



**VESSEL WASTE NO
DISCHARGE ZONE
DESIGNATION FOR THE
RARITAN BAY, NEW YORK
AND NEW JERSEY
STAKEHOLDER EVALUATION AND
RECOMMENDATIONS REPORT**

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Prepared by

Rosana Da Silva

New York-New Jersey Harbor & Estuary Program

Hudson River Foundation

17 Battery Place, Suite 915

New York, New York 10004

On behalf of

New York State Department of Environmental
Conservation

New Jersey Department of Environmental Protection

United States Environmental Protection Agency

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1.0 EXECUTIVE SUMMARY

Waste discharged by vessels to surface water, even when treated by marine sanitation devices (MSDs), introduce microbial pathogens that impact water quality. These pathogens pose direct threats to human health, shell fishing, and recreational activities along coastal waterways. Building upon past efforts, the New York State Department of Environmental Conservation (NYSDEC), New Jersey Department of Environmental Protection (NJDEP), and the U.S. Environmental Protection Agency (EPA) partnered with the New York-New Jersey Harbor & Estuary Program (HEP) to help facilitate a stakeholder process. This process focused to inform the states and EPA in considering how to designate a vessel waste “No Discharge Zone” (NDZ) for the Raritan and Sandy Hook Bays and their tributaries, Great Kills Harbor, and the East and South Shores of Staten Island.

The stakeholder process began in December 2018 through December 2019. The project team included: Alyssa Arcaya (EPA), Dr. Moses Chang (EPA), Rosana Da Silva (HEP), Jason Fagel (NYSDEC), Tracy Fay (NJDEP), Bruce Friedman (NJDEP), and Virginia Wong (EPA). The project team focused efforts on stakeholders that operate in and around the propose NDZ boundaries. The process included identifying 162 stakeholders, developing informational fact sheets and maps of the proposed NDZ boundaries, conducting online and mailed surveys, interviews with key stakeholders, and hosting two public meetings. At each step of the process, the project team sought to solicit input from the vast community operating in the region that may be impacted by the NDZ designation, including transportation and commercial industries, maritime-related associations, environmental not-for-profits, boat houses, marinas, and academic institutions.

Of the 162 individuals and/or organizations identified in the stakeholder identification process, the project team was successful in having a total of 41 participants complete the survey, a better than 25% response rate. The 41 survey participants identified themselves as either: not owning or operating a boat (n=6); commercial or transportation operator (n=7); recreational boater (n=10); marina operator (n=12); or operating a non-motorized boat (n=6). Their self-identification directed them to select sections of the survey. Commercial/transportation operators and marina operators represented the majority of survey responses, but had the lowest response level to survey questions. In contrast, both motorized and non-motorized recreational boaters who participated in the survey fully responded to all the questions.

Of the 23 respondents who stated they either own or operate a boat, 90% have over 11 years or more of experience¹. The top three activities identified by these boaters are recreation, transportation, and research. 70% of the 23 boaters indicated that they do not have a marine sanitation device (MSD) or installed toilet in their vessel. The vast majority (86%) of those boaters, who had an MSD, had an MSD Type III. 16 of the boaters completed the pumpout facility section of the survey and 94% of these boaters were aware of where pumpout facilities are located. Stationary pumpouts were most used followed by mobile pumpouts and those not using a pumpout facility of any kind. Finally, the survey indicated that boaters who need to use pumpout facilities do not have trouble finding a working facility.

HEP successfully completed 10 formal and informal interviews and received two written comment submissions from the interviews and public meetings. Only five individuals attended the two public

¹ Of the 41 survey participants, 23 participants that own or operate a boat include the following groups: commercial or transportation operators, recreational boaters, and non-motorized boaters.

meetings. No marina operators were reached to confirm and complete interviews despite a number of email and phone call attempts.

The responses in the interviews and public meetings echoed similar themes. Most people know where pumpout facilities are located and that there are minimum issues that hinder the use of those facilities. The commercial and transportation industry are likely to have their own private pumpout facilities or toilet dumps that their vessels berth. Recreational boaters were identified as a community that would be most affected by the NDZ and further outreach would be needed to inform on pumpout facility locations and mobile pumpout programs. The major concerns for commercial and transportation boaters were for the towboats and tugboats where the states should ensure there are adequate pumpout facilities to service the towboat, tugboat, and barge industry.

The stakeholder process clearly showed interest and support of protecting water quality in the bays through the NDZ process. Two key themes of the interviews and public meeting comments were funding and enforcement. Participants suggested that funding in the form of a grant or low-interest loans be made available to support creation of additional pumpout facilities that could service both recreational and commercial boaters; extend the available hours for mobile pumpout programs; and/or add vessels to the existing fleet that could also service commercial vessels. The second theme was on the importance of education and a reasonable timetable to best inform the maritime community of any new designation as well as the locations of pumpout facilities and services and enable them to prepare their fleet and operations, prior to taking any enforcement actions.

All stakeholders involved in this process supported and echoed their appreciation of the process to engage stakeholders prior to New York and New Jersey submitting a petition to EPA. The following steps are recommended to NYSDEC and NJDEP prior to formally submitting a designation petition to EPA:

- Evaluate whether there are adequate facilities to service not only recreational boaters, but also the commercial boaters, and update the draft NEIWPC 2016 petition;
- Determine requirements for “grandfathering” vessels as well as establishing a deadline for when the proposed NDZ can be enforced. Allowing for a later date for vessels to comply with the NDZ enables the maritime community to plan for the maintenance and upgrades needed for operational vessels;
- Continue discussions with marina operators and the commercial operators, particularly the towboat, tugboat, and barge industries, in the process.

2.0 BACKGROUND AND PROJECT DESCRIPTION

2.1 Background

Microbial pathogens from sewage wastes pose direct threats to human health, limit shell fishing, and hinder recreational uses. While waste discharged by vessels to surface waters are often treated by marine sanitation devices (MSD), they still pose some risk to human health and contain harmful chemical additives, such as chlorine. New York-New Jersey Harbor & Estuary Program’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.

No Discharge Zone (NDZ) designations are a key component of larger strategies for protecting navigable waters and educating the public about water quality. Under Section 312 of the Clean Water Act, an NDZ regulates against the discharge of treated and/or disinfected sewage from vessels directly into the designated waterbody. In order for the states to establish a NDZ under the Clean Water Act Section 312(f)(3), the U.S. Environmental Protection Agency (EPA) must find that adequate facilities are reasonably available for the safe and sanitary removal and treatment of sewage from all vessels.

The New York-New Jersey Harbor & Estuary Program (HEP) facilitated a stakeholder process to help inform the states of New York and New Jersey as they consider petitioning the EPA to designate a vessel waste NDZ for and around Raritan Bay. The New England Interstate Water Pollution Control Commission (NEIWPC) completed an initial petition report on behalf of the New York State Department of Environmental Conservation (NYSDEC) and the New Jersey Department of Environmental Protection (NJDEP) in 2016. The draft petition outlines the justification required for designation, primarily stating that there are adequate vessel waste pumpout facilities to service the boating population in the area. With an active port and growing port activities in and around the Harbor Estuary, the two states requested HEP assist in gathering additional stakeholder feedback regarding the proposed NDZ as one of 40 actions outlined in HEP's 2017-2022 Action Agenda (see Water Quality A-3 action, pg. 17). HEP agreed to work with the two states to better understand the views of our stakeholders and the maritime community, both recreational and commercial, on the challenges and opportunities that a NDZ designation may have in the region. This report accumulates stakeholder feedback and recommendations for the states to consider in their joint process regarding the proposed NDZ for vessel waste in and around the Raritan Bay.

2.2 Project Description

Raritan Bay sits at the southernmost intersection of the Harbor Estuary, bordering both New York and New Jersey as depicted in Appendix A. The watersheds that feed into the Raritan Bay are well developed, with a mix of suburban residential areas and commercial/industrial centers. Based on the 2016 draft New England Interstate Water Pollution Control Commission (NEIWPC) petition, the proposed boundaries of the Raritan Bay NDZ were recommended to include the Raritan and Sandy Hook Bays and their tributaries, the Great Kills Harbor, and the East and South Shores of Staten Island (Appendix A). These boundaries laid the framework in developing the stakeholder feedback process, which included the following key tasks:

- Identifying Stakeholders – The Harbor Estuary is a critical economic engine. Almost 200,000 people work at jobs directly associated with port and maritime operations. The whole regional economy benefits from hosting the nation's second largest port operation, and its capacity to affordably and reliably deliver goods to the marketplace. These waters are also a critical part of the region's public transportation system with more than 38 million ferry trips every year (Pirani, et al, 2018). This process required thoughtful consideration of reaching stakeholders from a number of sectors that include marina operators, ferry operators, port operators, coast guard, municipalities, not-for-profit organizations, state and federal governments, and other environmental groups or interested parties that operate or recreate in and around the Raritan Bay.
- Outreach Material – The development of fact sheets was identified as a need at the beginning of the process to inform stakeholders of the NDZ regulations. The fact sheets provided definitions of

an NDZ, the methods by which vessel waste is managed, the different marine sanitation devices available to manage vessel waste, improvement to the marine environment, and the boundaries of the proposed NDZ. In addition, an interactive map of the proposed boundaries and the location of pumpout facilities was recommended. The map would serve to orientate stakeholders on the proposed impacted area of the NDZ and support the feedback process.

- Survey Stakeholders – An online survey was determined to be a critical component of the process in an effort to connect with as many stakeholders as possible in both states. An online survey also allowed the known stakeholders to circulate the survey to other boaters in the community to obtain greater feedback. In addition, 10 phone interviews to key stakeholders, specifically the commercial community, was a secondary survey focus. These interviews built upon the online survey questions and provided more in-depth conversations regarding the challenges and opportunities in the region.
- Public Meetings – Two public meetings, one in each state, provided the final opportunity in this process to obtain feedback from the public regarding the potential concerns, challenges, and opportunities that a NDZ designation may have on the community. The meetings provided a face-to-face conversation with the agencies involved in the NDZ, to learn about the process, and raise issues or questions that the states would need to address.

The project team consisted of members of HEP, NYSDEC, NJDEP, and EPA, who participated in bimonthly conference calls to address project design, progress, and deliverables. The implementation of the project began in December 2018 and completed in December 2019. This report serves as the summary of the feedback received on the potential benefits and impacts of the NDZ designation on the surrounding communities and others who use the waterways for business and recreation.

3.0 DESIGN AND IMPLEMENTATION

3.1 Stakeholder Outreach Design

Interest in establishing a NDZ in and around Raritan Bay has been in discussion by EPA and the two states since 2011. Stakeholder conversations with members of the NJDEP, NYSDEC, commercial vessel communities, the Coast Guard, and recreational boaters were held over the years. These initial discussions lead EPA and the states of New York and New Jersey to commission NEWIPCC to conduct the research needed to draft a petition determining whether the Raritan Bay would meet EPA's requirements to establish a NDZ designation. The 2016 draft petition provided the justification required for designation, primarily that there are adequate vessel waste pumpout facilities located in the Raritan Bay. Committed to the process, the two states requested assistance from HEP to provide a forum for discussion to publicize the initiative and engage stakeholders for all voices to be heard.

