no discharge zone in the Bay.



NY/NJ HARBOR & ESTUARY PROGRAM

Stakeholder Engagement Meetings



Agenda

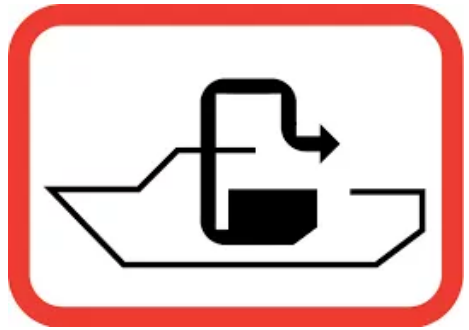
- No Discharge Zone Presentation (~45 minutes)
- Open Discussion (~60 minutes)
- Closing Remarks (~15 minutes)

Goal

- To seek **input from stakeholders** and gain more information on the possible effects of the designation on the communities surrounding the Raritan Bay and others who use the bay for business and recreation.

Please note, the decision to pursue an NDZ designation will not be made today; rather, we are seeking an exchange of views and information to help inform the eventual decision.

Clean Water Act (CWA), Section 312:
No Discharge Zone (NDZ)



- An NDZ is a designated body of water within which the discharge of both **treated and untreated** boat sewage is prohibited.
- Boaters must dispose of their sewage at specially designated pump-out stations or via a mobile pumpout.
- Federal Law prohibits the discharge of untreated boat sewage within all navigable waters of the U.S., which include territorial seas within three (3) miles offshore.

Clean Water Act (CWA), Section 312:
No Discharge Zone (NDZ)

Why?

- Discharges of sewage from boats can contain harmful levels of pathogens, nutrients, and chemicals (e.g., formaldehyde, phenols, and chlorine).
- Negative impacts on water quality pose a risk to public health and impair marine life.

Clean Water Act (CWA), Section 312:
No Discharge Zone (NDZ)

A State can seek to establish an NDZ for any of the following three (3) objectives:

1. **Section 312 (f)(3): Protecting aquatic habitats where pumpout facilities are available – most common;**
2. Section 312 (f)(4)(A): Protecting special aquatic habitats or species; and
3. Section 312 (f)(4)(B): Protecting drinking water intake zones to protect human health.

Clean Water Act (CWA), Section 312(f): No Discharge Zone (NDZ)

- The State determines that the protection and enhancement of the quality of the water requires greater environmental protection than current Federal regulations; **and**
- EPA determines that adequate facilities for the safe and sanitary removal, and treatment of sewage from all vessels are reasonably available.

Clean Water Act (CWA), Section 312(f):
No Discharge Zone (NDZ)

- State must submit to EPA a petition to have the waterbody of concern designated as a NDZ.
  - In the case of the Raritan Bay, both New Jersey and New York state would need to initiate the process.
- EPA reviews the petition submitted by the State.
- Public Notice of NDZ in Federal Register:
  - Tentative decision
  - Public Comment period
  - Final Decision
- EPA issues a finding that adequate pumpout facilities for such waters are reasonably available.

Water Quality:

Reduce the sources of pollution so that the waters of the Harbor Estuary will meet the fishable/swimmable goal of the Clean Water Act, where attainable.

- HEP's 2015 Raritan Bay Conference focused attention on the need to continue water quality improvements to the Bay, and benefits of sustaining and expanding its beneficial uses.
- Current and potential uses to benefit from improved water quality:
  - Fishing: Recreational and Commerical
  - Shellfishing: Commercial
  - Secondary Contact Recreation (e.g., motor boating, sailing, kayaking, and associated use of marinas)
  - Boating: Commercial
  - Primary Contact Recreation (e.g., swimming)
  - Aesthetic/Scenic (including prime real estate value)
  - Tourism
  - Education

NY/NJ HARBOR & ESTUARY PROGRAM

Indicators at a Glance

Reference: NY/NJ Harbor & Estuary Program State of the Estuary Report 2018

WATER QUALITY

Indicators	Long Term Trend	Short Term Trend
Dissolved Oxygen	↗	↗
Enterococcus	↗	~
Nitrogen	↗	↗
Water Temperature	↘	~
Debris Collected by Skimmers and Booms	●	↗
Debris Collected on Beaches	↗	↗
Microplastics	●	●
Chemical Contaminants of Emerging Concern	●	●

HABITAT AND ECOLOGICAL HEALTH

Indicators	Long Term Trend	Short Term Trend
Benthic Index of Biotic Integrity	~	●
Estuarine and Diadromous Fish Abundance	↘	~
Established Oyster Beds	●	●
Whale and Dolphin Abundance	●	●
Tributary Habitat Connectivity	●	●
Riparian Area Integrity	●	↘
Stream Health Bioassessment	↗	●
Percent and Distribution of Natural Shorelines	●	●
Horseshoe Crab Abundance	●	↘
Submerged Aquatic Vegetation	●	↘
Area of Coastal Forest and Grassland	●	↘
Area of Wetlands	↘	↘
Nesting Pairs of Harbor Herons	~	↘

PORT AND MARITIME (Toxic Contaimination)

Indicators	Long Term Trend	Short Term Trend
Metals in Sediments	~	●
PAHs in Sediments	↗	●
Dioxin in Sediments	↗	~
PCBs	↗	↗

PUBLIC ACCESS AND STEWARDSHIP

Indicators	Long Term Trend	ShortTerm Trend
Publicly Accessible Waterfront	●	↗
On-Water Access	●	↗
On-Water Programs	●	↗

COMMUNITY ENGAGEMENT

Indicators	Long Term Trend	ShortTerm Trend
Capacity of Stewardship Organizations	●	●
Participation in Stewardship Events	●	↗
Participation in Citizen Science	●	●

