

**Report on the Potential Establishment of No Discharge Zones**

**In Virginia's Coastal Waters**

**Virginia Department of Environmental Quality**

**1994**



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## Executive Summary

No Discharge Zones (NDZs) are waters of a state that have been designated by both the state and the Environmental Protection Agency for the purpose of prohibiting the discharge of sewage, including treated sewage, from any boat into those waters. Thus, neither raw sewage nor sewage from a flow-through marine sanitation (sewage treatment) device and be discharged into an NDZ. The effluent from marine sanitation devices, though partially treated, contains intestinal microorganisms, biochemical oxygen demand (BOD), nutrients and toxic pollutants (used in the treatment process).

Under a grant project funded by the National Oceanic and Atmospheric Administration, Virginia state agency staff investigated the feasibility of developing an NDZ program in Virginia's coastal waters, based on the identification and designation of rivers, creeks, embayments, or portions of these waterbodies, which contain significant or sensitive aquatic resources. This effort was designed to provide an ecological basis for targeting candidate NDZ sites. Final approval authority for NDZ status rests with the Environmental Protection Agency, which reviews all such state applications to ensure that adequate facilities for pumping-out boat holding tanks exist and are operational in any designated NDZ area.

An earlier effort by the Commonwealth of Virginia in 1979 to have the shellfish growing portion of the lower Rappahannock River designated as an NDZ was not approved by the Environmental Protection Agency due to opposition by the marina industry and the lack of sufficient pump-out facilities as compared to the number and location of mooring facilities and the number of recreational boats in the area.

In the first phase of the current project, the Virginia Institute of Marine Science researched the NDZ programs of other states and digitized into GIS format the geographic/ecological information found on the Environmental Sensitivity Index maps of the Virginia Coastal Zone. VIMS found that no other NDZ programs in other states were based upon thorough ecological assessments of aquatic resources. The digitized data were provided to the Virginia Department of Environmental Quality to support the second phase of the project.

The second phase of the project was designed to use the digitized geographic/ecological information to target where NDZ designation (and possibly other management strategies) would be considered to protect identified aquatic resources. A group of state agency representatives was convened to act as a steering committee for this initiative. The group met several times, discussed the many issues surrounding the establishment of NDZs, and developed criteria for determining which types or categories of aquatic resources (as reflected in the ESI data or elsewhere) and other factors would enter into the determination of candidate NDZs.

The steering committee determined that appropriate criteria, designed to address the specific effects of boater sewage effluent, would include the protection of areas and resources vulnerable to increased turbidity from nutrient loadings, increased intestinal microorganisms and increased toxics. The committee determined that submerged aquatic vegetation beds are

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particularly vulnerable to turbidity impacts; oyster beds, clam beds, public beaches and public parks are particularly vulnerable to the effects of intestinal microorganisms; and fish nursery areas (particularly anadromous fish) and state and federal wildlife areas and ecological reserves are particularly vulnerable to the impacts of toxic pollutants.

The committee also considered other criteria, such as the degree of flushing and the level of boating activity in a particular area, but it was determined that such criteria should be used as a second tier of evaluation after high value resource areas had been initially identified.

Unfortunately, however, the limited staff of the Department of Environmental Quality EcoMAPS GIS program were not able to transform the digital information that was provided by VIMS into usable map products due to the complexity and uniqueness of the data base structure. Thus, the cornerstone information for this project could not be obtained and no funds were spent under this portion of the project.

In addition, other factors may have likely delayed any positive recommendations for NDZ development arising from the current project, even if the GIS data base had been more accessible. First, the data contained in the Environmental Sensitivity Index Maps is at least fifteen years old and needs to be updated if it is to be used as a basis for a regulatory initiative. In past considerations of NDZ designations in Virginia, the marina and boating industries have been strong opponents of any such effort; without updated and defensible ecological information, state agency representatives have not had grounds for demonstrating a definite need to target particular areas for NDZ designation to the marina and boating industry.