By 2018, HEP began discussions with New York and New Jersey regarding the stakeholder outreach design process, in addition to researching past NDZ stakeholder processes that have previously occurred in the country. Initially, the scope aimed at holding 10 interviews with key stakeholders from commercial and transportation operators in the bay and one public meeting. Based on a review of NDZ designation's across New England by EPA Region 1, it was agreed upon by the two states that an online survey should be considered as part of the process. EPA confirmed that New York and New Jersey may proceed with a

stakeholder process prior to any NDZ designation, but recommended that the draft petition be updated to reflect the work and confirm whether the compiled date is reflective of existing conditions. By March 2019, the two states, EPA, and HEP agreed on the stakeholder processes which included the identification of key stakeholders, an online survey, interviews with key stakeholders, and two public meetings. The remaining section below details the decisions made during the implementation process.

3.2 Stakeholder Identification

Recreational boating is one of the most prominent uses of the Raritan Bay, whether it is by kayaking, sailing, or power boating. With major port activities in New York Harbor, it is also typical to see a number of commercial boats, ferries, tugboats and barges around the New York Harbor. Although the proposed area within the NDZ boundaries (see Appendix A) is not the most frequented area by commercial vessels, it is a popular route in some parts of the industry. Furthermore, there are a number of cruises and fishing charters and a number of environmental organizations, who support public access to the waterfront and improved water quality.

The draft NEWIPCC petition included a list of marinas with pumpout facilities and enterprises around the area to add to the stakeholder list. The list started with 55 known organizations or individuals. Utilizing existing partnerships with organizations across the Harbor Estuary, HEP reached out to local organizations for assistance in developing the stakeholder by the proposed NDZ designation. Organizations such as the Waterfront Alliance, New York City Parks, National Park Service, NJDEP, and NYSDEC all aided in providing organization information for a variety of stakeholders. With their assistance, eight (8) stakeholder categories were identified: academic institutions; environmental not-for-profits; government agencies; human-powered boating associations or clubs; industry and commercial operators or associations; marinas and services (including Harbor Masters); recreational fishing charters and cruises; and transportation operators.

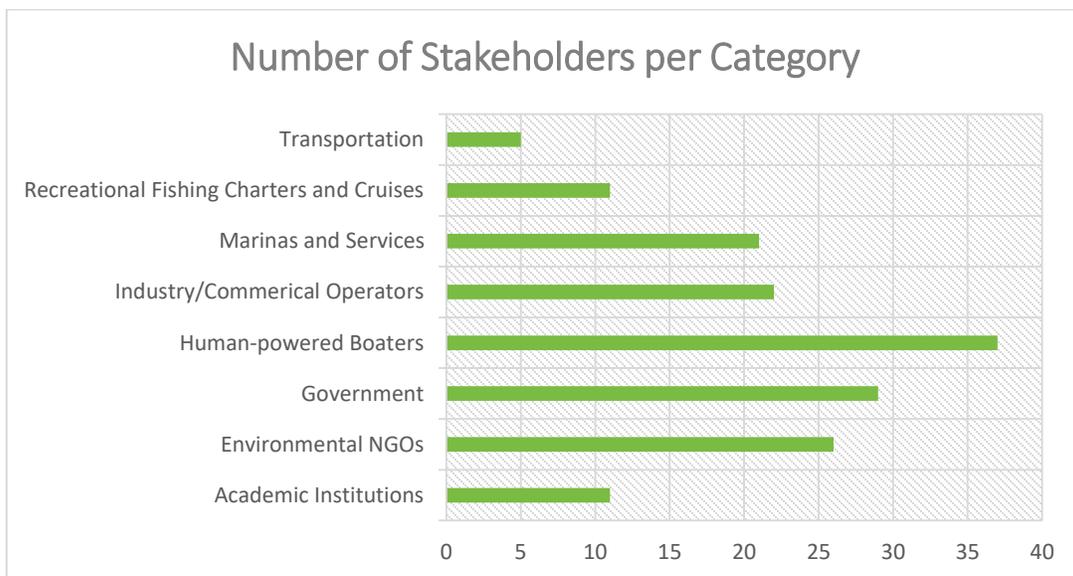


Figure 1. Of the eight categories, 162 organizations and individuals were identified as potentially impacted by the proposed designation of the NDZ.

By the final stage of identifying stakeholders, a total of 162 organizations and individuals were identified through this process and distributed throughout the eight categories, as indicated in Figure 1, and were engaged in one or more of the outlined activities in the remaining section.

3.3 Survey Implementation

The survey design was informed by evaluation report surveys completed in New England (Battelle, 2004) with additional questions proposed by the project team targeted to better understand the community utilizing the Raritan Bay. Specifically, there was an intention to understand the different communities and their needs. The survey's outline distinguished between individuals who: operate or own a boat for pleasure and/or recreation; operate or own a boat for commercial or transportation purposes; operate or own a marina, pumpout facility, or mobile pumpout; operate or own a non-motorized boat for pleasure and/or recreation; or that do not own or operate a boat, motorized or non-motorized (see Appendix B). By distinguishing the different communities, survey questions adjusted to guide participants to the appropriate questions that would apply directly to them utilizing the online survey software, SurveyMonkey®. HEP developed the initial survey and shared it with the project team for input and review. The final survey approved by the project team is outlined in Appendix B.

The survey consisted of five sections including a general section for all participants. The response to question one determined the subsequent questions a participation would be given. As examples, those who identified as "I do not own or operate a boat, motorized or non-motorized" and "I operate or own a non-motorized boat for pleasure/recreation," were only given the general section of the survey to understand existing knowledge of NDZ designation and terms. Those that identified as "I operate or own a boat or more for commercial or transportation purposes" would not take the marina and recreational sections of the survey, but were given the commercial motorized boaters, manufactured sanitation devices, pumpout facilities, and the NDZ section of the survey.

The survey was released to the stakeholder contact list (discussed above in Section 3.2) by NYSDEC and NJDEP via email on June 27, 2019 with an enclosed fact sheet that provided the basics of what an NDZ designation means, including its benefits (Appendix C). The two states utilized an introductory email as follows:

Hello, you are invited to participate in a joint-survey by New York State Department of Environmental Conservation (NYSDEC) and New Jersey Department of Environmental Protection (NJDEP) regarding the opportunity to protect the health of Raritan, Sandy Hook, and a portion of the Lower New York Bay.

[Click here](https://www.surveymonkey.com/r/NDZraritan) or copy and paste this link into your web browser to participate in the survey: <https://www.surveymonkey.com/r/NDZraritan>.

The New York State Department of Environmental Conservation, New Jersey Department of Environmental Protection, New York-New Jersey Harbor Estuary Program, and the U.S. Environmental Protection Agency are seeking input from stakeholders to gain more information on possible effects of a "No Discharge Zone" designation on the communities surrounding the bays, and others who use the bay for business and recreation.

A “No Discharge Zone” (NDZ) is a designated body of water where discharging boat sewage, treated or untreated, is prohibited. NDZ designations ensure better water quality in our waterbodies, harbors, coves, and beaches. A NDZ designation is under consideration for the Raritan/Sandy Hook Bays to include: Raritan and Sandy Hook Bays and their tributaries, Great Kills Harbor, and the eastern shore of Staten Island. An NDZ fact sheet is attached to this message. A map of the proposed NDZ boundaries can be found at the survey link.

Your input is a critical step in evaluating the proposed NDZ and we encourage you to take up to 15 minutes of your time to participate in our survey.

Thank you in advance for your participation. Please contact [state representative name] if you have any questions on this effort.

HEP rectified email errors or provided alternative email address for the organization/individual for the states to resend the invitation email. The two states and HEP agreed to mail a hard-copy of the survey to marina owners and/or operators to increase their participation and capture the information detailed in the survey. Mailed surveys were sent with an envelope addressed to HEP. Upon completion, the surveys were mailed to HEP where the surveys were recorded on the online survey platform by HEP staff.

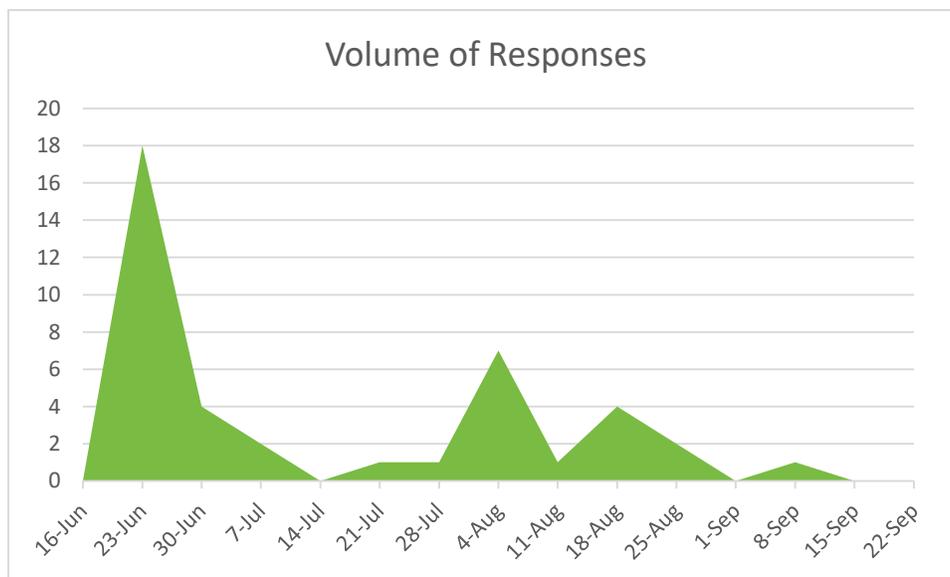


Figure 2. Response volume of survey participation per week of the active survey.

Secondary email reminders were sent on August 2nd and August 6th by NYSDEC and NJDEP. Figure 2 displays the volume of responses per week of survey activity. Organizations such as NYC SWIM, NY/NJ Baykeeper, and the Waterfront Alliance also linked the survey to their newsletters and social media posts to aid in extending the network. The survey closed on September 30, 2019, with 41 participants (25% of the stakeholder population). The survey does not address or account for bias opinions and answers.

3.4 Interview Implementation

As part of 3.2 Stakeholder Identification, the project team conducted eight formal and two informal interviews with key stakeholders who were representative of the larger community impacted by the NDZ designation’s proposed boundaries. HEP made recommendations of organizations and individuals

representing academic institutions, marinas and services, industry/commercial operators, environmental not-for-profits, and transportation. The project team approved the following list of twelve potential candidates:

1. State University of New York's Maritime College
2. Marine Trades Association of New Jersey
3. Maritime Association of the Port of New York/New Jersey
4. Lemon Creek Marina
5. Nichols Great Kills Marina
6. NYC Parks Marina
7. Twin Lights Marina
8. NY/NJ Baykeeper
9. Raritan Riverkeeper
10. NY Waterway Ferry
11. Seastreak Ferry
12. Port Authority of New York and New Jersey

Each organization was contacted first with an introductory email following up from the initial survey email stating the following:

Hello, you have been recently invited to participate in a joint-survey by New York State Department of Environmental Conservation (NYSDEC) and New Jersey Department of Environmental Protection (NJDEP) regarding the opportunity to protect the health of the Raritan, Sandy Hook, and a portion of the Lower New York Bay.

The NYSDEC, NJDEP, New York-New Jersey Harbor Estuary Program, and the U.S. Environmental Protection Agency are seeking input from stakeholders to gain more information on possible effects of a "No Discharge Zone" designation on the communities surrounding the bays, and others who use the bay for business and recreation.