TREND IDENTIFIERS

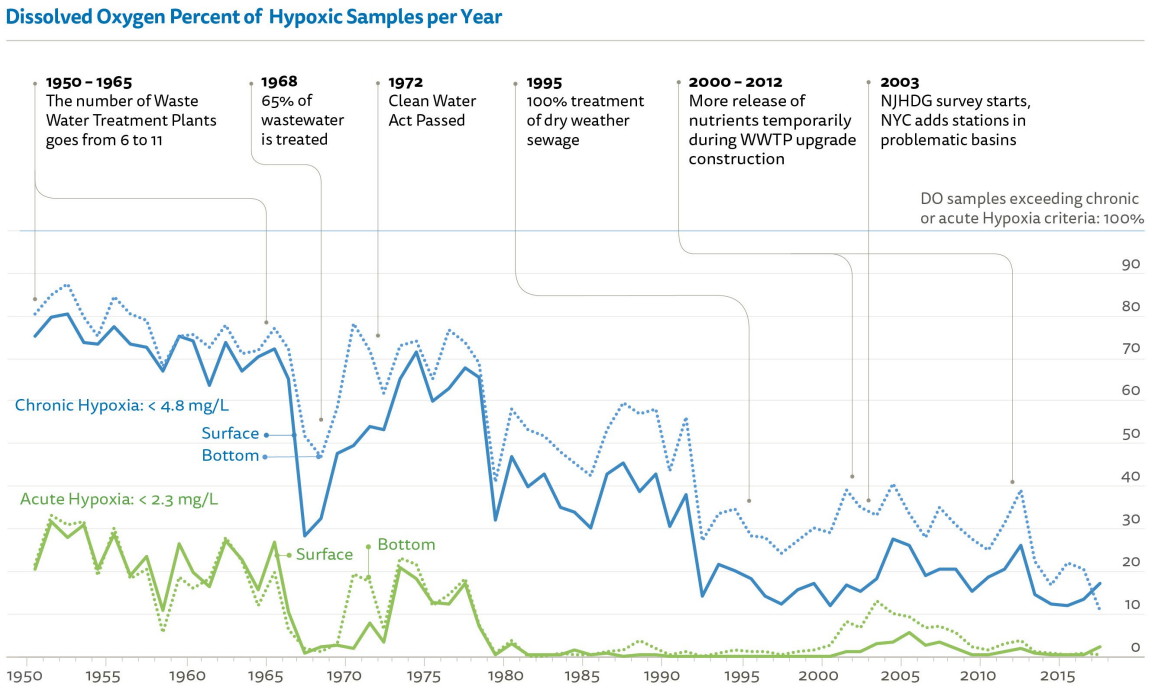
- ↗ Indicates a trend that is improving in terms of environmental health
- ↘ Indicates a trend that is det eriorating in terms of environmental health
- ~ Indicates that the data are not trending, are stable or variable
- ● Indicates that there are insufficient data to determine a trend or that this type of analysis is not applicable

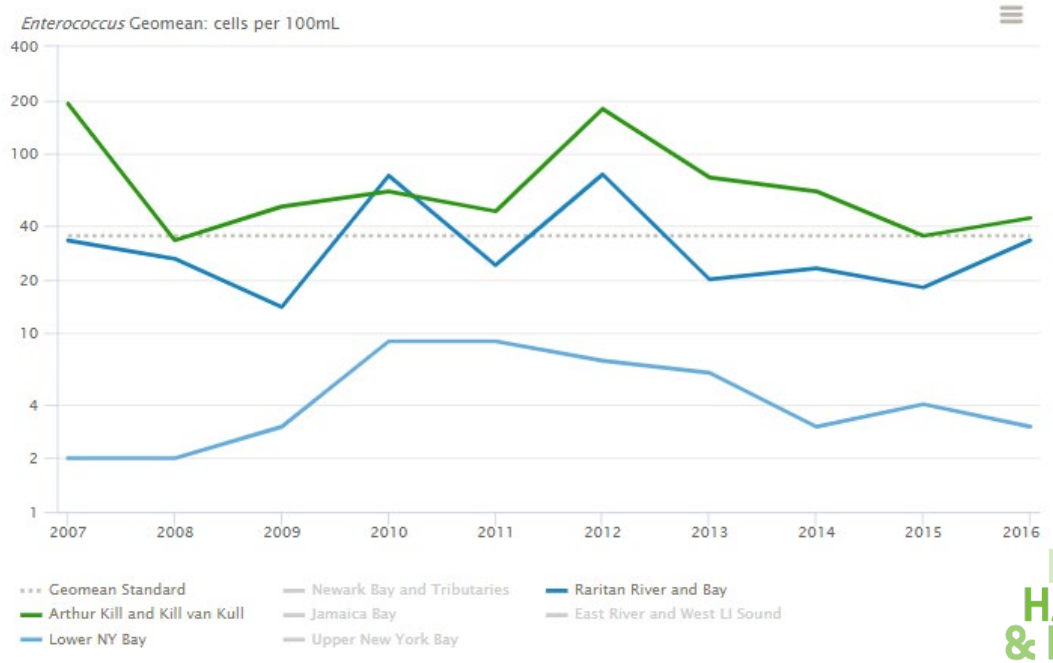
NY/NJ HARBOR & ESTUARY PROGRAM

Water Quality

Reference: NY/NJ Harbor & Estuary Program State of the Estuary Report 2018

- **Water quality improvement is the Harbor Estuary's biggest success story!**
- Dissolved oxygen levels in the water, critical for fish survival, are increasing.
- Pathogenic contamination has also decreased over the long-term, but bacterial contamination emanating from combined sewage overflow (CSO) and stormwater is sporadically high in many places and regularly high in a few parts of the Harbor Estuary, which restricts swimming and the desirability of other on-water recreation.
- There is less garbage floating in the water and along the shoreline than there was 20 years ago.
- Average annual nitrogen concentrations in all the specific waterways are trending down significantly in both the long and short term analysis.
- Coming Soon: *Harbor-wide Water Quality Monitoring Report for the Harbor Estuary* to be published in 2020





NY/NJ HARBOR & ESTUARY PROGRAM

Water Quality:

Combined Sewer System Improvements in New York

- No NYC CSOs discharge directly to Raritan Bay, some CSO outfalls to Lower NY Bay adjacent to the proposed NDZ (Tier 3 Outfall @ Owls Head)
- NYC efforts to control CSOs date back to 1972
- 1992 - NYSDEC-NYCDEP Consent Order to control CSO discharges, major updates to Order in 2005, 2012, 2015
- NYC DEP commitments: $4.1B for ongoing CSO Grey/Green Infrastructure, $4.4B for Long Term Control Plan (LTCP) projects through 2050
- CSO control projects combine hydraulic relief, storage, and disinfection
- Lower NY Bay CSOs will be covered by the "Open Waters" LTCP due March 2020