State agency representatives on the steering committee generally agree that discussions and considerations should continue on development of a state NDZ program. The steering committee intends to continue looking at the possibilities of NDZ designation and the upgrade of the ESI data. Currently, a project is being considered by the Office of Ocean Resources Conservation and Assessment and the Office of Ocean and Coastal Resource Management to update the ESI maps for the entire Chesapeake Bay and to digitize that information. If successful, this initiative could have significant potential for furthering NDZ program considerations as well as other aquatic resource management strategies.

Efforts to educate the marina industry and the boating community on the values of aquatic resources and environmentally sound methods of managing sewage and other boater waste will continue in Virginia, primarily as conducted by the Department of Health. In addition, further research needs to be conducted regarding the current practices of boat manufacturers and dealers and how these industries could be brought along as partners in the effort to make it easy for boaters to make the right decision regarding sewage disposal.

Reauthorization of the Clean Water Act may affect the capabilities and strategies of states in dealing with the management of boater waste. This issue is one of many that deserves strong coordination among the Environmental Protection Agency, the National Oceanic and Atmospheric Administration and coastal states.

## I. Introduction: Background for Consideration of No Discharge Zones in Virginia

Under Section 312 of the Federal Water Pollution Control Act,<sup>1</sup> the Environmental Protection Agency has promulgated standards<sup>2</sup> aimed at preventing the discharge of untreated or inadequately treated sewage from vessels, including recreational boats, into the waters of the United States. The FWPCA requires the installation of a marine sanitation device (MSD)<sup>3</sup> on all vessels with installed toilet systems. The standards developed by EPA, in combination with regulations promulgated by the Coast Guard for the design, construction, installation and operation of MSDs,<sup>4</sup> govern the implementation of the FWPCA provision. For certain classes and sizes of boats (which include the majority of recreational boats), boaters are normally allowed to use flow-through marine sanitation devices which only partially treat sewage waste and which discharge toxic treatment chemicals along with the effluent. The pollutant impacts of these toxic chemicals and partially treated effluent have at one time or another become a concern to many states, including the Commonwealth of Virginia.

However, under the FWPCA, states may not act unilaterally in prohibiting discharges from flow-through MSDs in navigable waters. Section 312 of the Act details the requirements for states to apply to the Environmental Protection Agency for the authority to prohibit discharges of partially treated boat wastes from MSDs in particular waterbodies, or other state waters, that meet EPA requirements. States must, in their application, certify that there is a need for a given waterbody to receive greater protection from boater waste than is otherwise afforded through existing Federal law and that there are available, within that waterbody, sufficient pump-out facilities to handle the job of pumping and processing the effluent from boats moored therein. If adequate pump-out facilities are available, the EPA can accept the state's petition to have that waterbody, or area of water, designated as a No Discharge Zone (NDZ), and enforcement of that designation is then turned over to the state.

The pollution problems created by boats with flow-through MSDs has led a number of states to designate NDZs. Waterbodies in California, Massachusetts, New Hampshire, Vermont

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<sup>1</sup>The FWPCA was adopted by Congress in 1972 and has been amended in 1977, 1987 and 1990.

<sup>2</sup>40 CFR 140.

<sup>3</sup>There are three types of MSDs. A Type III MSD is a holding tank which can be pumped out. Type I MSDs and Type II MSDs are flow-through devices which provide some level of treatment to the sewage. Type I MSDs, the less effective of the two, treat waste with disinfectant and, typically, with maceration. The final discharge must not have a fecal coliform bacteria count of greater than 1000 per 100 milliliters and may not contain any visible floating solids. Type II MSDs use a combination of chemical, biological, electrical or incineration methods. Effluent from Type II MSDs may not have a fecal coliform count greater than 200 per 100 milliliters nor more than 150 milligrams of suspended solids per liter. Type II MSDs have greater space and power requirements and usually are installed only in larger boats such as passenger and cargo vessels.

