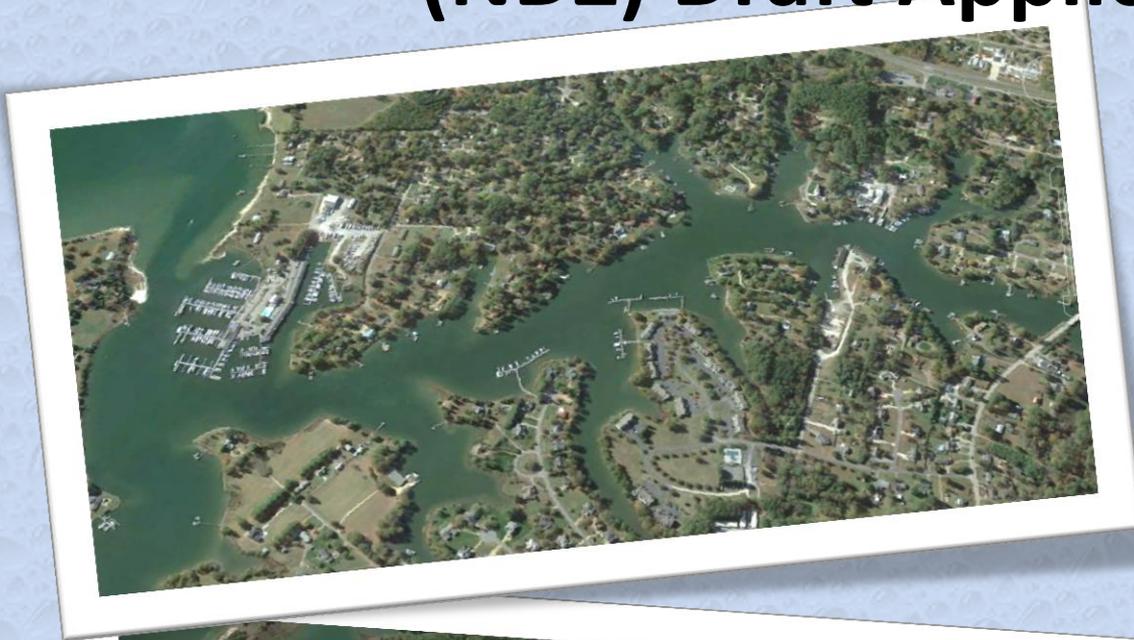


Public Meeting to Discuss No Discharge Zone (NDZ) Draft Application



**Sarah Creek and Perrin
River in Gloucester
County
July 27, 2016**

Christine Tombleson
Virginia Institute of Marine
Science

Anne Schlegel
Virginia Department of
Environmental Quality



Public Meeting Agenda

***Introduction to No Discharge Zones
(NDZs)***

Anne Schlegel
Watershed Coordinator
VA Department of Environmental Quality

***Overview of NDZ Application
for Sarah Creek and Perrin River***

Christine Tombleson
Marine Scientist
Virginia Institute of Marine Science

Question and Answer Session

Public Comments for Public Record

July 28 – August 26

Comments should be sent to Anne Schlegel at Anne.Schlegel@deq.virginia.gov

Clean Water Act (1972)

- The Clean Water Act (CWA) prohibits the discharge of untreated waste into United States territorial waters
- §312 (33 U.S.C. 1322):
 - mandates all commercial and recreational vessels *with an installed toilet* be equipped with a United States Coast Guard (USCG) certified *Marine Sanitation Device (MSD)*
 - designates EPA with responsibility of setting MSD performance standards (includes specification for treatment requirements for bacteria)
 - allows states to apply for complete prohibition of vessel sewage for waters requiring greater environmental protection (e.g. protection of shellfish beds)
 - allows the US Coast Guard or any other Federal or state government entity to enforce the provision

Performance Standards for Marine Sanitation Devices

40 CFR Part 140.3

- **Type I MSD** must produce an effluent having a fecal coliform bacteria count $\leq 1,000$ per 100 milliliters and no visible floating solids
- **Type II MSD** must produce an effluent having a fecal coliform bacteria count ≤ 200 per 100 milliliters and suspended solids ≤ 150 milligrams per liter
 - *Required on boats > 65 ft*
- **Type III MSD** holding tank (with or without discharge capability)



MSDs include any equipment for installation on board a vessel which is designed to receive, retain, treat, or discharge sewage, and any process to treat such sewage.