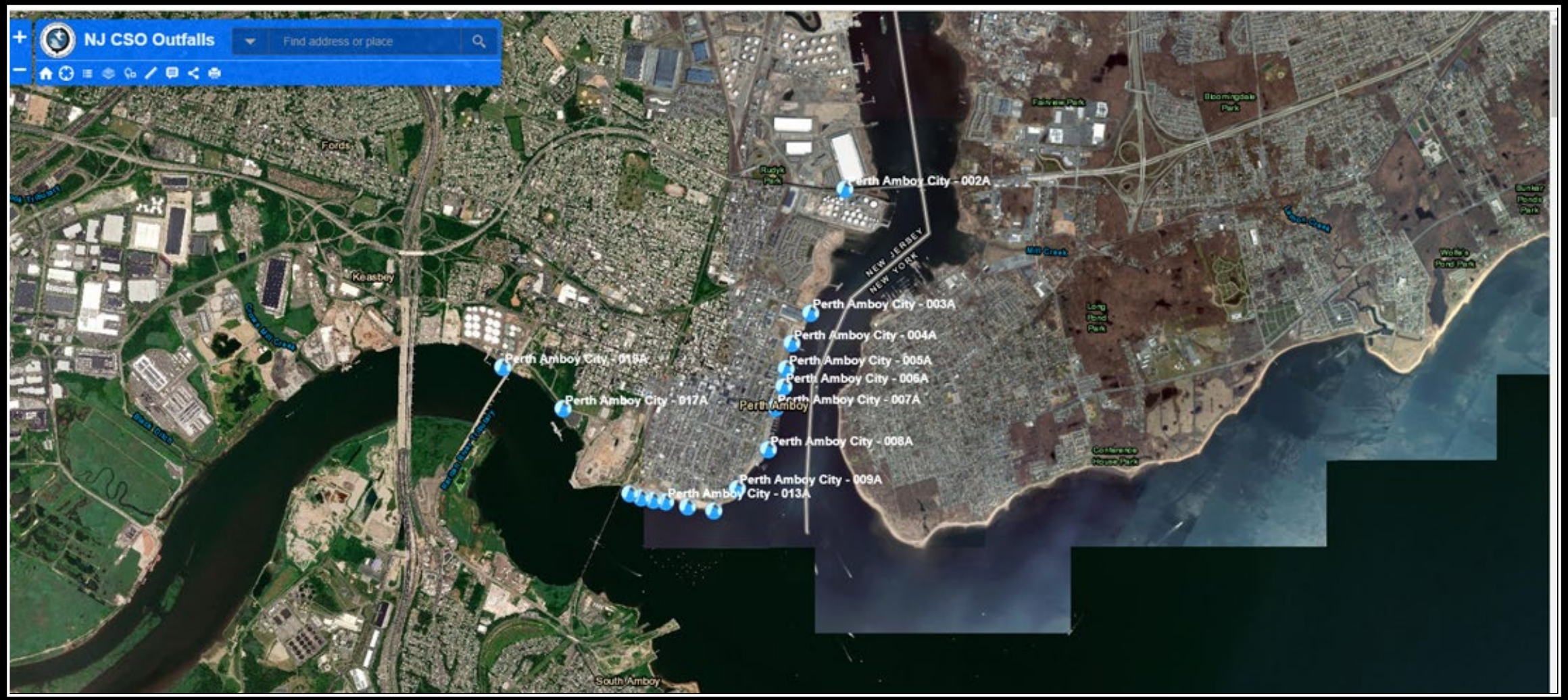
Current NYS Waters with Approved NDZs

- Lake Champlain (1976)
- Lake George (1976)
- Hudson River, water intake zones (1995)
- Mamaroneck Harbor (1997)
- Peconic Waters, East Hampton (1999)
- Huntington-Northport Bay Complex (2000)
- Port Jefferson Complex (2001)
- Peconic Estuary (2002)
- Hudson River Estuary (2003)
- Hempstead Harbor (2008)
- Oyster Bay/Cold Spring Harbor (2008)
- South Shore Estuary Reserve (2009)
- New York State Canal System (2010)
- Long Island Sound (2011)
- Jamaica Bay (2011)
- Lake Ontario (2011)
- Lake Erie (2014)
- Seneca/Cayuga Lakes (2015)

Water Quality:

Combined Sewer System Improvements in New Jersey

- **No Combined Sewer Outfalls within the proposed No Discharge Zone**
- **98% of the CSO outfalls have solids and floatable controls such as netting**
  - Removes over 600 tons of material / year
- **Eliminated 64 CSO outfalls**
- **25 Individual CSO water discharge permits** were issued on March 12, 2015, effective July 1, 2015.
- An **ambitious schedule** with cascading permit requirements. Integrated, incremental improvements in water quality
  - Updated mapping with CSO coordinates
  - Enhanced operation and maintenance
  - Asset Management
  - Development and implementation of Long Term Control Plan
- Long Term Control Plan (LTCP) is due **June 1, 2020**.
- Based on ambient data there has been significant improvement of water quality in Raritan Bay and Sandy Hook Bay