<sup>4</sup>33 CFR 159.

and other states have been designated as No Discharge Zones. However, none of these states has undergone a complete ecological review and ranking of their streams, rivers and lakes to determine which contain the most significant or sensitive aquatic resources and are most in need of NDZ designation.

In 1976, the Virginia Water Control Board adopted Regulation No. 5 - Control of Pollution from Boats.<sup>5</sup> The purpose of Regulation No. 5 was to protect shellfish growing areas in Virginia waters by establishing a state regulatory framework for the implementation and enforcement of designated NDZs where any such designation should later receive EPA approval.

In 1979, the Virginia Department of Health and the State Water Control Board, acting on behalf of the Commonwealth, jointly petitioned EPA for "No Discharge Certification" for the shellfish growing portion of the Rappahannock River. EPA received opposition to the notice of this petition appearing in the Federal Register. Consequently, EPA requested additional information and documentation relating to the availability of shoreside pump-out facilities in this area. Soon thereafter, EPA and the U.S. Coast Guard began a cost effectiveness study on MSDs. After more than two years for this study, the EPA/U.S.C.G. recommendation was for Congress to amend the Clean Water Act to permit rule-making changes to discontinue the present MSD regulations in effect for boats under 65 feet in length; and to return control of such regulations back to the states. This recommendation was not incorporated into the 1987 nor the 1990 amendments to the FWPCA; and the Administrator of the EPA did not make a determination on the Commonwealth's Rappahannock River NDZ petition.

Since that time, certain localities in Virginia have expressed an interest in pursuing NDZ designation for waters within their jurisdiction. In the late 1980s, the City of Virginia Beach consulted with state officials regarding a possible NDZ petition for Rudy Inlet. Because of the potential benefits of NDZ designation in many areas, its relevance to the Chesapeake Bay Program and the many levels of government which have an interest in protecting navigation, managing water quality and preserving aquatic resources, state agencies in Virginia determined in 1991 that an objective review and ranking of the presence and sensitivity of aquatic resources in Virginia waters should be conducted and used as a component in any further initiatives targeted toward NDZ designation. Although other factors, such as adequacy of pump-out facilities, concentration of boating activities and degree of hydrologic flushing in an area would play an important role in any final NDZ designation, an ecological prioritization of state waters would provide an impartial first step to a confusing issue.

A two-part grant was designed and submitted to the National Oceanic and Atmospheric Association through Virginia's Coastal Resources Management Program. This grant project was designed to provide state agencies with the best (only) available information on the location of aquatic resources: the Oil Spill Response Environmentally Sensitive Index maps of the Chesapeake Bay. The results of this grant project is discussed below.

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<sup>5</sup>A copy of Regulation No. 5 is provided in the Appendix.

## II. No Discharge Zone Grant Project Process and Results

### A. Phase I of the Grant Project

The first phase of the grant project was conducted by staff of the Virginia Institute of Marine Science. VIMS staff interviewed NDZ program representatives from other states and put together a short review of these programs. Through their review, VIMS staff found that no state had based their NDZ designations on a thorough ecological review and ranking of the aquatic resources in state waters (although Maryland is using that approach for their proposed NDZ program). In their report, they concluded:

The EPA appears to have finally produced a somewhat detailed guideline for those states wishing to meet the criteria for NDZ status. EPA Region I (Boston, MA) and Region X (Sacramento, CA) seem to be the most up-to-date and organized EPA regions for NDZ designation. However, the process is slow, generally progressing on a case-by-case basis. In general, sewage dumping is prohibited in state water bodies and if a valve exists on an MSD, it is required to be made inoperable so that the only means of disposal is at a pump-out facility. State vessels appear to be exempted from abiding by such NDZ laws.<sup>6</sup>