Your input is a critical step in evaluating the proposed NDZ and I would like to schedule a 15 minute call with you, or someone from your organization, to answer a few questions and identify any major concerns or questions you may have.

Please let me know, of the following dates and times below, your availability and the best number to reach you.

Email requests were sent to all twelve organizations on July 2, 2019. Several follow up emails and phone calls were made to schedule interviews. Of the twelve organizations, eight (8) interviews were held between July 22nd and August 15th and included: State University of New York's Maritime College professors Joseph Ahlstrom and Captain Walt Nadolny; Marine Trades Association of New Jersey's Executive Director, Melissa Danko; Nichols Great Kills Marina National Park Service's Chief of Resource Stewardship, Patti Rafferty; NY/NJ Baykeeper's Restoration Program Director, Meredith Comi; Raritan Riverkeeper's Captain Bill Schultz; Port Authority of New York and New Jersey's Office of Environmental & Energy Programs, Dana Mecomber; and Seastreak Ferry's Vice President of Operations, Jack Bevins. The Maritime Association of the Port of New York/New Jersey and Lemon Creek Marina responded with interest but were unable to commit to scheduling a survey. Twin Lights Marina did not respond to either emails or phone calls, and the NY Waterway Ferry responded to the interview request with comments and declining the interview. Specific questions from the online survey were used to guide the interview with additional open-ended questions to allow interviewees to provide further input (Appendix D). Interviewees were asked to answer these questions to the best of their knowledge and were provided

definitions regarding NDZ and the proposed boundaries of the NDZ. Interviewees were informed that HEP staff were taking notes on the responses provided and that a final report would be published on HEP's website at the end of the year. In addition to these eight formal interviews, HEP conducted two informal interviews. A request to provide comments was sent by the Wildlife Conservation Society-New York Aquarium's NY Seascape Associate Director, Noah S. Chesnin to HEP and a conference call was held on October 10th to further discuss the NDZ process. A request to submit comments from the American Waterways Operators-Atlantic Region's Tugboat, Towboat, and Barge Industry Association, was made by Senior Manager Brian Vahey in late August and shared with HEP on November 8th. To understand the statements made in the submitted comment letter, HEP also interviewed Brian Vahey on November 25th to capture the concerns from the active tugboat, towboat, and barge industry that operates in the New York Harbor.

3.5 Public Meeting Implementation

Public meetings aimed to provide an overview of the Clean Water Act, what it means to the boating community if the proposed waters become a designated NDZ, and how an NDZ is enforced. In addition, public meetings included a listening session for the states to hear from the community whether sufficient pumpout facilities were available, or if there are unintended consequences or challenges that could impact the commercial/transportation community, both for the present and future. To serve both states, it was agreed by the project team to host two (2) meetings to allow New Jersey and New York residents to participate in a meeting in their state, stressing that the meetings be held as close as possible to the impacted areas of the proposed NDZ boundaries.

Venues were explored by the project team and secured at the Monmouth Battlefield State Park in Manalapan, NJ, and at the NYC Parks Greenbelt Nature Center in Staten Island, NY. Both venues were able to hold between 50-75 people and had available parking. Upon securing venues, dates and times were selected and advertised to the stakeholder group by email beginning August 27th, and again on September 6th, through HEP's MailChimp® services. Organizations such as NYC SWIM, NY/NJ Baykeeper, and the Waterfront Alliance helped market the public meetings via newsletters and social media accounts up until the public meeting dates held on September 9th and 10th. Meetings were organized to allow for 15-30 minutes of registration, 45 minutes of a presentation delivered by the project team (NYSDEC, NJDEP, EPA, and HEP), and ended with up to 60 minutes of public feedback. Materials provided at the meetings included copies of Appendix B. Online Survey Questions, Appendix C. NDZ Fact Sheet, Going Coastal Hudson River Pumpout Map, Going Coastal NYC Waterfront Map, NYSDEC's NYC Fishing Map, and Going Coastal New York-New Jersey Harbor Estuary Paddling Guide. Participants were asked to register by providing their name, phone number, email address, and address.

The first meeting was held at the Monmouth Battlefield State Park in Manalapan, NJ, and began at 12 pm on September 9th. Outside of the project team and presenters, only two representatives of Monmouth County Planning Department attended the meeting. Due to the low turnout, NJDEP provided a verbal overview of the goal of the NDZ and HEP followed up with questions as to who should the states should engage; what would be important to have in the region to make an NDZ successful; and what was the current capacity of the marinas in the region. The meeting ended by 3 pm. The next morning at 9 am, the project team gathered at the Greenbelt Nature Center in Staten Island, NY, for the second public meeting in this process. Four participants attended this meeting and one of the presenters requested the approval

of the project team to video record the meeting. Participants included representatives from the National Park Service, NYC Parks, and the Natural Resources Protective Association. With approval from all presenters, the project team allowed the participant to video record the meeting presentation with the request that the video be shared with the project team and with those who were unable to attend. HEP introduced the project team and the goals of the public meeting, followed by EPA with an overview of the Clean Water Act and the goals of the NDZ designation. NYSDEC then led the majority of the presentation with HEP and NJDEP sharing water quality improvements and existing NDZs in the region. Questions were accepted throughout of the presentation with time for questions at the end of the meeting. The meeting concluded at 12 pm.

4.0 ANALYSIS AND RESULTS

4.1 Survey Results

Of the 162 individuals and/or organizations identified in the Stakeholder Identification process (Section 3.1), a total of 41 participants completed the online survey, which is representative of a quarter of the stakeholder list. Survey participants were asked to identify themselves as a commercial or recreational boater, marina or pumpout facility operator, a non-motorized boater, or none of these options. Indicated in Figure 3, a majority of participants (29%) indicated they operated or owned a marina, pumpout facility, or mobile pumpout, followed by those identifying as a recreational operator/owner (24%)

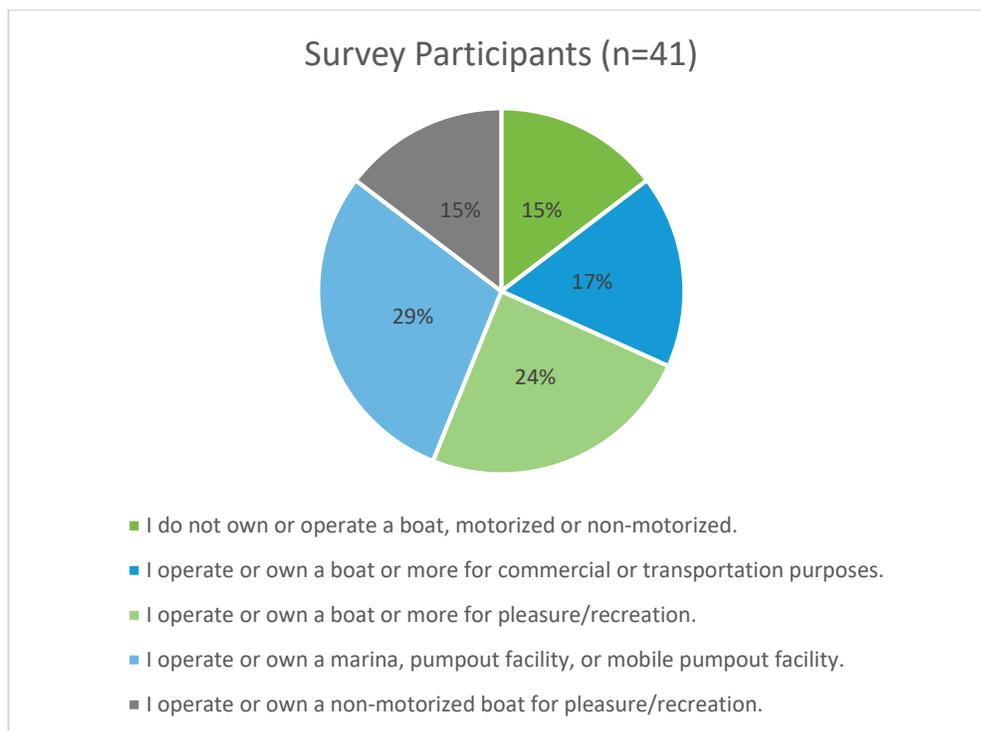


Figure 3. Total number of survey participants (n=41) identifying with statements as: not owning or operating a boat (n=6); commercial or transportation operator (n=7); recreational boater (n=10); marina operator (n=12); or operating a non-motorized boat (n=6).

The survey participants identified 21 unique port of entry zip codes, with a majority of participants identifying their homeport as Pleasant Plains, NY (10309), Great Kills in Staten Island, NY (10308), and Atlantic Highlands, NJ (07716). This question (#2) was an optional question for all participants and only 30 choose to respond in identifying their homeport. Figure 4 showcases the unique zip codes of home ports in the region, with an even split of representation of New York and New Jersey zip codes.

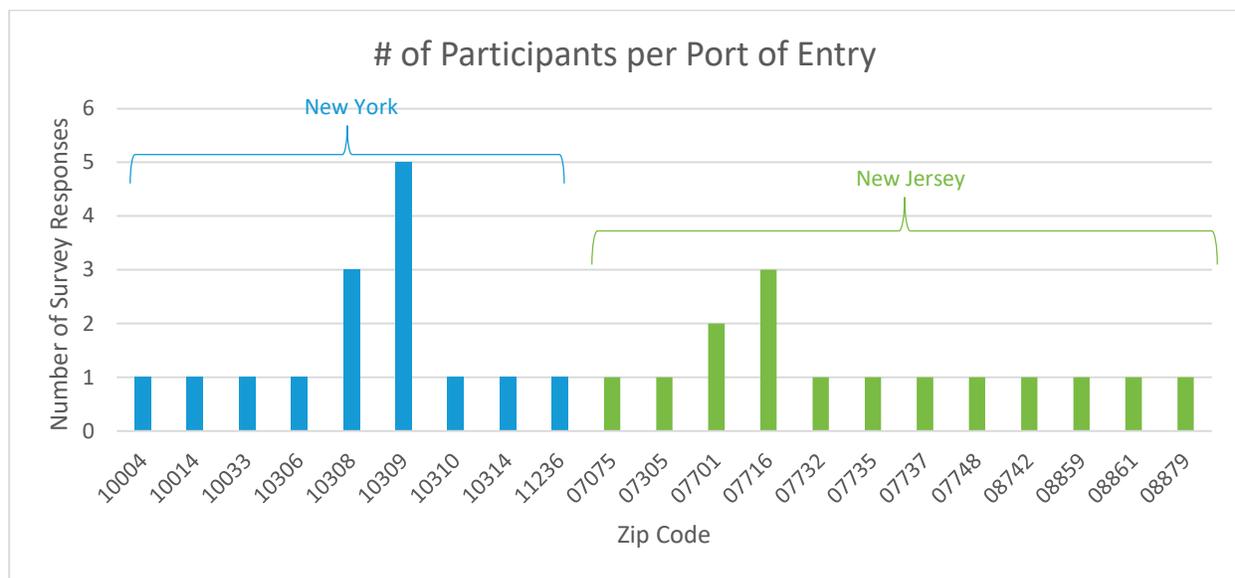


Figure 4. Optional Question #2 of the survey identifying with participants' (n=30) homeport by zip code with equal representation from both states.