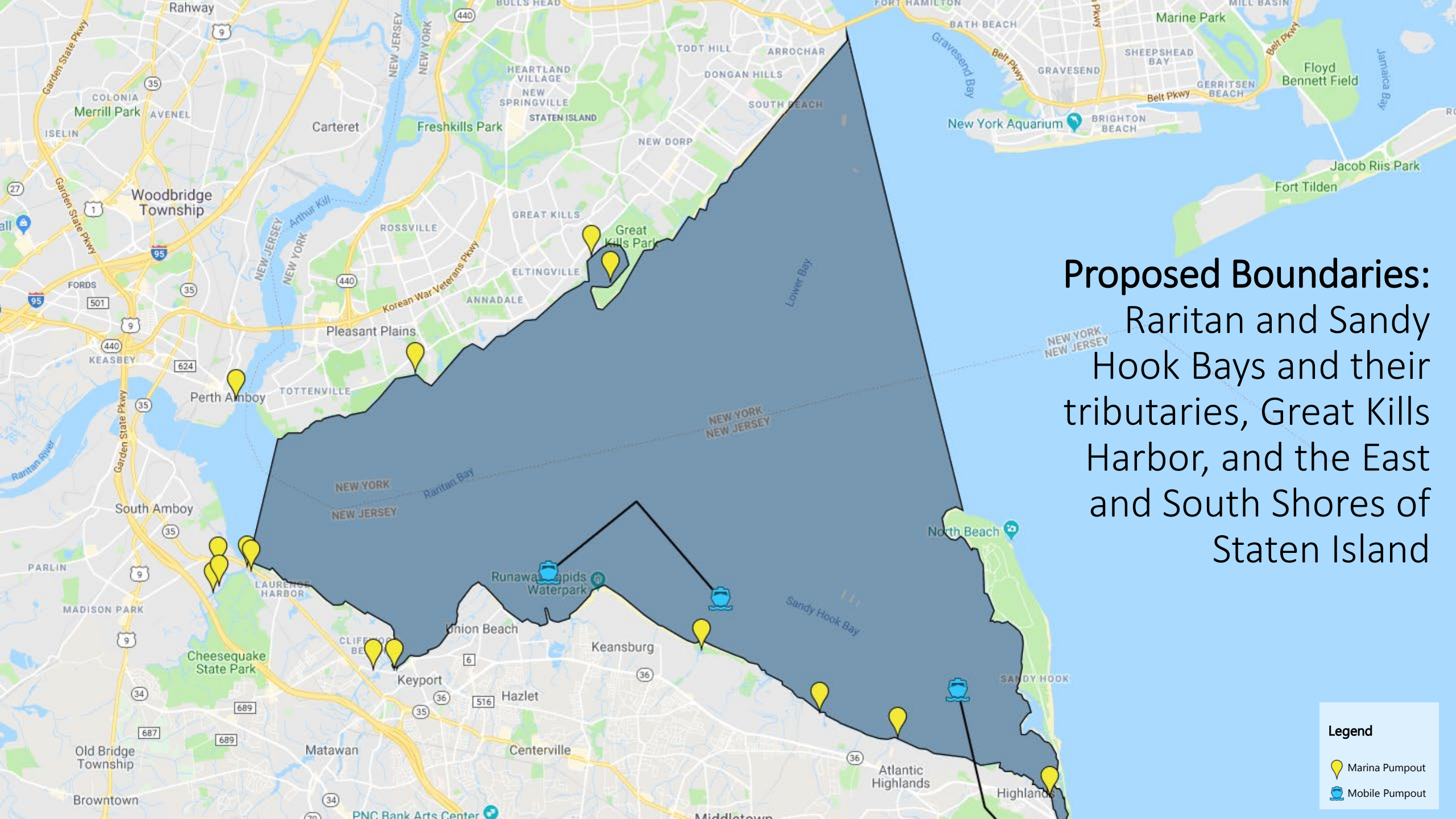


CSO Interactive Map

https://www.nj.gov/dep/dwq/cso.htm

Current NJ Waters with Approved NDZs

- Manasquan River (1998)
- Shark River (1998)
- Navesink River (1999)
- Shrewsbury River (2000)
- Barnegat Bay (2003)


Proposed Boundaries:
Raritan and Sandy Hook Bays and their tributaries, Great Kills Harbor, and the East and South Shores of Staten Island
Legend
Marina Pumpout
Mobile Pumpout
Rahway
Carteret
Freshkills Park
Woodbridge Township
Great Kills Park
Pleasant Plains
Perth Amboy
South Amboy
Cheesequake State Park
Keyport
Union Beach
Keansburg
Hazlet
Matawan
Old Bridge Township
Centerville
Atlantic Highlands
Highlands
North Beach
Sandy Hook
Runaway Rapids Waterpark
New York Aquarium
Marine Park
Floyd Bennett Field
Jacob Riis Park
Fort Tilden
Lower Bay
Raritan Bay
Sandy Hook Bay
NEW YORK
NEW JERSEY
Arthur Kill
Raritan River
Garden State Pkwy
Korean War Veterans Pkwy
Belt Pkwy
Gravesend Bay
Jamaica Bay

Raritan NDZ Timeline/History of NEI Report

2015

- June: Raritan NDZ Quality Assurance Project Plan (QAPP) completed by New England Interstate Water Pollution Control Commision (NEIWPCC)
- July: Data acquisition for NDZ petition. Data used spanned 2008 to 2015

2016

- June: NEIWPCC NDZ petition report finalized and submitted to States as a "working draft" for consideration/modification

2018

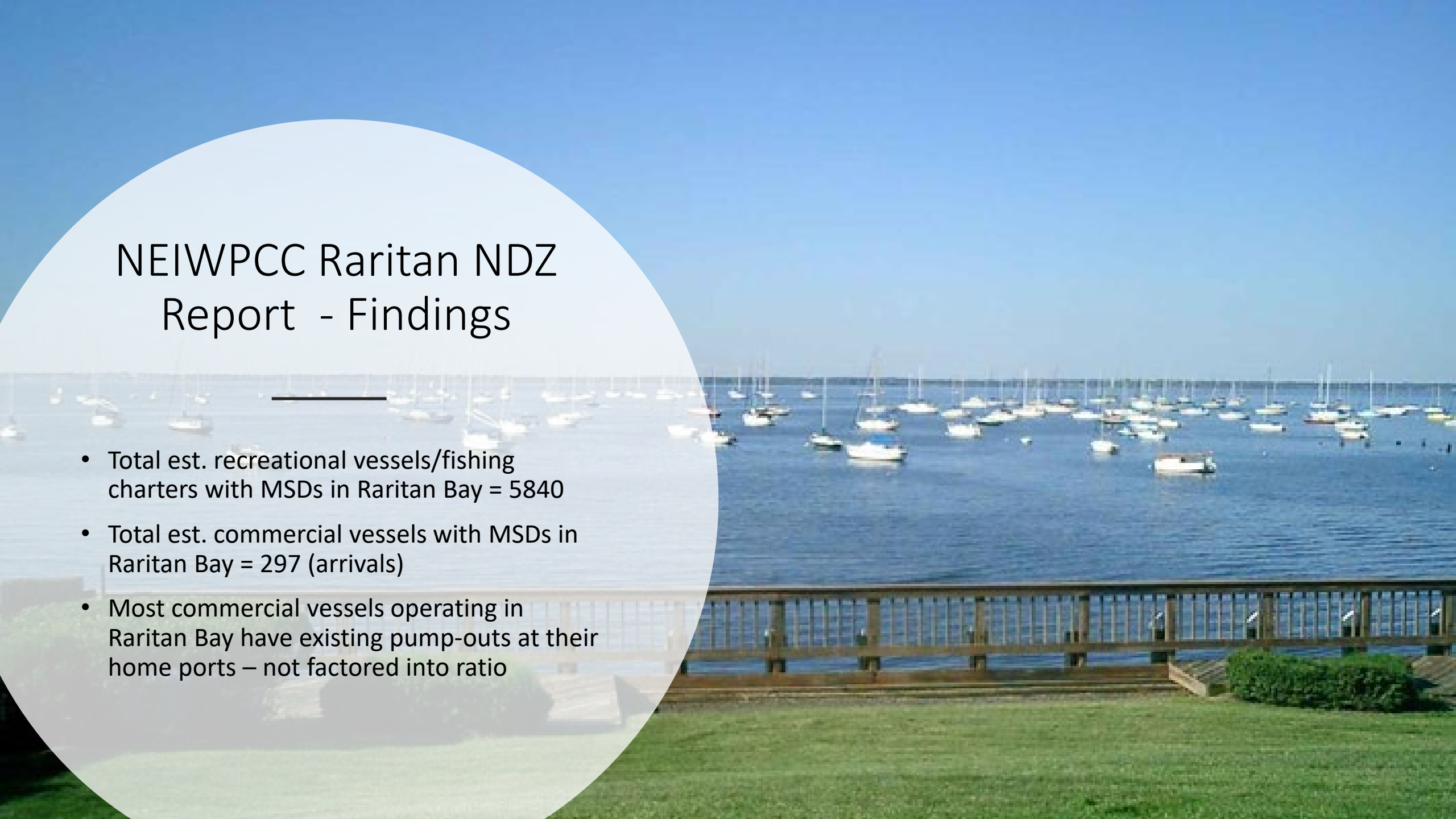
- November: Raritan NDZ outreach effort added to HEP's 2017-2022 Action Agenda (WQ-A-3)