Why is Treated Overboard Discharge (MSD I/II) an Issue?

- MSDs (I/II) may not be capable of destroying enough bacteria in waterways with bacteria impairments
- EPA certification to a performance standard is not designed to meet the water quality standards for shellfish waters
 - Performance Standard
 - MSD Type I: 1000 (Fecal coliform/100 ml)
 - MSD Type II: 200 (Fecal coliform/100 ml)
 - Water Quality
 - Shellfish Consumption : 14 (Fecal coliform/100 ml)

Why is Treated Overboard Discharge (MSD I/II) an Issue?

- MSDs (I/II) not designed to remove nutrients (nitrogen/phosphorus) and contribute to:
 - Depletion of dissolved oxygen in water
 - Low or no dissolved oxygen affects aquatic organisms such as fish, oysters, and crabs
 - Algal blooms including harmful algal blooms such as Red Tide
 - Impairments of submerged aquatic vegetation (SAV) due to decreased light infiltration

Impact of Vessel Sewage Discharges on Shellfish Waters

- ❖ “A single weekend boater flushing untreated sewage into our waters produces the same amount of bacterial pollution as 10,000 people whose sewage passes through a treatment plant.”



- ❖ California Department of Boating and Waterways

Impact of Vessel Sewage Discharges on Shellfish Waters

It takes 6 to 13.4 football fields full of water 10 feet deep to dilute the sewage discharge from one boat down to acceptable shellfish harvesting levels (Faust 1982).

- Faust, M.A. 1982. Contribution of pleasure boats to fecal coliform bacteria concentrations in the Rhode Island River Estuary, Maryland, USA. *The Science of the Total Environment* 25:255-262

A No Discharge Zone...



...is a federally designated body of water where discharge of *treated* vessel waste is prohibited (MSD I/II)

NOTE → NDZs do NOT apply to discharges incidental to operation (gray water, bilge water, weather deck runoff) → Treated sewage from certified MSDs can still be discharged outside of the NDZ boundary

Federal Requirements of MSDs in a NDZ Reiterated in Virginia State Law

In a no-discharge zone:

- *“A physical barrier to the use of the y-valve or toilet” is required.*
 - *Closing the seacock or discharge valve and padlocking it*
 - *Using a non-releasable wire tie*
 - *Removing the seacock handle (with the seacock closed)*
 - *Lock door leading to toilet*

Why is a NDZ Beneficial?