44% of the total survey participants (n=41) stated that their homeport or point of entry is found within the purposed boundaries of the NDZ, while 39% chose not to respond to the question. 51% of the total survey participants indicated they were familiar with the term “No Discharge Zone” or “No Discharge Area.” 59% of the total survey participants accurately defined the term “No Discharge Zone.” 27% of the total survey participants identified the U.S. Coast Guard as an enforcer of the NDZ designation, while 20% identified the EPA and 41% chose not to respond to the question. Due to the structure of the survey, the remaining results are discussed by survey section to adjust for the population of participants that were given the opportunity to respond to the section questions.

4.1.1 Marina, Pumpout Facility, Mobile Pumpout Section Results

12 participants were provided this section of the survey, representing 29% of the total survey responses collected. Only four (4) completed the survey section for analysis. Two marinas indicated having between 120 to 200 boat slips; one indicated having between 20 to 119 boat slips; and one indicated less than 20. Three of the marinas indicated they are close or at slip capacity, while one marina indicated being only a third full.

All four marinas indicated having onshore pumpout facilities with an average of 0-5 minutes of a wait time for a boater to access the pumpout during the recreational season (May-October). One marina indicated that there is also a toilet dump station on site. Half of the marinas indicated pumpout or toilet dump was either free or \$5 or less to the boater, with three of the marinas identifying as a private pumpout facility. During a typical year, marina operators/owners indicated that pumpout facilities and/or toilet dumps are functional 75 to 99% of the time and are all self-service pumps. A majority of the marinas indicated a cost

of \$500-900, estimated to the nearest dollar, annually is spent to operate and maintain the marina's pumpout facility and/or toilet. A majority of marinas have applied for the Clean Vessel Assistance Program (CVAP) and have received funding from CVAP.

Two marinas indicated that they could serve commercial vessels, while the other two could not. One marina has a maximum vessel draft of 4.5 feet; two are between 6 and 10 feet; and one has a maximum vessel draft of 18 feet. There are an estimated 15 marina or pumpout facilities that are operating in and around the proposed NDZ boundaries (Appendix A). With only four completed surveys, the responses represent only a quarter of the facility populations and should be taken in consideration when evaluating these results further. However, the New Jersey Sea Grant Consortium (NJSGC) conducted a Clean Vessel Act (CVA) survey from August-September 2019 of 38 select marinas that were known to have working pumpout services at some point in recent time. Although only two of those marinas fall within or near the proposed NDZ boundaries, NJSGC's inspection found a majority of facilities had operational boat sewage pumpout units (NJSGC, 2019).

4.1.2 Commercial Boater Background Section Results

A total of seven (7) participants were provided this section of the survey, representing 17% of the total survey responses collected, only two (2) completed the survey section for analysis. One indicated having a fleet of eight (8) vessels for primarily transportation services, and the other indicated a fleet of five (5) for primarily research and restoration. The survey asked for the range of their vessel length in feet for the smallest and largest vessels in their fleet. Figure 5 highlights the probable range of vessel length in the Raritan and Sandy Hook Bays.

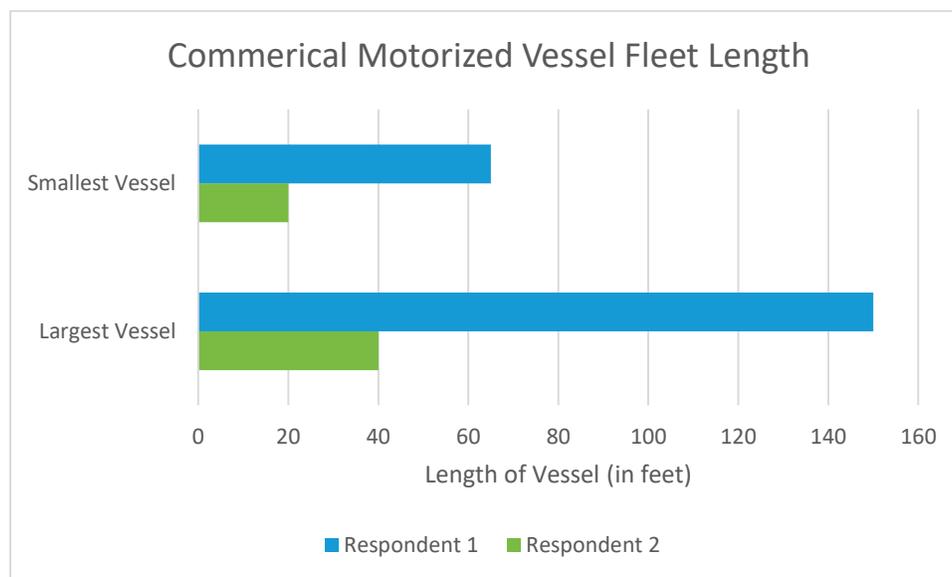


Figure 5. Commercial fleet range of vessel length from the smallest and largest vessel within the fleet.

Both respondents indicated they are on the water throughout the year and do not find it difficult to navigate to existing marinas or pumpouts in the Raritan and Sandy Hook Bays, and portions of the Lower New York Bay. Boating varied between novice (1-5 years) and experienced (21-30 years). Due to the low response rate for this stakeholder group, the results are likely not reflective of the commercial and transportation community operating in and around the New York Harbor.

4.1.3 Recreational Boater Background Section Results

10 participants were provided this section of the survey, representing 24% of the total survey responses collected. All completed the survey section. All of recreational boaters own the vessel that they operate and are boating during the recreational season (May through October). Figure 6 provides a range of the vessel length and draft of recreational boaters, recreational vessels between 22 and 24 feet in length, and vessels with a draft of three (3) feet or less.

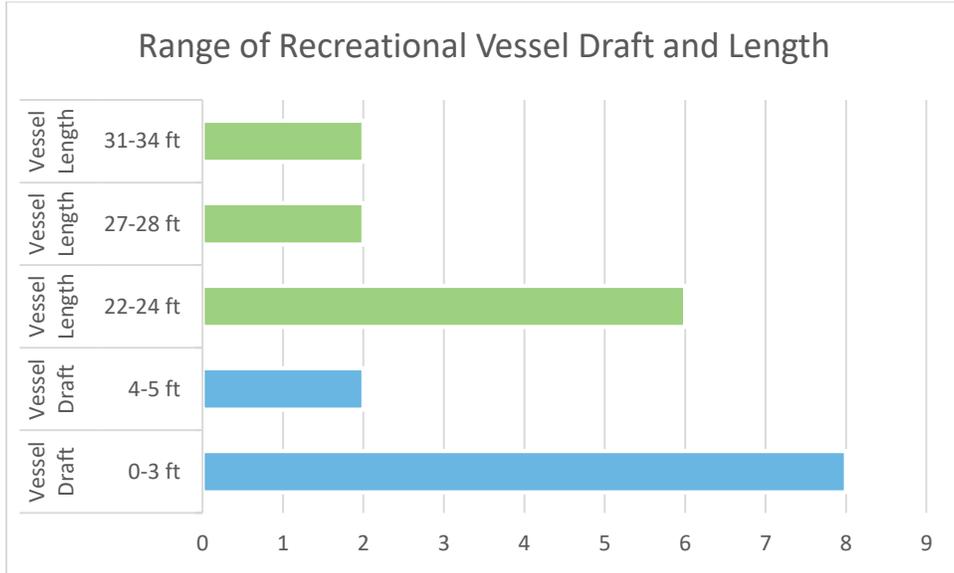


Figure 6. Motorized recreational vessel length and vessel draft ranges (n=10).

The 10 respondents to this survey all indicated that they are experienced boaters having over 10 years of experience, as indicated in Figure 7.

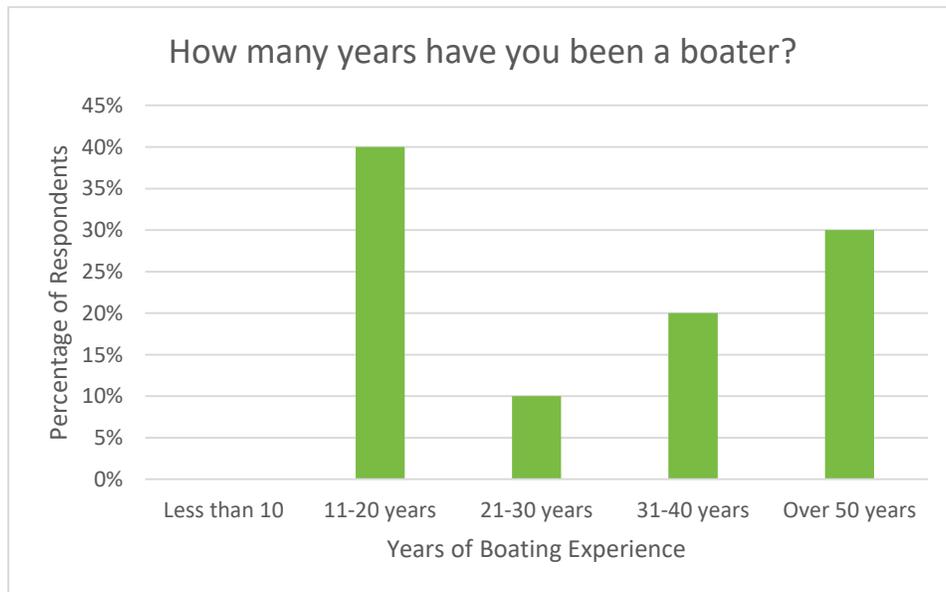


Figure 7. Average years of respondents' boating experiences (n=10).

80% of the recreational boaters agreed that their primary vessel activity in the Raritan and Sandy Hook Bay and portions of the Lower New York Bay are considered motorized recreation. The remaining 20% indicated their primary activity to be non-motorized recreation, such as a sailboat, or as part of an association activity. The results indicate there is an experienced recreational community and are active during the recreational season.

4.1.4 Marine Sanitation Devices (MSD) Section Results

23 participants were provided this section of the survey that included commercial/transportation owners or operators, recreational owners or operators, and non-motorized recreational vessels. Altogether, they represent 56% of the total survey responses collected, and all completed the survey section for analysis. To continue this section of the survey, participants were asked whether they have a marine sanitation device (MSD) or a toilet installed in their vessel. Boaters were asked to respond “no” if they have a porta-potty, which are popular among recreational vessels. Of the 23 participants, 70% responded no and were directed to the next section of the survey (Pumpout Facilities Section). The following analysis is indicative of the 30% that responded “yes” to having a MSD or toilet on board their vessel.

- 86% indicated having a MSD Type III on board, which is a holding tank designed to hold sewage until it can be pumped out at a pumpout facility.
- 43% maintain their MSD(s) at all times, while 29% maintain the MSD sometimes.
- 57% learned how to operate their MSD by using the instruction manual, and others indicated being trained by a marina operator (14%), MSD manufacturer (14%), the boat dealer (14%), or did not receive any type of training or instruction (14%).
- Of those that received training by either the marina operator, MSD manufacturer, or boat dealer, 14% indicated that the training was less than 30 minutes.

Boaters (n=7) indicated that while operating in a designated NDZs, 57% send their vessel waste to a holding tank, while 14% avoid using their installed toilet, and 14% did not respond to the question. Based on these responses, it is likely that those vessels with an MSD or installed toilet are likely to have an MSD Type III and rely on the instruction manual for how to operate the MSD (i.e., connecting to a pumpout).

4.1.5 Pumpout Facility Experiences Section Results

23 participants were provided this section of the survey, which included commercial/transportation owners or operators, recreational owners or operators, and non-motorized recreational vessels. Together they represent 56% of the total survey responses collected, but only 16 completed this survey section for analysis. The following analysis is indicative of those that responded on their experiences and knowledge of pumpout facilities in and around the New York Harbor.