NEIWPCC Raritan NDZ Report - Methods

- Main function of the report is to establish the ratio of vessels in the subject waters to available pump-out facilities
- Primary estimate of vessel numbers and sizes:
  - New York State Office of Parks, Recreation and Historic Preservation's Recreational Boating Report
  - Marine Trades Association's 2008 study of Recreational Boating in New Jersey
  - USGC reports (commercial vessels, both states)
- Vessels with MSDs estimated based on length using USEPA guidance, MSD Type not factored in estimate
- Pump-out availability determined by CVAP funding records and phone calls to local marinas/commercial operators

NEIWPCC Raritan NDZ Report - Findings

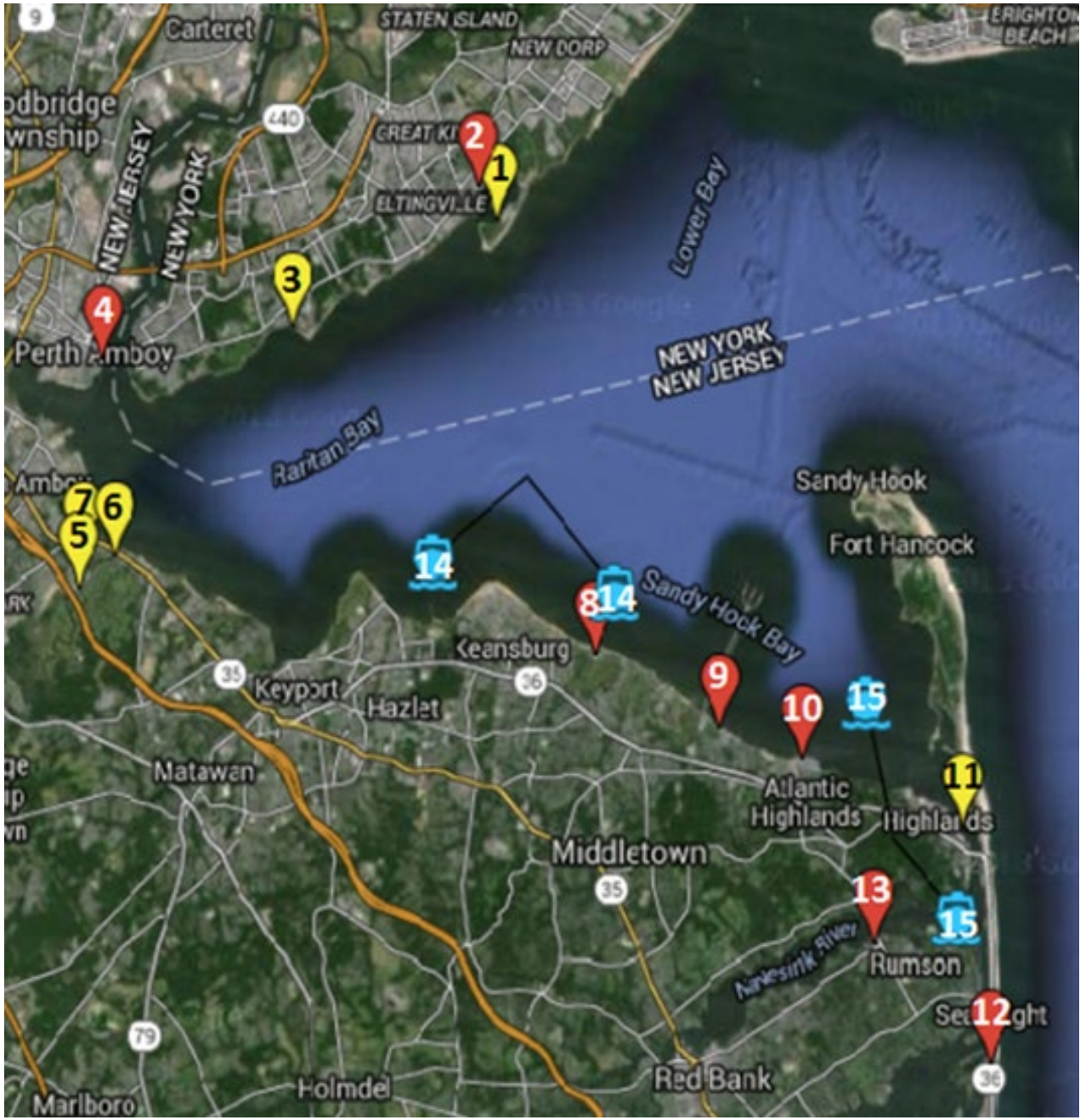
- Total est. recreational vessels/fishing charters with MSDs in Raritan Bay = 5840
- Total est. commercial vessels with MSDs in Raritan Bay = 297 (arrivals)
- Most commercial vessels operating in Raritan Bay have existing pump-outs at their home ports – not factored into ratio



Available Pumpouts

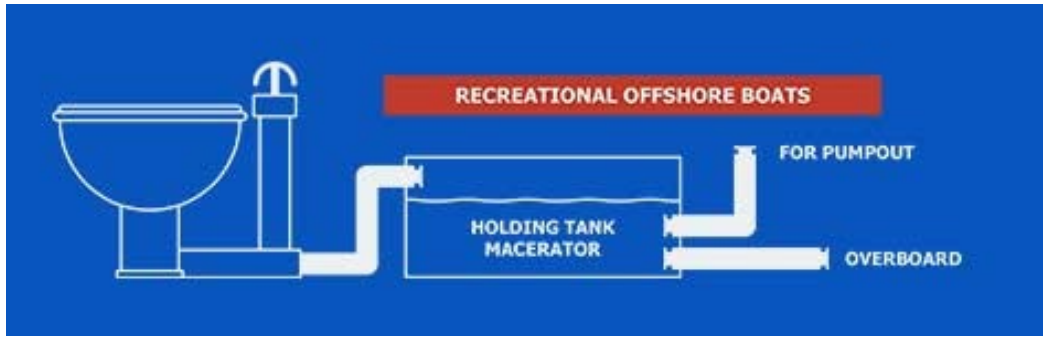
- As of June 2015, the estimated pumpout-to-recreational vessel ratio is 1:390
- EPA recommends a ratio of 1:300-600