The major component of the first phase of the grant project was the digitizing by VIMS staff of the oil spill response Environmental Sensitivity Map Atlas for the Commonwealth of Virginia into digital GIS format. The ESI Atlas was originally produced by VIMS (c.a. 1979) under contract with NOAA to provide oil spill response teams with guidance regarding the location of environmentally sensitive regions in the Bay. VIMS determined that the ESI Atlas is the only comprehensive source of data that would provide the ecological sensitivity information necessary for the NDZ development project. However, the final VIMS report notes the following limitations to this data base:

Several problems which exist with the ESI Atlas should be noted. First, the delineations of the various groups, species and habitats identified were subjective. While experts in the respective fields were consulted, the actual mapping exercise was never verified, and the ability to map with any geographic accuracy was not available at the time. Second, minimum quality assurance and quality control measures were exercised in the original product. In particular, a user will find that data does not flow logically across contiguous topographic boundaries. This suggests that the maps were never edge-matched to evaluate continuity or correctness in the plotted elements. The data presented should be viewed as a general representation of the possible natural resources which existed at the time the Atlas was published.

The data base developed by VIMS included other data relevant to the NDZ project. These

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<sup>6</sup>Chaun, Melissa. 1993. The Progression of "No Discharge Zone" Status in Water Bodies Across the Continental United States. Virginia Institute of Marine Science.

other data included marinas, pump-out facilities, public beaches, submerged aquatic vegetation, tidal wetlands and others (listed below). VIMS staff completed their digitizing task and turned the data over to the former Council on the Environment (now the Department of Environmental Quality) to be used as the baseplate in the considerations for the possible development of an NDZ program in Virginia.

**B. Phase II of the Grant Project**

Prior to receiving the data tapes from the Virginia Institute of Marine Science, staff responsible for Phase II implementation formed a state agency steering committee and held three meetings to discuss the issues surrounding NDZ designation and the process of establishing recommendations for NDZ development. The state agencies represented included the Department of Health, the Council on the Environment (now DEQ), the Virginia Water Control Board (now DEQ), the Chesapeake Bay Local Assistance Department, the Department of Conservation and Recreation, the Virginia Marine Resources Commission, and the Virginia Institute of Marine Science.

A number of state agency representatives generally supported the NDZ concept, and the steering committee unanimously supported the proposed process of ranking creeks, rivers and embayments based on the sensitivity of their ecological resources and then pursuing management strategies, as appropriate. When the final report from the Phase I project was provided by VIMS, it described the following data as components of the GIS data base:

- Birds -** Dabbling Ducks, Diving Ducks, Sea Ducks, Geese and Swans, Rails, Raptors, Wading Birds, Diving Birds, Shore Birds, Gulls and Terns, Other and Nesting Areas.
- Finfish -** Nursery Fish, Anadromous Fish and Estuarine.
- Amphibians -** Turtles and Alligators.
- Invertebrates -** Oysters, Clams, Crabs, Scallops and Shrimp.
- Vegetation -** Tidal Wetlands and Submerged Aquatic Vegetation.
- Socioeconomic -** Public/Private Marinas, Marinas w/Pump-out Facilities, Archaeological Sites, Boat Ramps, Parks and Public Beaches, Ecological Areas: Reserves.

The steering committee determined that appropriate criteria, designed to address the specific effects of boater sewage effluent, would include the protection of areas and resources vulnerable to increased turbidity from nutrient loadings, increased intestinal microorganisms and increased toxics. The committee determined that submerged aquatic vegetation, oyster beds and clam beds are particularly vulnerable to turbidity impacts; oyster beds, clam beds, public beaches and public parks are particularly vulnerable to the effects of intestinal microorganisms; and fish

nursery areas (particularly anadromous fish), oyster beds, clam beds and state and federal wildlife areas and ecological reserves are particularly vulnerable to the impacts of toxic pollutants.