- 94% are aware of where pumpout facilities are located in and around the proposed NDZ boundaries.
- 56% currently utilize one or more pumpout facilities in the proposed NDZ boundaries.
- 56% typically use a stationary pumpout to service their vessel, while 25% did not use a pumpout facility of any kind. 13% typically use a mobile pumpout such as those operated by the NY/NJ Baykeeper or Monmouth County. 6% utilize a shore-based portable pumpout, and 6% typically use a portable toilet dump station to service their vessel.

- Over the past five (5) years, 75% did not have a problem finding a working pumpout or toilet dump facility when needed.
- 31% did not find any experience or condition that would hinder their use of a pumpout facility, while 25% indicated that the facility being closed had hindered their use this year (2019) or last season (2018). Others indicated their hindrance was due to the facility not having a pumpout out (13%), the pumpout was not functional (6%), the facility staff could not assist (6%), or that the cost was too high (6%).

Boaters (n=16) in this section indicated that while they may have experienced challenges at pumpout facilities, 63% did not see those challenges deterring them from utilizing the facility at a later date while 13% stated that it did deter them from visiting the facility in the future. Based on these results, the community is aware of and actively using pumpout facilities, specifically stationary pumpouts, to service their vessels in the Raritan and Sandy Hook Bays. The main deterrence of accessing a pumpout seems to be the facility being closed, likely a result of recreational fishermen coming to shore in evening or odd hours.

4.2 Interview Results

Of the 12 identified organizations and/or individuals, HEP successfully completed eight (8) interviews and received two (2) written comment submissions during this process. No marina operators were reached to confirm and complete interviews despite a number of email and phone call attempts. Therefore, the interview responses to the Appendix D questions are jointly analyzed with a discussion on further comments made during the interview.

Of the eight interviewees, 75% indicated that they operate and own one or more boats in the proposed NDZ area. The National Park Service Gateway National Recreation Area operates the largest fleet with 20 small boats under 20 feet in length (motorized and non-motorized) used for education, followed by Seastreek Ferry with eight (8) vessels operating seven (7) days a week for transportation services. A number of the interviewees indicated several activities that take place in and around the proposed NDZ boundaries, with transportation and recreation being the dominant activities, as displayed in Figure 8.

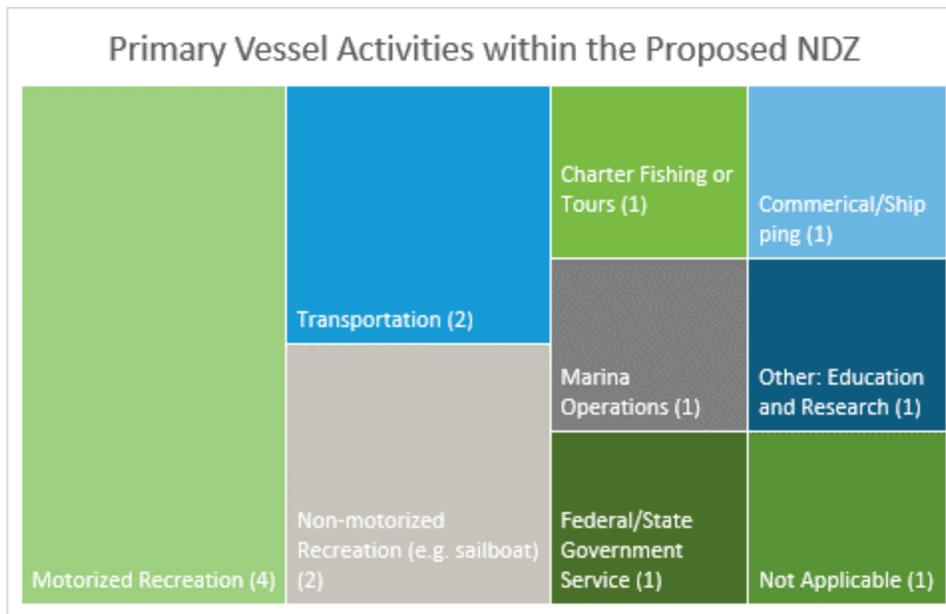


Figure 8. Interviewees (n=8) primary activities of their vessels in and around the Raritan and Sandy Hook Bays and portions of the Lower New York Bay.

Of the interviewees that have a need to dispose of vessel sewage waste, Seastreak and the Port Authority of New York and New Jersey have their own private facilities and terminals to service their fleets. NY Waterway submitted a comment letter that indicated they already meet the NDZ compliance requirements. In a 2014 interview with HEP, the Staten Island Ferry indicated that they would soon come into compliance based on their scheduled maintenance plan. Other users have utilized existing pumpout facilities in the area; 50% of the interviewees indicated they were aware of the pumpout locations. NY/NJ Baykeeper relayed public complaints on accessing pumpouts during the recreational season due to an increase of boaters, and their unawareness of the mobile pumpout program or not knowing where pumpout facilities are located. When asked about common problems with pumpout facilities, the Marine Trades Association of New Jersey mentioned that pumpouts have not been identified as an issue on their hotline for the boating community. The Raritan Riverkeeper has found non-functional self-service pumpout stations and believe that it is likely due to mishandling of the pumpout. Three (3) interviewees agreed that additional pumpouts would be beneficial, particularly to service the Lower New York Bay and encouraged pumpouts to service the towboats and tugboats. NY/NJ Baykeeper indicated that their captains are often called upon for mobile pumpout services that exceed the amount of hours they are allotted to work in a given recreational season.

All interviewees were familiar with the NDZ and overall, supportive of NDZs for the protection and improvement of water quality in the targeted bays. When asked about what limitations existed to comply with the NDZ, funding and enforcement were the common themes. Those that indicated funding spoke in terms of available funding to support extended hours for mobile pumpouts, implementation of additional pumpout facilities, and funds available for the commercial/towing industries to install holding tanks. Enforcement was also deemed an issue due to some vessel designs inability to comply, third party lessees or operators entering our bays may be less aware of the NDZ designations, and the vast community of recreational boaters that would need to be regulated.

63% of interviewees indicated that funding and/or low-interest loan programs would benefit the community of commercial and recreational boaters to comply with the NDZ designation. Funds were recommended to be used to either increase the number of available pumpout facilities; add to the existing fleet of mobile pumpouts units in the area or provide the fleet with funds to extend the workforce hours of operation; and to upgrade vessels to come into compliance. It was also suggested that the states consider working with the maritime community for a drop date designation for enforcement to allow the maritime community to schedule vessel maintenance with any upgrades or modifications needed prior to enforcement of the NDZ commencing.

Overall, general comments received included the following suggestions and recommendations:

- Improving outreach and education on the benefits of the NDZ, specifically on how addressing a reduction of a pollution source will improve water quality, fish habitats, and the various fish stocks – in particular bunker and the whales that feed on them.
- Engaging the U.S. Coast Guard in the NDZ process more thoroughly.
- Towboat and tugboat operations are limited by NDZs and often reroute themselves out of existing NDZs. Considerations to grandfather some vessels that are in ports longer or that do not have holding tanks and are likely to be phased out by the owner should be explored.
- Ensure that there are adequate pumpout facilities available for the existing maritime community, including both recreational and commercial boaters.

HEP was also contacted by the American Waterways Operators (AWO) Atlantic Region's Tugboat, Towboat, and Barge Industry Association and an informal interview was conducted with Senior Manager Brian Vahey in response to the formal letter of comments submitted by the AWO (Appendix F). AWO and its members are not supportive of NDZ designation but are appreciative of the process New York and New Jersey have undertaken in this stakeholder process. AWO indicated that they are supportive of protecting the marine environment working within a practicable regulatory framework that allows for marine commerce. Based on an informal interview on November 25th and the comment letter, the main concerns from tugboats, towboats, and the barge industries in the region are the ratio of vessels to pumpout facilities and the lack of infrastructure needed for the tugboats, towboats, and barges to access pumpout facilities while operating in a NDZ. In evaluating the number of pumpout facilities, AWO informed that it is equally critical to understand the configuration of the facility for vessels to navigate and access the pumpout as is the available draft at marinas. AWO was not opposed to mobile pumpout facilities or programs, if they were designed with the tugboat, towboat, and barge industry and specifically the local operators who likely are not leaving the area and are bunkering down or providing ship assistance in the area.

4.3 Public Meeting Results

Two key themes were clear after analyzing comments and questions received during the meetings: education/outreach and access to pumpout facilities. In both meetings, participants were supportive of an NDZ designation. Recognition that an NDZ relies upon an honor system from the boating community and understanding of the NDZ regulation, all participants identified the need to improve outreach and education in the communities. This includes asking marinas to include informational brochures/maps, an acknowledgement of the NDZ as part of marina slip agreements, and other means of communication.

Participants, including Monmouth County, NJ, the National Park Service, and the NY/NJ Baykeeper offered support for sharing information. A general request included that the states allocate funds to install signs along the shoreline and marinas in English and other languages. Pumpouts were the second theme mentioned during the meetings. Discussions focused on how boaters receive information, such as pumpout station locations and costs. In addition to waterproof maps, participants recommended the states work with a Global Positioning System (GPS) to include pumpout locations into units used by boaters. Updated maps and charts should also include the hours of operation for the pumpout facilities. Additional pumpout facilities were also recommended as most marinas in the area are either near or at capacity, or building upon the existing mobile pumpout program by Monmouth County and NY/NJ Baykeeper to service the boating community in the region.

Other comments made were on understanding enforcement – who can enforce and how vessels are cited. Participants had difficulty understanding enforcement, particularly due to discharging into a designated NDZ often occurs out of sight and below surface waters. Clarification on enforcement and the education that is needed to improve water quality by addressing vessel source discharge is an important step for consideration. There were discussions on how the NDZ could impact the Seafood Co-Op that operates out of Belford, NJ, and other commercial industries that utilize the bays. It was generally agreed that continued outreach with stakeholders would provide the states with an opportunity to not only educate on the NDZ, but also provide opportunities to understand potential obstacles that an NDZ may unintentionally create.

5.0 RECOMMENDATIONS

New York and New Jersey states are recommended to proceed with further evaluating whether adequate pumpout facilities exist that can service recreational/commercial vessels and proceed with petitioning EPA for an NDZ designation. EPA's guidance recommends a ratio of one pumpout for every 300-600 vessels and outlined in the draft 2016 NEIWPC petition. Further evaluation of pumpout facilities may be adequate, though consideration to the infrastructure of the marina is necessary to determine the type of vessels that can be serviced and identify funding needs to address gaps. Most commercial vessels operating in the Raritan and Sandy Hook Bays have existing pumpout facilities at their homeports; however, should they need to pumpout away from their homeports, there are limited marinas that can provide this service.

New York and New Jersey are recommended to work with EPA on determining requirements for grandfathering vessels that are in the ports longer or have no holding tanks. This would be supportive to commercial operations, while letting the older vessels be phased out. Establishing a deadline for when the NDZ in the Raritan and Sandy Hook Bays and a portion of the Lower New York Bay can be enforced. The phase-in period prior to enforcement is important for vessel operations and easily implemented by the commercial community by giving everyone the opportunity to be in compliance (i.e., maintenance and upgrade schedules).