1	Nichols Great Kills Marina	9	Leonardo State Marina
2	Atlantis Marina & Yacht Club	10	Atlantic Highlands Municipal Harbor
3	Lemon Creek Marina	11	Twin Lights Marina
4	Perth Amboy Municipal Marina	12	Navesink Marina
5	Morgan Marina	13	Oceanic Marina
6	Vikings Marina	14	NY/NJ Head Mistress Pumpout Boat
7	Lockwood Boat Works	15	Royal Flush Pumpout Boat
8	Monmouth Cove Marina		

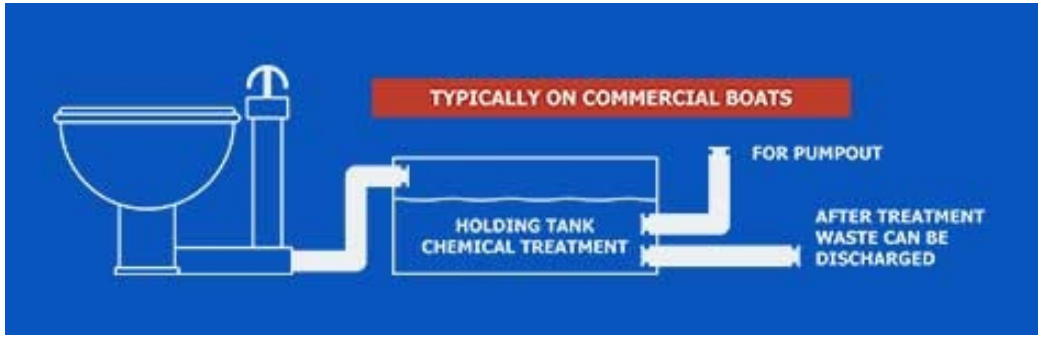


Marine Sanitation Devices (MSDs)

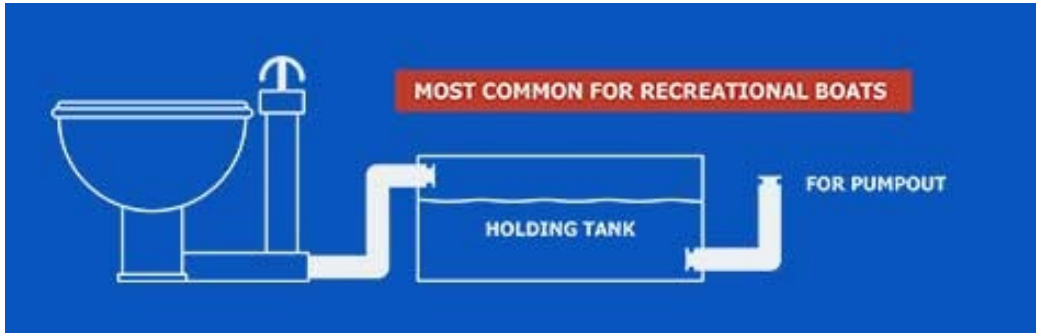
- MSDs are designed to keep untreated sewage out of the water.
- Every boat with an installed toilet must have it connected to an operable U.S. Coast Guard approved MSD.
- Most boats have one of three basic types of MSDs.



MSD Type I



MSD Type II



MSD Type III

Types of Marine Sanitation Devices (MSDs)

Type I	Flow-through treatment devices that commonly use maceration and disinfection for the treatment of sewage	May be installed only on vessels less than or equal to 65 feet in length	Must produce an effluent with: •No visible floating solids •A fecal coliform bacterial count not greater than 1000 per 100 milliliters
Type II	Flow-through treatment devices that may employ biological treatment and disinfection (some Type II MSDs may use maceration and disinfection)	May be installed on vessels of any length	Must produce an effluent with: •A fecal coliform bacterial count not greater than 200 per 100 milliliters •No more than 150 milligrams of total suspended solids per liter
Type III	Typically a holding tank where sewage is stored until it can be discharged shore-side or at sea (beyond three miles from shore)	May be installed on vessels of any length	No performance standard; must "be designed to prevent the overboard discharge of treated or untreated sewage or any waste derived from sewage."

How does a vessel operator comply with an NDZ?

- The regulations allow for four methods of securing an **MSD Type I or II** while in an NDZ, including:
  - Closing the seacock and removing the handle;
  - Padlocking the seacock in the closed position;
  - Using a non-releasable wire-tie to hold the seacock in the closed position; or
  - Locking the door to the space enclosing the toilets with a padlock or door handle key lock.
- For **MSD Type III** devices, the following options are available:
  - Closing valves leading to overboard discharge and removing the handle;
  - Padlocking any valves leading to overboard discharge in the closed position; or
  - Holding overboard discharge valves closed using a non-releasable wire-tie

NDZ APPLIES TO ALL VESSELS:

Commerical, Transportaion, and Recreational

Enforcement

- U.S. Coast Guard inspects vessels for compliance with NDZ; may include review of inspection records, holding tank limits, and review of any sewage logs.
- Enforcement is allowed by any police officer or peace officer, including State police, Conservation Officers, Park Police, Navigation Inspectors, and local police officers, Harbor Masters, and Bay Constables.
- Enforcement privilege is shared with the U.S. Coast Guard and the State(s).