In reviewing the VIMS report on the NDZ programs in other states, it was apparent that NDZ designations are typically driven by the need to mitigate a problem of concentrated boater sewage, caused by very high boater use in an area or the lack of flushing in a waterbody. Considering these issues as potential factors in the NDZ designation process, the committee determined that high boater density and poor flushing should be used as a second tier of evaluation after high value resource areas (and areas of public beaches) had been initially identified. It was recognized that quantifying these parameters for individual rivers or embayments would require more intensive research and that this process should be conducted after the number of sites under consideration had been trimmed by the primary process of ecological ranking. It was also recognized that the factor of boater density would be evaluated anyway for a specific area if it were being considered and the ratio of pump-out facilities to moored boats were being measured for the purpose of meeting EPA requirements.

Unfortunately, the data as presented by VIMS could not be as readily manipulated to present the location of select species on map products of variable boundaries (as had been anticipated). This task, which was not included in the original grant proposal and contract, is accomplishable. However, the limited staff of the Department of Environmental Quality EcoMAPS program had significant high priority commitments at that time and also had to deal with the agency merger and equipment move that occurred during the Autumn of 1993. Thus, the cornerstone information for this project could not be obtained.

An additional meeting was held by the steering committee to discuss options for continuing the NDZ initiative. That meeting was attended by representatives of the Department of Game and Inland Fisheries who opposed any NDZ effort in the absence of any clear rationale for selecting specific waters. Since that time, staff of the Department of Environmental Quality have determined that the continuation of the NDZ initiative will require usable, sound, up-to-date information on the presence of aquatic resources in order to adequately defend an NDZ initiative based on ecological ranking.

This information would also prove very useful to other conservation and management programs in the Commonwealth. The project being considered by the Office of Ocean Resources Conservation and Assessment and the Office of Ocean and Coastal Resource Management to update the ESI maps for the entire Chesapeake Bay and to digitize that information into a format that would fully meet Virginia's needs in this area. If successful, this initiative could have significant potential for furthering NDZ program considerations.

As a foundation for any further considerations of NDZ program development, the most important continuing process will be education of Virginia's boaters and marina industry. Such education efforts are currently being undertaken by the Commonwealth's Natural Resource agencies as a component of the larger effort to address marina and boater pollution from a number of different approaches. Some of these are described in the following section.



### III. Associated Activities in Virginia's Program for Managing Boater Pollution

The Commonwealth of Virginia is currently involved in a number of other activities which are designed to further the same goals as an NDZ program and which will maintain momentum for these considerations. The two major categories of related activities include: the development and upgrade of pump-out facilities throughout the Chesapeake Bay and tributaries; and the continuation and enhancement of education initiatives and technical assistance to boaters and marina operators.

The Virginia Department of Health's Sanitary Regulations for Marinas and Boat Moorings manage the marina side of the boater waste problem. The regulations require that boat moorings which allow overnight docking and all marinas provide pump-out facilities and dump stations. The regulations establish other sanitary facility requirements, set minimum design criteria, and allow exemptions for marinas that can obtain pump-out agreements from nearby marinas having adequate pump-out availability and capacity.

Annual survey inspections of all marinas covered by these regulations are carried out by Virginia Department of Health personnel who will continue to promote and require pump-out facilities where needed.

Virginia has applied for and received grant funding under the Clean Vessel Act to install and refurbish pump-out facilities and dump stations in Virginia's Coastal Zone. This grant project will meet, in a timely fashion, a critical need in Virginia's program for managing recreational boat pollution. The process for determining exact locations (individual marinas) for these facilities will be guided by criteria outlined in the U.S. Fish and Wildlife Service's Technical Guidelines for the Clean Vessel Act. These criteria include "Waters designated by the EPA as No Discharge Areas".<sup>7</sup>

One of the most promising new programs for improving education and technical assistance to boaters and marina operators is the Lynnhaven Bay Marina Educator and Pump-Out Program, co-sponsored by the Department of Environmental Quality and the Department of Health. Recognizing that marina regulations alone will not eliminate the problem of overboard disposal of boater wastes, these agencies have received a grant from the Environmental Protection Agency, Near Coastal Waters Program, to conduct a pilot program in the Lynnhaven Bay of the City of Virginia Beach. The grant will finance two portable pump-out machines and four "circuit-rider" educators who will provide educational materials and pump-outs to boaters at the 32 marinas located in Lynnhaven Bay.