Outreach and engagement of marina operators and the commercial operators, particularly the towboat, tugboat, and barge industries, is further recommended throughout this process. New York and New Jersey should continue outreach efforts with the maritime community on the potential challenges or burdens a NDZ in the Raritan and Sandy Hook Bays and their tributaries, Great Kills Harbor, and the East

and South Shores of Staten Island. Building off the recent 2019 survey conducted by NJSJC, additional inspections should be made to those pumpout facilities identified in Appendix A. Discussions with commercial associations such as the Maritime Association of the Port of New York and New Jersey, the American Waterways Operators-Atlantic Region's Tugboat, Towboat, and Barge Industry Association, and others will aid in highlighting further concerns. Future outreach efforts should consider hosting nighttime meetings for greater engagement with the maritime community in addition to more adequate announcement of meeting dates. Collaborating with known maritime associations to announce meetings or other outreach opportunities would be beneficial to all parties involved. New York and New Jersey State is recommended to coordinate and launch a public education program for boaters emphasizing the advantages of clean waters for local uses. Monmouth County Parks Department and the National Park Service Gateway National Recreational Area offered their support in education and outreach efforts.

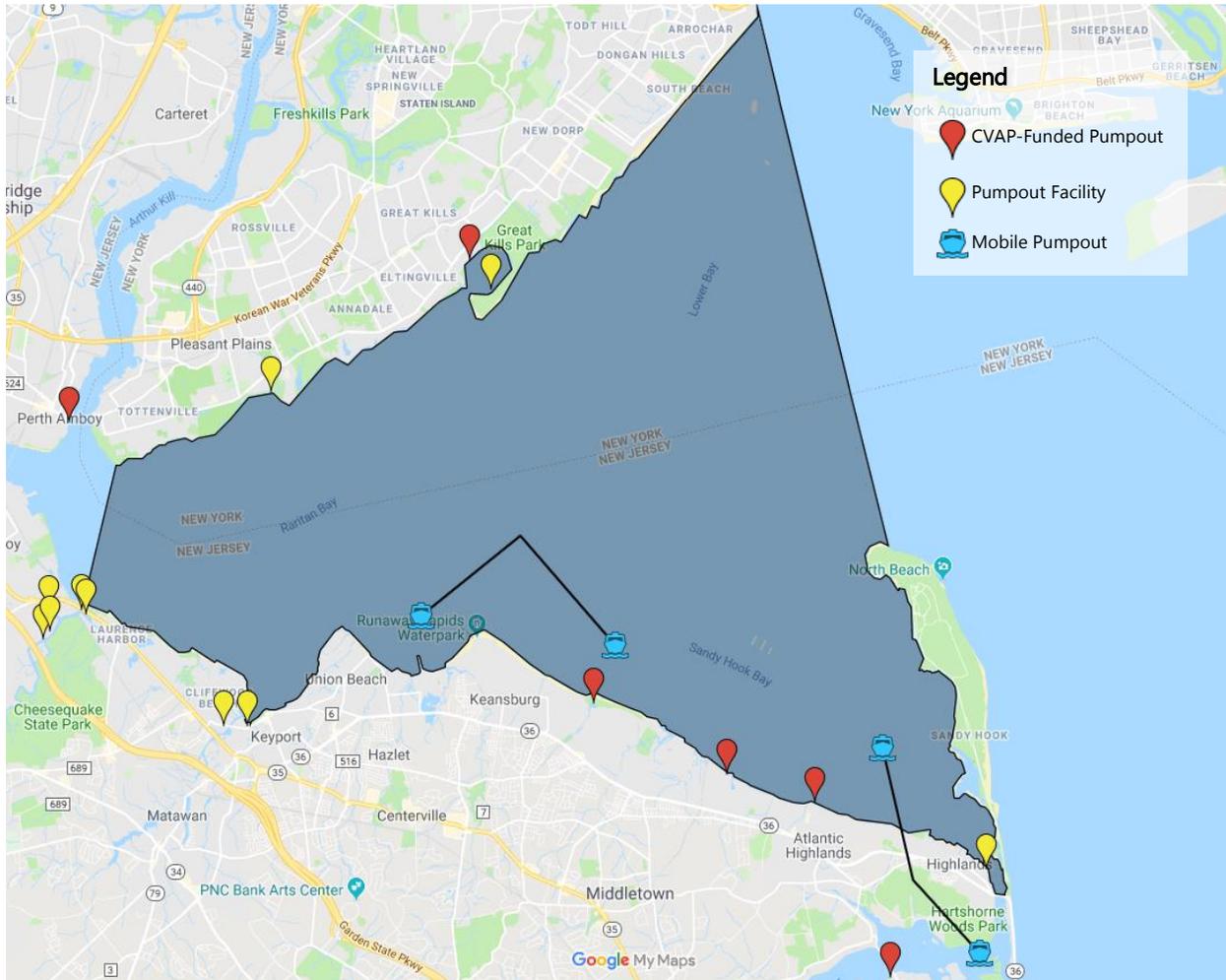
EPA announced that a guidance document is being developed to assess the cost impacts of NDZs to commercial industries and pumpout facilities. The guidance document may be informative on the impacts and concerns that New York and New Jersey share on the commerce industry. Although there has been no update on the potential release date of the document, the document could provide further insight to the concerns raised in this process.

6.0 REFERENCES

- Battelle. 2004. Final No-Discharge Zone Evaluation: EPA/OCPD Contract No. 68-C-03-041. Annapolis, MD.
- New England Interstate Water Pollution Control Commission (NEIWPCC), 2016. *Vessel Waste No Discharge Zone Designation Petition for Raritan Bay, New York and New Jersey*. Lowell, MA.
- New Jersey Sea Grant Consortium. 2019. 2019 New Jersey Clean Vessel Act Marina Survey. Fort Hancock, NJ. Access December 2019: <http://njseagrant.org/clean-vessel-act-marina-survey-2019-results/>
- Pirani, R; Stinnette, I; Da Silva, R; Lerman-Sinkoff, S; Lodge, J; Giudicelli, A; and Boicourt, K., 2018. NY–NJ Harbor & Estuary Program Action Agenda 2017-2022, Hudson River Foundation. New York, NY.

7.0 Appendices

Appendix A: Proposed NDZ Boundaries



The NDZ designation under consideration includes: Raritan and Sandy Hook Bays and their tributaries, Great Kills Harbor, and the East and South Shores of Staten Island.

Appendix B: Online Survey Questions

NO DISCHARGE ZONE: RARITAN BAY

Final Survey Questions, prepared by: NY/NJ Harbor & Estuary Program

The purpose of this survey is to gather background information to help inform the states of New York State Department of Environmental Conservation (NYSDEC) and New Jersey State Department of Environmental Protection (NJDEP) as they consider whether to pursue the U.S. Environmental Protection Agency's Vessel Sewage Discharge Program for the Raritan/Sandy Hook Bay. The New York-New Jersey Harbor Estuary Program, in partnership with the NYSDEC, NJDEP, and the U.S. Environmental Protection Agency, is seeking input from stakeholders to gain more information on possible effects of a "No Discharge Zone" designation on the communities surrounding bays, and others who use the bay for business and recreation.

The information collected is anonymous and will not be linked to any individual or facility. Please complete this survey if you operate a boat, marina, or mobile pumpout facility. This survey is estimated to take 15 minutes of your time.

- 1) Please select the statement below that best describes your primary activity in and around the Raritan/Sandy Hook Bay and portions of the Lower New York Bay (shaded area in the picture above).
 - I operate or own a non-motorized boat for pleasure/recreation
 - I operate or own a boat for pleasure/recreation
 - I operate or own a boat commercially
 - I operate or own more than one boat for pleasure/recreation
 - I operate or own more than one boat commercially
 - I operate or own a marina, pumpout facility, or mobile pumpout facility
 - I do not own or operate a boat
 - I do not own or operate a marina, pumpout facility, or mobile pumpout facility
- 2) What is the zip code of your home port (optional)?

Marina, Pumpout Facility, Mobile Pumpout Section

- 3) How many boat slips does the marina have?
- 4) Please estimate the number of boats currently at this marina.
- 5) This marina has (*please check all that apply*):
 - Onshore pumpout facilities
 - Mobile pumpout boat(s)
 - Toilet dump station(s)
 - Portable pumpout facilities
 - None of the above
 - Other:
- 6) What is the average wait time for a boater to use the pumpout facilities during the months of May-October?
 - 0-5 minutes
 - 6-15 minutes
 - 16-30 minutes
 - Over 30 minutes
- 7) What is the maximum vessel draft this marina's pumpout facilities can service? (in feet)

- 8) Is your marina suitable for commercial vessels?
 Yes
 No
- 9) Is your marina and/or dock suitable for commercial vessel navigation?
 Yes
 No
- 10) How much does this marina charge per pumpout or toilet dump? (Estimate to the nearest dollar)
- 11) How much does it cost annually to operate and maintain the marina's pumpout facilities and/or toilet dump? (Estimate to the nearest dollar)
- 12) During a typical year, approximately what percentage of time have the pumpout facilities and/or toilet dumps been functional?
 100% of the time
 75 to 99% of the time
 50 to 74% of the time
 26 to 49% of the time
 0 to 25% of the time
 Not applicable
- 13) Is there a pump operator (full service) or is it self-service?
 Full
 Self
 Not applicable
- 14) Is the pumpout public or privately owned?
 Public
 Private
 Other:
- 15) Would any of the operational pumpouts require upgrades or replacement to comply with a No Discharge designation?
 Yes
 No
- 16) Has your marina ever applied for Clean Vessel Assistance Program (CVAP) funding?
 Yes
 No
- 17) Has your marina received Clean Vessel Assistance Program (CVAP) funding?
 Yes
 No
- 18) Please provide any additional comments below. Specifically, if there other limitations at your facility for recreational or commercial vessels.

Recreational Boater Background

If you own or operate more than one boat, please complete this survey based on the largest vessel in your ownership/operation.

- 19) Do you own the boat that you operate?
 Yes
 No
- 20) What is the length of your vessel?
- 21) What is the draft of your vessel?

22) Which statement best describes your vessel's primary activity in the Raritan/Sandy Hook Bay and portions of the Lower New York Bay?

- Motorized Recreation
- Non-motorized Recreation (e.g. sailboat)
- Charter Fishing or Tours
- Commercial/Shipping
- Transportation
- Marina Operations
- Federal/State Government Service
- Other:

23) How many years have you been a boater?

- 1-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41-50
- Over 50

24) Which statement best describes your boating frequency?

- I typically boat seasonally (May through October).
- I typically boat throughout the year.
- Other

Commercial Boater Background

25) How many vessels are in your operation?

26) Do you own all the vessels in your operation?

- Yes
- No

27) What is the length of your largest vessel? (in feet)

28) What is the draft of your largest vessel? (in feet)

29) What is the length of your smallest vessel? (in feet)

30) What is the draft of your smallest vessel? (in feet)

31) Which statement best describes your vessel's primary activity in the Raritan/Sandy Hook Bay and portions of the Lower New York Bay?

- Motorized Recreation
- Non-motorized Recreation (e.g. sailboat)
- Charter Fishing or Tours
- Commercial/Shipping
- Transportation
- Marina Operations
- Federal/State Government Service
- Other:

32) How many years have you been a commercial boater?

- 1-5
- 6-10
- 11-20
- 21-30

- 31-40
- 41-50
- Over 50

- 33) Which statement best describes your commercial boating frequency?
- I typically boat seasonally (May through October).
 - I typically boat throughout the year.
 - Other

Marine Sanitation Devices

- 34) Do you have a marine sanitation device (MSD) or toilet installed in your vessel?