Stakeholder Feedback Process

January-April 2019: Research Stakeholders with high possible impacts

May-August 2019: Conduct Online Survey

July-August 2019: Conduct Interviews with key stakeholders

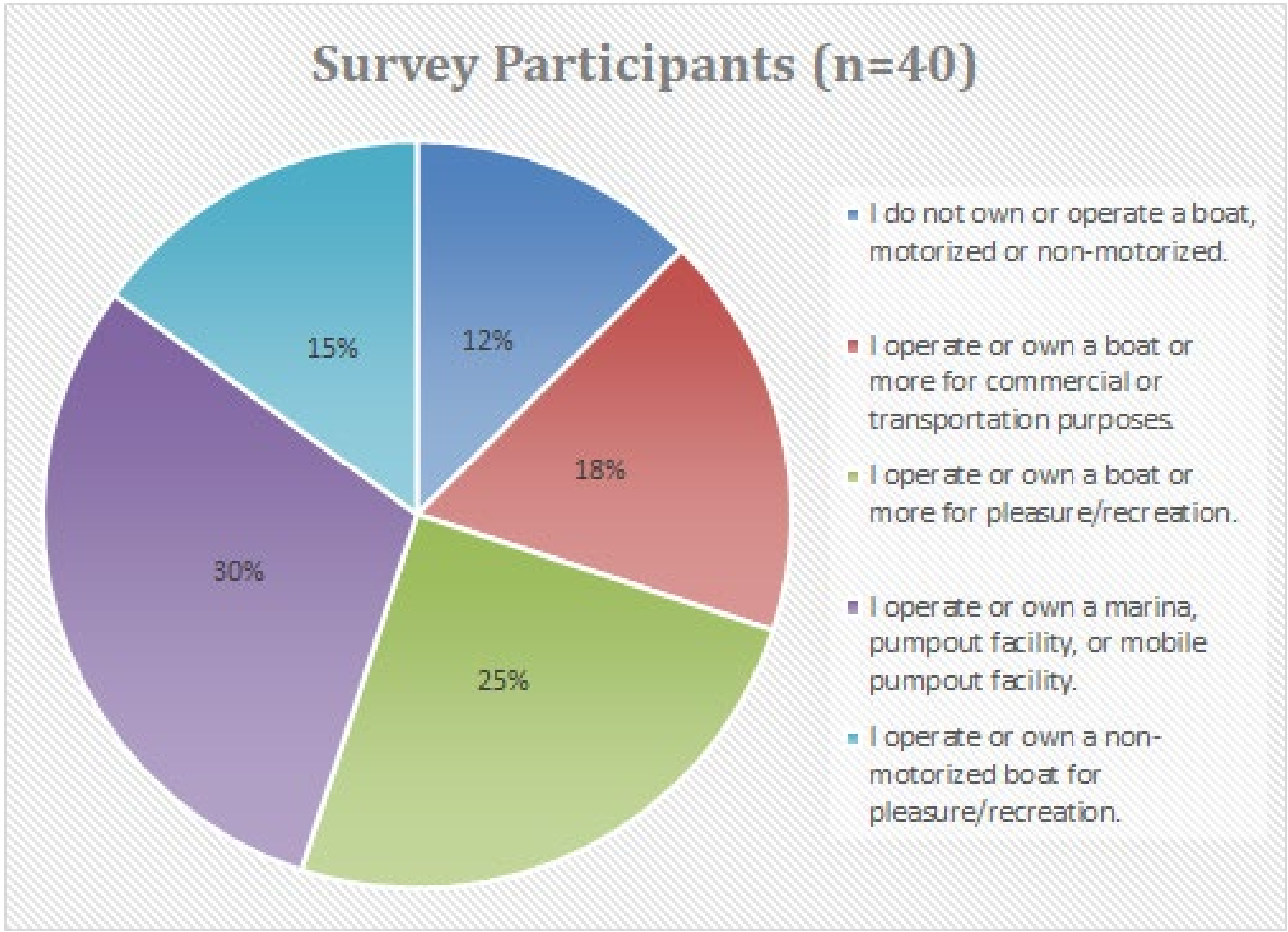
September 2019: Public Outreach Meetings held in both states

December 2019: Data analysis and prepare a final report on stakeholder feedback

NY/NJ HARBOR & ESTUARY PROGRAM

Stakeholder Feedback Process:
Pre-analysis of Online Survey

- 20 unique home port zip codes were given, and the most responses are from 10308 (Great Kills), 10309 (Pleasant Plains), 07716 (Atlantic Highlands), 07701 (Red Bank)
- Recreational vessels vary in size, from 22 ft to 34 ft length and a draft between 2 ft and 5 ft
  - 80% primarily motorized recreation
  - Primarily active May through October
- Commerical vessels largely used for transportation which vessels ranging from 20 ft to 150 ft length, and draft of 2ft to 7 ft.
  - Active yearlong



NY/NJ HARBOR & ESTUARY PROGRAM

Stakeholder Feedback Process:
Pre-analysis of Online Survey

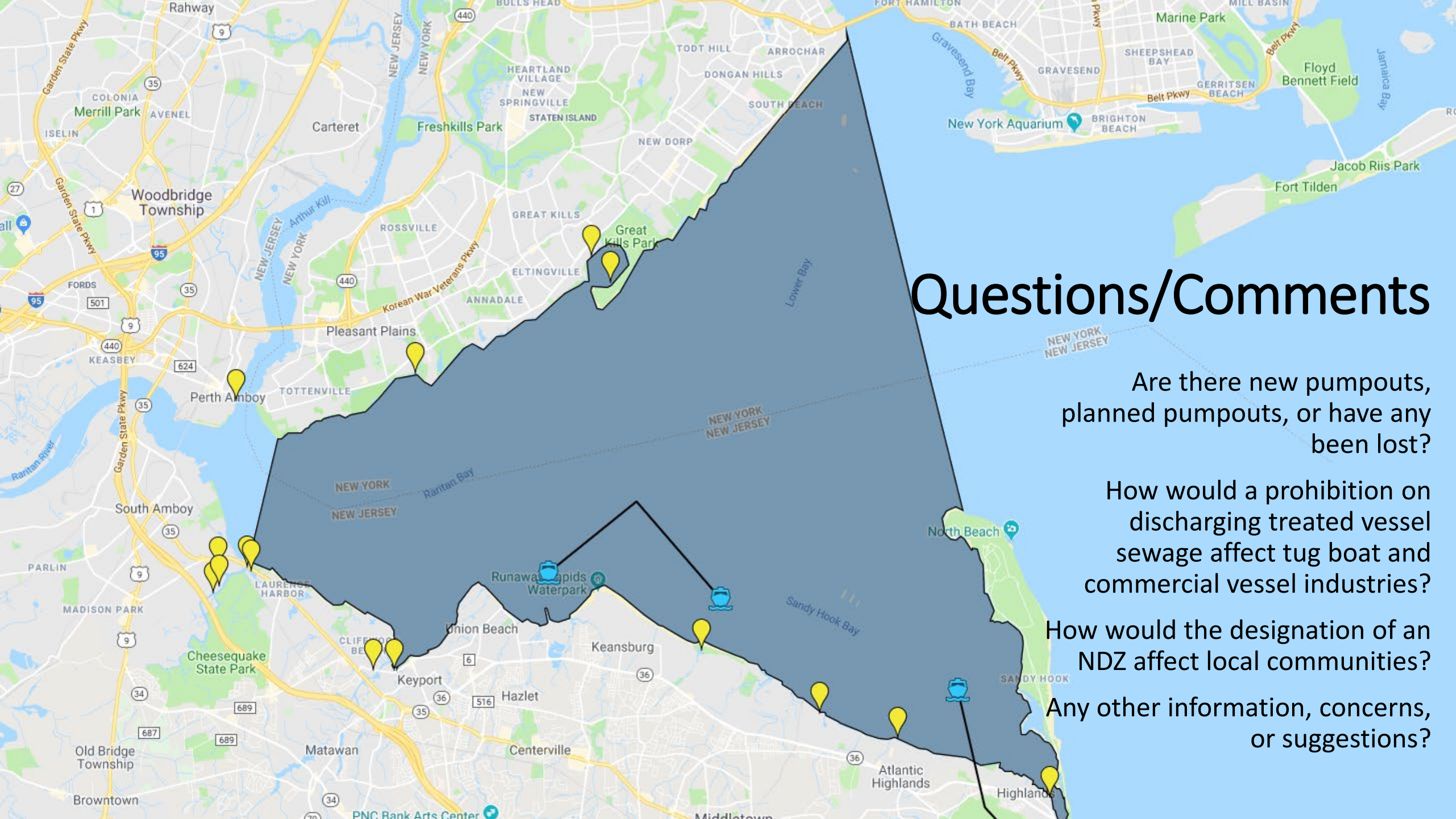
- *Marina's boat slips range between 50 and 200, with most close or at capacity.*
- *Majority of marinas have onshore pumpout facilities and claim 5 minutes or less for boaters to use the pumpouts through the recreational season (May-October).*
- *40% participants stated they do not have an MSD*
- *23% use a stationary pumpout and indicated that their with main issue with accessing a pumpout or toilet dump facility was that the facility was closed.*
- *58% participants are familiar with an NDZ*