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<sup>7</sup>These include: (1) Sheltered waters that are generally poorly flushed systems; (2) Waters identified to be of National Significance; (3) Waters of significant recreational value; (4) Water supporting designated shellfish harvest areas; (5) Nursery areas of indigenous aquatic life; (6) Waters designated by the EPA as No-Discharge Areas under the Clean Water Act; and (7) Waters that do not meet State designated usage.

If successful, the Lynnhaven Bay pilot project may be followed by a broader effort to expand boater pollution education and assistance. One idea under consideration is to hire a "Marina Extension Agent" who would be in charge of coordinating education and technical assistance for marinas and boaters in Virginia's Chesapeake Bay region.

#### **IV. Further Needs for No Discharge Zone Designation**

While efforts are underway to update the ESI Map Atlas information, there are other types of information necessary to any final NDZ determination which the Department of Health is working to obtain. These include surveys of boater usage and more detailed information on the status of pump-out facilities.

The existing files of the Department of Health, in combination with the inspections that the Department conducts annually, reflect much of the information necessary to determine the sufficiency of pump-out facilities in any coastal area which might be considered for NDZ designation. However, enhanced information gathering and processing is needed to evaluate where pump-out facilities meet EPA's criteria for availability.

The Department of Health data files include the location of all marinas and Other Places Where Boats are Moored (Other Places) and whether they have a pump-out facility, dump station or agreement with a nearby marina. For each inspection of a marina or Other Place the total capacity of the facility, as well as the number of slips or moorings occupied, is determined.

However, current Department of Health marina inspections and data files do not include the number of boats having Type III MSD holding tanks or portable toilets. Health Department staff estimates that different percentages of boats within the various length categories have Type III MSD holding tanks or portable toilets<sup>8</sup> (marina inspections and data files do address the length of boats). These estimates need to be verified through research at a sample set of marinas in Virginia to provide a multiplier that can be extrapolated to the boat-length data for all marinas across the Commonwealth.

#### **V. Conclusion**

The effort that has gone into NDZ designation on the part of state agency representatives through this project has laid solid groundwork for any future NDZ initiatives and has led to a

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<sup>8</sup>Health Department staff estimate that 100% of boats 40 feet in length and longer have Type III MSDs and that 30% of boats between the lengths of 26 and 39 feet have Type III MSDs. They estimate that 50% of boats between the lengths of 26 and 39 feet have portable toilets and that 25% of boats under 26 feet in length have portable toilets.

consistent understanding of what directions and major issues would be associated with such an initiative. In particular, the project under consideration by the Office of Ocean Resources Conservation and Assessment and the Office of Ocean and Coastal Resource Management to update the ESI maps for the entire Chesapeake Bay and to digitize that information into digital format could provide a very strong basis for a new undertaking.

To the degree that the Commonwealth of Virginia can successfully expand the number of pump-out facilities in the Coastal Zone and provide useful educational efforts to boaters and marina operators, the stage will be set for consideration and development of NDZ designation and implementation.

**Appendix**

**Virginia Department of Environmental Quality**

**Regulation #5**

**Control of Pollution from Boats**

**Appendix**

**Virginia Department of Environmental Quality**

**Regulation #5**

**Control of Pollution from Boats**

COMMONWEALTH OF VIRGINIA  
STATE WATER CONTROL BOARD

REGULATION NO. 5 - CONTROL OF POLLUTION FROM BOATS

[Adopted: March 27, 1976 - Amended: January 29-30, 1973 and  
January 3, 1975 - Effective: August 18, 1976.]