- Yes
- No

- 35) If yes, please identify which devices installed in the vessel within your operation.

MSD Type I: treats sewage so that no more than 1,000 bacteria per 100 milliliters and no visible floating solids remain.

MSD Type II: treats sewage so that no more than 200 bacteria per 100 milliliters and 150 milligrams of suspended solids per liter remain

MSD Type III: a holding tank designed to hold sewage until it can be pumped out at a pumpout facility

Other:

I don't know

- 36) Do you maintain your MSDs? (i.e., add salt if needed based on water's salinity levels, refill disinfectant, etc.)

- All the time
- Most of the time
- Sometimes
- Rarely
- Never
- Not Applicable

- 37) What type of training did you receive regarding the proper operation of your MSD and/or toilet?

- I was trained by the boat dealer
- I was trained by the MSD manufacturer
- I was trained by a marina operator
- I learned to operate the device using the instruction manual
- I have not received any training or instruction
- I do not have an installed toilet
- I do not have an installed MSD

- 38) If you received training by a vendor, MSD manufacturer, or marina operator regarding proper use of your MSD, how long was the training?

- Less than 30 minutes
- 30 minute – 1 hour
- 2 hours
- Half day
- Full day
- Not applicable

- 39) If the boat you operate has an installed toilet, how do you prevent discharging while in a No Discharge Zone?

I close the Y valve
The waste is sent to a holding tank
I don't use it
I operate it normally
I do not know
I do not operate my vessel in a No Discharge Zone
Other:

Pumpout Facilities

- 40) Are you aware of where pumpout facilities are located in the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay?
Yes
No
- 41) Do you currently use a pumpout facility in the Raritan Bay?
Yes
No
- 42) Which of the following pumpouts do you typically use?
Stationary pumpout
Mobile pumpout
Shore-based portable pumpout
Portable toilet dump station
None of the above
Other:
- 43) In the past five years, have you ever found yourself looking but could not find a working pumpout or toilet dump facility in the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay?
Yes
No
- 44) Did you find any conditions at any of the pumpout or toilet dump facilities in the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay this year or last season that impacted your use of the facility? Check all the statements that apply.
I did not experience any condition that hindered my use of a pumpout facility.
Facility was closed.
Facility did not have a pumpout.
Facility was not functional.
Facility did not have staff available to assist.
I did not have sufficient knowledge to use the pumpout facility.
The facility had a long wait time.
The costs to use the facility are too high.
The facility is not accessible for my vessel.
The facility is too far for me to access.
There is no mobile pumpout available.
Other:
- 45) Did or will the problems you encountered deter you from using the facility on a later date?
Yes
Sometimes
No

No Discharge Zone

- 1) Are you familiar with the term "No Discharge Zone" or "No Discharge Area"?
 - Yes
 - No
- 2) To your knowledge, does a "No Discharge Zone" indicate that you are prohibited from discharging treated and untreated sewage in a designated area?
 - Yes
 - No
 - I don't know
- 3) To your knowledge, who enforces no discharge zone requirements?
 - U.S. Coast Guard
 - U.S. Environmental Protection Agency
 - State Agency
 - Local Government
 - Harbormaster
 - Marina
- 4) To the best of your knowledge, is your home port or point of entry (i.e., boat launch) within the purposed boundaries of the No Discharge Zone (shaded area)?
 - Yes
 - Sometimes
 - No
 - I don't know

Thank you for taking this survey. We encourage that you share this survey with other boaters and/or marina operators in and around the Raritan/Sandy Hook Bay and portions of the Lower New York Bay. New York State Department of Environmental Conservation and the New Jersey Department of Environmental Protection will inform you of the upcoming 2019 public meetings.

To receive updates regarding the proposed No Discharge Zone review, please provide us with your contact information. Please note your responses to the survey will be kept anonymous if you chose to provide your information below.

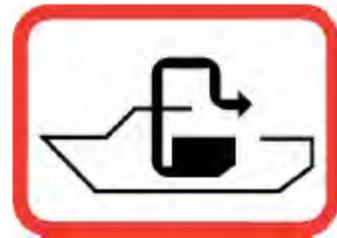
Name: _____
Address: _____
Phone Number: _____
Email: _____



What is a No Discharge Zone?

A No Discharge Zone (NDZ) is a designated body of water where **discharging boat sewage, treated or untreated, is prohibited.**

NDZ designations ensure better water quality in our waterbodies, harbors, coves, and beaches.



Managing Boat Waste

Under the federal Clean Water Act, it's illegal to discharge untreated (raw) sewage from a vessel in waters within three miles of the shore and in navigable rivers.

Recreational boats are not required to be equipped with a toilet, but if they are, the Marine Sanitation Devices (MSDs) must be US Coast Guard approved. MSDs hold sewage for shore-based disposal or treats the sewage prior to discharge. There are three types of MSDs:

- **TYPE I:** MSDs discharge treated effluent having a fecal coliform bacterial count not greater than 1,000 per 100 milliliters of water and no visible floating solids.
- **TYPE II:** MSDs discharge treated effluent having a fecal coliform bacterial count of less than 200 per 100 milliliters and suspended solids not greater than 150 milligrams per liter.
- **TYPE III:** MSDs are devices designed to store sewage (usually with disinfectants and deodorants added) until it can be pumped out at a pumpout facility or discharged outside the territorial sea boundary of three miles from shore. These are commonly known as holding tanks.

Vessels **65 feet and under** may install a Type I, Type II, or Type III MSD. Vessels over 65 feet in length must install a Type II or Type III.

Portable toilets or "porta-potties" are not considered installed toilets and are not subject to the MSD regulations. They are however, subject to the disposal regulations, which prohibit the disposal of raw sewage within the three-mile limit.

What is Different When Operating in a No Discharge Zone?

Type III MSD's and "porta-potties" are the only sanitary equipment that can be used in a No Discharge Zone. These holding tanks can store sewage until the vessel arrives at a pumpout facility. Creation of a No Discharge Zone requires that there are adequate provision of pumpout facilities in a designated water body.

When operating in a NDZ, the US Coast Guard regulations state MSDs Type I and Type II must be secured to prevent discharge. Examples provided by the Coast Guard for securing Type I and Type II MSDs include closing the seacock and padlocking it, using a non-releasable wire tie, using a door handle lock, or removing the seacock handle (with the seacock closed).

Protecting our Health and our Environment

Sewage wastes discharged from boats introduce disease-causing microorganisms, nutrients, and chemicals into the marine environment.

- Microorganisms such as viruses, bacteria, and protozoans may introduce diseases like hepatitis and gastroenteritis to people in contact with the water and causing beach closures. They can contaminate shellfish beds and restrict harvesting.
- Nutrients are necessary for the growth of both microscopic and larger plants such as seaweeds and eelgrass. However, when nutrients become too abundant they stimulate algae blooms which may lead to the loss of eelgrass and depletion of oxygen in water. Depletion of oxygen in water (called hypoxia) can stress and even kill fish and other aquatic animals.
- Chemical products used in toilets and sanitation systems can be toxic to marine and estuarine life, especially in areas where boats congregate and where there is little tidal flushing.

Complying with vessel sewage discharge laws and regulations and using pumpout facilities, are necessary steps in protecting public health and the marine environment.

*Pumpout Facilities Map: <https://tinyurl.com/Pumpouts> OR njboating.org
For more information: <https://tinyurl.com/epaNDZ>*

Appendix D. Interview Questions

One-On-One Interview Questions:

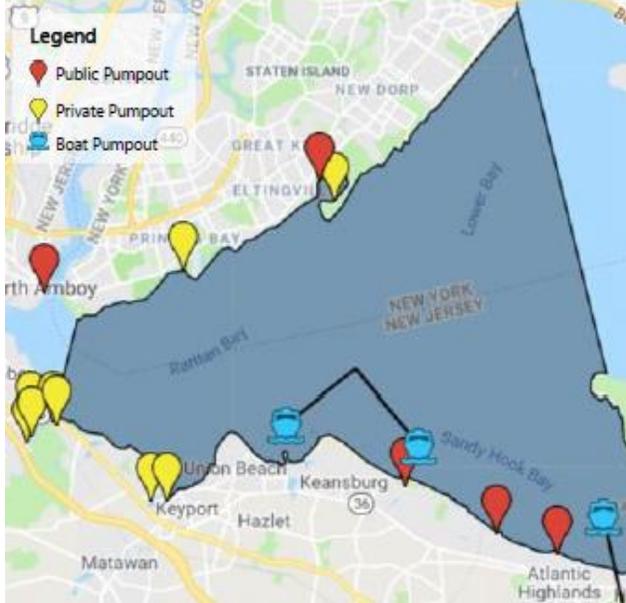
- 1) Do you own or operate a boat or more than one boat in or around the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay?
- 2) How many vessels are in your fleet? (estimate is okay)
- 3) Which statement best describes your vessel's primary activity in the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay?
 - Motorized Recreation
 - Non-motorized Recreation (e.g. sailboat)
 - Charter Fishing or Tours
 - Commercial/Shipping
 - Transportation
 - Marina Operations
 - Federal/State Government Service
 - Other:
- 4) How do you dispose of your sewage waste?
- 5) Are you aware of where sewage pumpouts are located in and around the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay?
- 6) Where you able to find pumpout facilities when you needed them?
- 7) What are common problems you have experienced when using pumpouts?
- 8) Are there adequate facilities to service the Raritan/Sandy Hook Bay boating community?
- 9) Are you familiar with NDZs?
- 10) What are the limiting factors for you to comply with a NDZ in the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay?
- 11) What kind of support would you need to comply with a NDZ? (i.e., loans)
- 12) General Comments:

Marina Interview Questions:

- 1) How many boat slips does the marina have?
- 2) Is your marina and/or dock suitable for commercial vessel navigation?
- 3) How much does it cost annually to operate and maintain the marina's pumpout facilities and/or toilet dump? (Estimate to the nearest dollar)
- 4) Does your marina have?:
 - i. Onshore pumpout facilities
 - ii. Mobile pumpout boat(s)
 - iii. Toilet dump station(s)
 - iv. Portable pumpout facilities
 - v. None of the above
 - vi. Other:
- 5) How frequently were your pumpouts used in the past five years?
- 6) What common problems do operators experience with the equipment?
- 7) How do you promote your services?
- 8) Are you familiar with NDZs?
- 9) What are the limiting factors for you to comply with a NDZ in the Raritan/Sandy Hook Bay and/or portions of the Lower New York Bay?
- 10) What kind of support would you need to comply with a NDZ? (i.e., loans)
- 11) General Comments:



Improving Water Quality in the Raritan, Sandy Hook, and Lower New York Bays



Legend

- Public Pumpout
- Private Pumpout
- Boat Pumpout

The states of New York and New Jersey are jointly analyzing the opportunity to protect the Raritan, Sandy Hook, and a portion of the Lower New York Bay by designating them as a No Discharge Zone (NDZ).

A NDZ is a designated body of water where **discharging boat sewage, treated or untreated, is prohibited**. NDZ designations ensure better water quality in our waterbodies, harbors, coves, and beaches.

The NDZ designation under consideration will include: Raritan and Sandy Hook Bays and their tributaries, Great Kills Harbor, and the eastern shore of Staten Island.