NY/NJ HARBOR & ESTUARY PROGRAM

Stakeholder Feedback Process: Pre-analysis of Interviews

- Commercial/Transportation industry did not believe an NDZ would hinder on current operations
- An interviewee suggested the States work with the commercial boaters and tugs to set a future date of the NDZ designation to enable operators to plan and implement upgrades to comply with the designation.
- Existing mobile pumpouts seem to be at capacity and there is concern as to the awareness for recreational boaters of where to access pumpouts (stationary or mobile).

NY/NJ HARBOR & ESTUARY PROGRAM



Questions/Comments

Are there new pumpouts, planned pumpouts, or have any been lost?

How would a prohibition on discharging treated vessel sewage affect tug boat and commercial vessel industries?

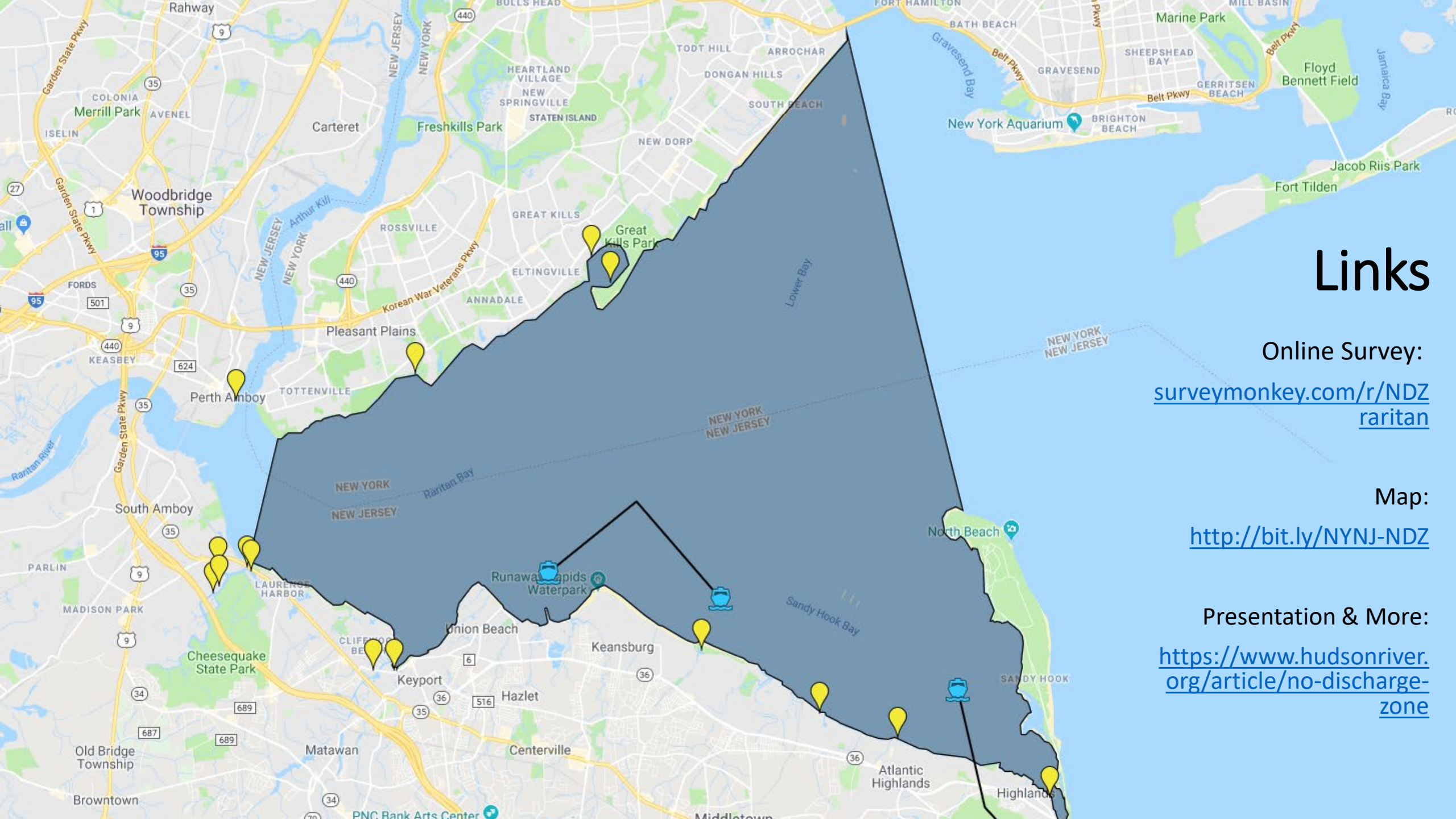
How would the designation of an NDZ affect local communities?

Any other information, concerns, or suggestions?

Next Steps

- HEP will analyze stakeholder feedback and prepare a report for NJDEP/NYSDEC and EPA.

- If the NJDEP/NYSDEC decide to proceed with the designation…
  - Update the NEI Report, specifically at population and pumpout ratios
  - Upon receipt of the petition to designate Raritan Bay an NDZ, EPA Region 2 will publish it for public comment.
  - EPA will review and respond to public comments.
  - Within 90 days, EPA will determine if adequate pumpouts are available and, if so, designate Raritan Bay an NDZ.



Links

Online Survey:

surveymonkey.com/r/NDZraritan

Map:

http://bit.ly/NYNJ-NDZ

Presentation & More:

https://www.hudsonriver.org/article/no-discharge-zone