5.01

This regulation is established in accordance with Section 62.1-44.33 of the State Water Control Law (Chapter 3.1 of Title 62.1 of the Code of Virginia (1950), as amended). For the purposes of this regulation, the following definitions apply:

1. "The Act" means the Federal Water Pollution Control Act Amendments of 1972 (P. L. 92-500) and standards and regulations promulgated thereunder.
2. "Marine sanitation device" includes any equipment for installation onboard a boat or vessel and which is designed to receive, retain, treat, or discharge sewage and any process to treat such sewage.
3. "Regularly moored, berthed, or docked" means moored, berthed or docked in or adjacent to shellfish growing waters for 30 or more days in any calendar year.
4. "Sewage retention device" means a properly operating holding tank, self-contained toilet, incineration device, or other Coast Guard certified system designed to prevent any discharge or drainage of human excrement or other wastes therefrom into State waters.
5. "Shellfish growing waters" means those State waters so designated on the maps entitled "Shellfish Growing Waters Subject to the Regulation No. 5 No-Discharge Standard," dated March 22, 1976 (exhibits 1-6).

5.02

No decayed wood, sawdust, shavings, bark, lime, garbage, refuse, ashes, offal, petroleum products, chemicals, or other substances shall be directly or indirectly cast, placed, thrown, deposited, or discharged from any documented or undocumented boat or vessel into the navigable or nonnavigable waters within this State. However, this provision shall not be construed to

prevent the normal operation of marine engines, or necessary pumping of bilge or ballast water pursuant to Section 5.04.

5.03

No liquid or other wastes resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource shall be directly or indirectly discharged from any documented or undocumented boat or vessel into the navigable or nonnavigable waters within the State. However, this provision shall not be applicable to the harvesting of seafood and fisheries products by commercial watermen.

5.04

No bilge or ballast water containing more than 10 mg/l of petroleum products shall be directly or indirectly discharged from any documented or undocumented boat or vessel into the navigable or nonnavigable waters within this State. However, this provision should not be construed to prevent bilge pumping necessary for the safe operation of the boat or vessel.

5.05

Subject to the provisions of Sections 5.06 and 5.08 herein, no human excrement shall be directly or indirectly discharged from any documented or undocumented boat or vessel into the navigable or nonnavigable waters within the State.

5.06

Every boat or vessel, whether documented or undocumented, equipped with an installed toilet and which is regularly moored, berthed, or docked within the geographic boundaries of those State waters now or hereafter designated as shellfish growing areas shall be equipped with a sewage retention device.

The foregoing notwithstanding, however, any vessel regularly moored, berthed, or docked within the geographic boundaries of those State waters now or hereafter designated as shellfish growing waters and equipped, on the date of adoption of this regulation, with a marine sanitation device which meets the requirements of Section 312 of the Act may continue to be equipped with said device so long as the device operates properly.

Every boat or vessel, whether documented or undocumented, equipped with an installed toilet and which is not regularly moored, berthed, or docked within the geographic boundaries of those State waters now or hereafter designated as shellfish growing waters shall be equipped with a marine sanitation device

that meets the requirements of Section 312 of the Act. In the event such boat or vessel is relocated so that it is regularly moored, berthed, or docked within the geographic boundaries of those State waters now or hereafter designated as shellfish growing waters or if the waters on which such boat or vessel is regularly moored, berthed, or docked are redesignated by the Board so as to become shellfish growing waters, such boat or vessel shall be equipped, within a reasonable time not to exceed one year from the date of relocation or the effective date of redesignation, with a sewage retention device.

The foregoing notwithstanding, however, those vessels equipped with a marine sanitation device meeting the requirements of Section 312 of the Act on the date of relocation or the effective date of the redesignation as shellfish growing waters may continue to be equipped with said device so long as the device operates properly.