We Want to Hear From You

September 9th from 12:30pm to 3pm held at Monmouth Battlefield State Park Visitor Center, 20 State Route 33, Manalapan, NJ 07726

September 10th from 9:30am to 12pm held at Greenbelt Nature Center, 700 Rockland Ave, Staten Island, NY (intersection of Rockland & Brielle Ave.)

Join us at either of the public meetings to learn more about the possible NDZ designation and exchange views and information.

The New York-New Jersey Harbor Estuary Program in partnership with the New York State Department of Environmental Conservation, New Jersey Department of Environmental Protection, and the U.S. Environmental Protection Agency are seeking input from stakeholders to gain more information on potential benefits and impacts of the NDZ designation on the surrounding communities and others who use the waterways for business and recreation.

To explore the above map: <http://bit.ly/NYNJ-NDZ>
For more information, contact: Rosana@hudsonriver.org or (212) 483-7667



Improving Water Quality in the Raritan, Sandy Hook, and Lower New York Bays



September 9, 2019 Meeting Agenda

Monmouth Battlefield State Park Visitor Center
20 State Route 33, Manalapan, NJ 07726

12:30 PM	Registration Begins
1:00 PM – 1:45 PM	No Discharge Zone Presentation
1:45 PM – 2:45 PM	Open Discussion
2:45 PM – 3:00 PM	Closing Remarks



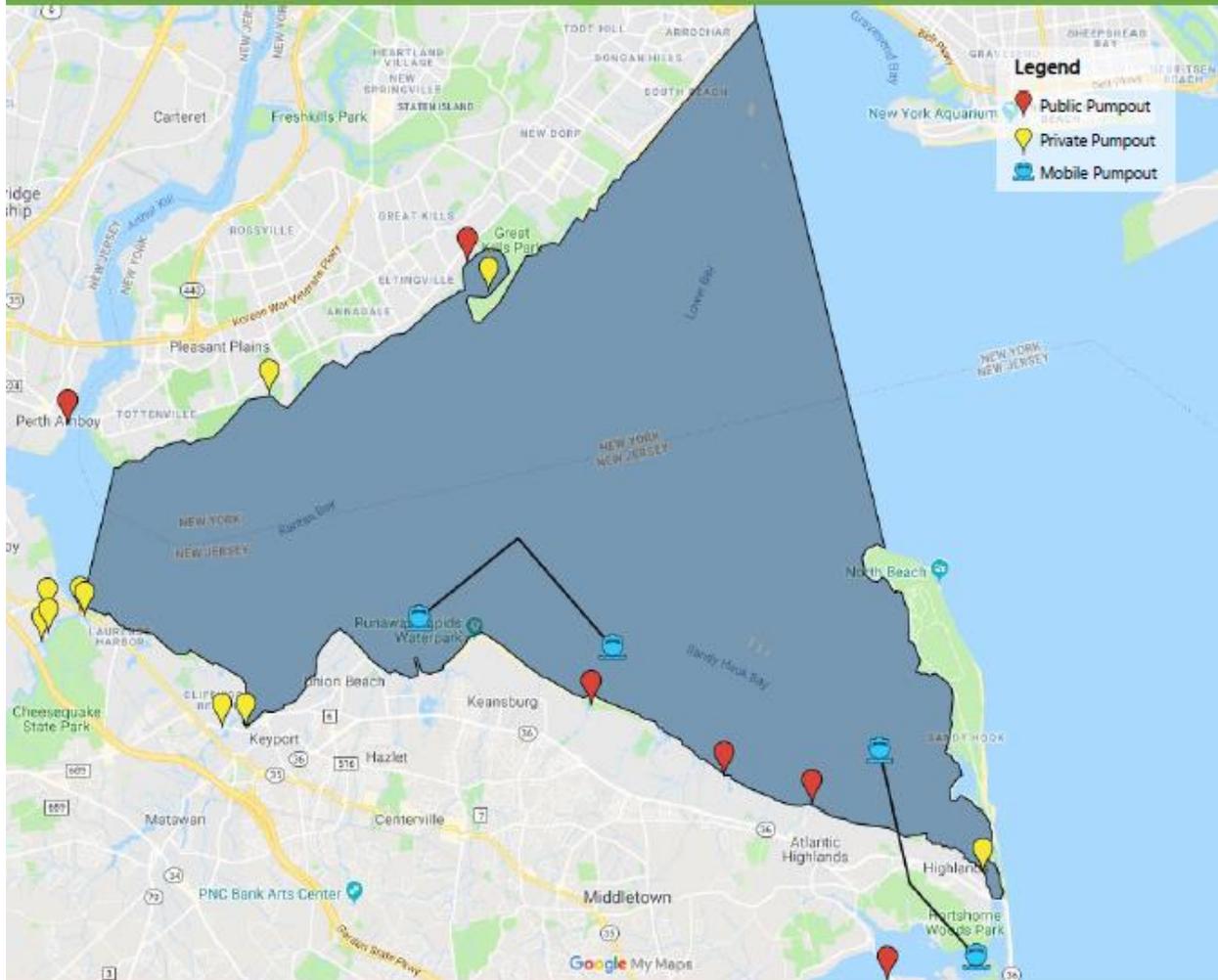
September 10, 2019 Meeting Agenda

Greenbelt Nature Center
700 Rockland Ave, Staten Island, NY

9:30 AM	Registration Begins
10:00 AM – 10:45 AM	No Discharge Zone Presentation
10:45 AM – 11:45 AM	Open Discussion
11:45 AM – 12:00 PM	Closing Remarks

*Comments or Questions, please contact the NY-NJ Harbor & Estuary Program
Rosana@hudsonriver.org or call (212) 483-7667*

Proposed No Discharge Zone boundaries for the Raritan and Sandy Hook Bays, Great Kills Harbor, and a portion of the Lower New York Bay



A NDZ is a designated body of water where **discharging boat sewage, treated or untreated, is prohibited**. NDZ designations ensure better water quality in our waterbodies, harbors, coves, and beaches.

The NDZ designation under consideration will include: Raritan and Sandy Hook Bays and their tributaries, Great Kills Harbor, and the South/Eastern shore of Staten Island.

Appendix F. American Waterways Operators (AWO) – Atlantic Region Formal Comment Letter



Brian W. Vahey
Senior Manager - Atlantic Region

801 North Quincy Street
Suite 200
Arlington, VA 22203

bvahey@americanwaterways.com
703.841.9300

November 8, 2019

Hudson River Foundation
New York/New Jersey Harbor & Estuary Program
17 Battery Place, Suite 915
New York, NY 10004

Re: Proposed No Discharge Zone for Raritan
Bay, Sandy Hook Bay, Great Kills Harbor, and
Lower New York Bay

Dear Sir or Madam:

The American Waterways Operators is the national trade association for the U.S. tugboat, towboat and barge industry. Our industry is the largest segment of the nation's 40,000 vessel Jones Act fleet and moves more than 760 million tons of cargo each year safely and efficiently. This includes more than 80 percent of New England's home heating oil, 60 percent of U.S. export grain and significant bulk and containerized cargoes transported along the Atlantic Coast. On behalf of the American Waterways Operators, we sincerely thank the Hudson River Foundation, the New York Department of Environmental Conservation, the New Jersey Department of Environmental Protection, and the U.S. Environmental Protection Agency for the opportunity to comment on the proposed No Discharge Zone (NDZ) for the lower New York Harbor.

AWO's member companies are proud to be part of an industry that is the safest and most fuel-efficient of any surface transportation mode. We are deeply committed to building on the natural advantages of marine transportation and leading the development of higher standards of marine safety and environmental protection. In 1994, AWO became the first transportation trade association to adopt a code of safe practice and environmental stewardship for member companies; today, compliance with the Responsible Carrier Program is a condition of AWO membership. This commitment informs our view of NDZ proposals across the United States. AWO seeks to protect the marine environment in which our members operate while ensuring a practicable regulatory framework that allows for the continued safe and efficient movement of crucial maritime commerce, and eschewing costly, infeasible or ineffective regulations that could result in the diversion of cargo to other modes of transportation that pose increased safety and environmental risks.

The Ports of New York and New Jersey are among the busiest in the world; and Raritan Bay, Sandy Hook Bay, and Lower New York Bay – the water bodies that would be, in whole or in part, covered under the proposed No Discharge Zone – are some of the busiest water bodies on the eastern seaboard. In addition to the commercial transits, the Lower Bay also hosts oil response vessel training and a host of other important activities. In some circumstances, vessels operating in the area are capable of discharging in their homeport or offshore, then holding their discharges while transiting through the lower harbor; in other instances – such as vessels waiting for a berth at an oil

terminal in Bayonne or further north on the Hudson at Con Hook – holding treated discharge material is difficult-to-impossible.

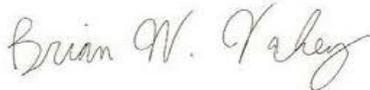
For those vessels that need to discharge, there are very few pump-out facilities capable of servicing the tugs operated by AWO member companies. Before a towing vessel operator can access a pump-out facility, he or she must assess a host of characteristics specific to that facility, including water depth and any limitations on vessel draft, length or maneuverability in the navigation route to reach the facility; dock size and characteristics including length of berths, height above the waterline, available fendering and any limitations on dock access, including width or height restrictions; and, working daily capacity (volume) of the facility and the minimum vessel pump-out flow rate of the facility. For vessels towing a large seagoing barge, operators would need a layberth and assist tugs to safely accommodate the barge while the tug discharges, creating additional complexities. Thus, a pump-out facility that can accommodate passenger vessels cannot necessarily or even typically accommodate towing vessels.

AWO's overarching concern with the NDZ designation process has been and continues to be that the statutory and regulatory provisions intended to ensure that proposed NDZs are feasible for commercial operators have proved to be insufficient. While petitioners understand the need to determine the availability of pump-out facilities before requesting NDZ certification, they generally do not understand the specific types of vessels that certain pump-out facilities can or cannot accommodate, and EPA's regional offices have repeatedly approved state petitions for waters where pump-out facilities are inadequate to serve the commercial vessels operating therein. When the EPA approves an NDZ designation for one water body on the mistaken assumption that pump-out facilities exist nearby to accommodate commercial vessels, it facilitates the proliferation of NDZs in adjacent waterbodies based on the same misinformation. AWO member operators take their role as environmental stewards seriously and make significant investments towards the goal of zero environmental harm, but if towing vessels can neither discharge nor pump-out, then they cannot operate.

We greatly appreciate New York and New Jersey proactively seeking stakeholder feedback on this NDZ initiative. But in addition to industry, AWO has also urged the EPA to better utilize federal agencies with maritime expertise and experience in evaluating NDZ petitions. The U.S. Coast Guard is the principal federal agency charged with regulating vessel navigation and safety, and it shares with EPA responsibility for enforcing NDZs. The Coast Guard is on record as having concerns with EPA's refusal to reasonably consider its comments on past NDZ determinations and has warned that a lack of communication and dialogue among petitioning states, EPA and the Coast Guard throughout the NDZ designation process is a worrying trend that will increasingly pose challenges to the successful implementation and enforcement of NDZs.

We again appreciate the outreach that leading agencies have done to solicit stakeholder feedback, but we must reiterate that in the absence of adequate commercial vessel pump-out facilities, we do not believe it is appropriate for the states to pursue an NDZ designation at this time. Thank you again for the opportunity to comment. AWO would be pleased to provide further information.

Sincerely,



Brian W. Vahey