#### 5.07

Human excrement and other wastes from holding tanks and self-contained toilets shall be pumped or carried ashore for treatment in facilities approved by the appropriate State agency or State agencies.

#### 5.08

In the case of boats and vessels hailing from another State or having foreign registry, and which are not regularly moored, berthed, or docked within the geographic boundaries of those State waters now or hereafter designated as shellfish growing waters, sewage disposal facilities approved by their respective governmental pollution control agency and meeting the requirements of Section 312 of the Act shall be acceptable.

#### 5.09

Every owner of a boat or vessel, whether documented or undocumented, shall, when so requested in writing by the Board, or when making application for the registration of said boat or vessel with the Commonwealth of Virginia, Commission of Game and Inland Fisheries, answer completely any and all questions appearing thereon relating to the requirements of this regulation. The Board shall design, and, based upon the information furnished by the owner, issue a decal to the owner of every boat or vessel which is regularly moored, berthed, or docked within the geographic boundaries of those State waters now or hereafter designated as shellfish growing waters and which is equipped with a sewage retention device or which complies with Section 5.06 above. The Board-issued decal shall expire three years after the date of issuance or on the date of expiration of registration with the Commonwealth of Virginia,



Commission of Game and Inland Fisheries, whichever event shall first occur. Application for subsequent decals shall be submitted prior to the expiration date of the last issued decal. The Board-issued decal will be evidence that any boat or vessel on which it is properly displayed is in compliance with the regulation. The Board-issued decal shall be prominently displayed on the exterior of the forward half of the boat or vessel.

5.10

Every owner or operator of a marina or other docking facility within the State shall notify every boat patron using his facilities of this regulation.

5.11

Under Virginia Law this regulation is effective 30 days after filing with the Secretary of the Commonwealth. All requirements set forth in this regulation shall be complied with one year after the date of certification by the Administrator of the U. S. Environmental Protection Agency pursuant to Section 312 (f)(3) of the Act that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available. Within 15 days of the date of said certification the Board shall publish notification of said certification in at least one newspaper of general circulation in the localities affected.

5.12

Section 62.1-44.33(3) of the State Water Control Law provides that violation of this regulation shall, upon conviction, be a misdemeanor. Every law enforcement officer of this State and its subdivisions shall have the authority to enforce this regulation.

Narrative Description of  
"Shellfish Growing Waters Subject to the Regulation No. 5  
No-Discharge Standard"

"Designated shellfish waters" are shown on exhibits 1-6 of the hearing file. In summary, these waters are:

**Eastern Shore** - All waters around the Eastern Shore, including Assateague, Chincoteague, Tangier, and Smith Islands, and the barrier islands.

**Western Chesapeake Bay and Potomac River (Peninsula, Middle Peninsula, and Northern Neck areas)** - The Chesapeake Bay and tidal portions of its tributaries from Old Point Comfort northerly to the Virginia-Maryland state line; the Chesapeake Bay and tidal tributaries into the Bay in Virginia and tidal tributaries into the Potomac River in Virginia from the state line upstream to the Route 301 bridge.

**Lynnhaven** - Lynnhaven Bay south of the Lesner Bridge (Route 60), including Long Creek, Broad Bay, and Linkhorn Bay.

**James River** - The James River and tidal portions of its tributaries (including the Nansemond, Pagan, and Warwick Rivers), beginning at a line extending from the western entrance to Boat Harbor across the northwest corner of the Craney Island Disposal Area and along the western boundary of the Disposal Area to the south shore, upstream to a line extending from Hog Point across the east bank of College Creek.

**York River** - The York River and tidal portions of its tributaries upstream to the Eltham Bridge (route 33) on the Pamunkey River and to the Lord Delaware Bridge (Route 33) on the Mattaponi River.

**Rappahannock River** - The Rappahannock River and tidal portions of its tributaries upstream to the Downing Bridge (Route 360) at Tappahannock.

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