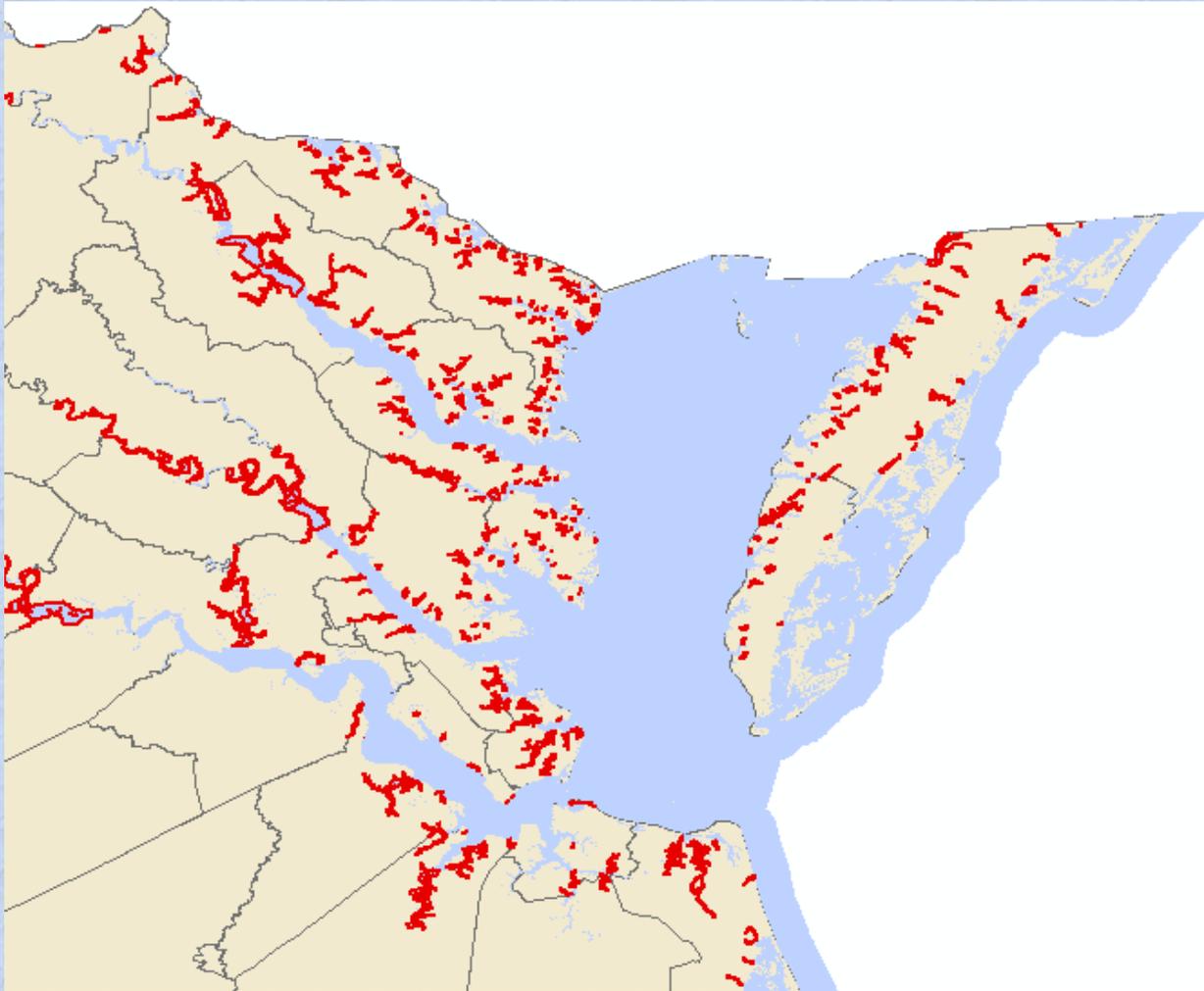
- Can improve water quality and aid in the re-opening of shellfish beds
- NDZs address boats as a source, allowing stakeholders to focus on “land based” source reductions
- Improves attractiveness of water bodies for marina owners & local businesses
- Encourages overall watershed stewardship

Factors Driving NDZ Designations in Virginia

- Chesapeake Bay Clean-up Plan
 - MSDs contribute to nutrient pollution and bacteria impairments
- VA Code §62.1-44.33
 - *“The tidal creeks of the Commonwealth are hereby established as no discharge zones for the discharge of sewage and other wastes from documented and undocumented boats and vessels. Criteria for the establishment of no discharge zones shall be premised on the improvement of impaired tidal creeks...”*
 - The intent in Virginia is to protect slower flushing, impaired growing areas, not main stems of the Bay or major rivers
- Other local pollution budgets, known as TMDLs, that identify human bacteria in proximity of boats

Note: TMDL stands for Total Maximum Daily Load

Extent of VA Bacteria Impairments



Most tidal tributaries of Bay have a shellfish or recreation use impairment and are more sensitive to pollution due to less volume and flushing than larger waterbodies

Map of bacteria impairments - VADEQ Integrated Assessment Report 2014

NDZs in Virginia

Approved VA NDZs

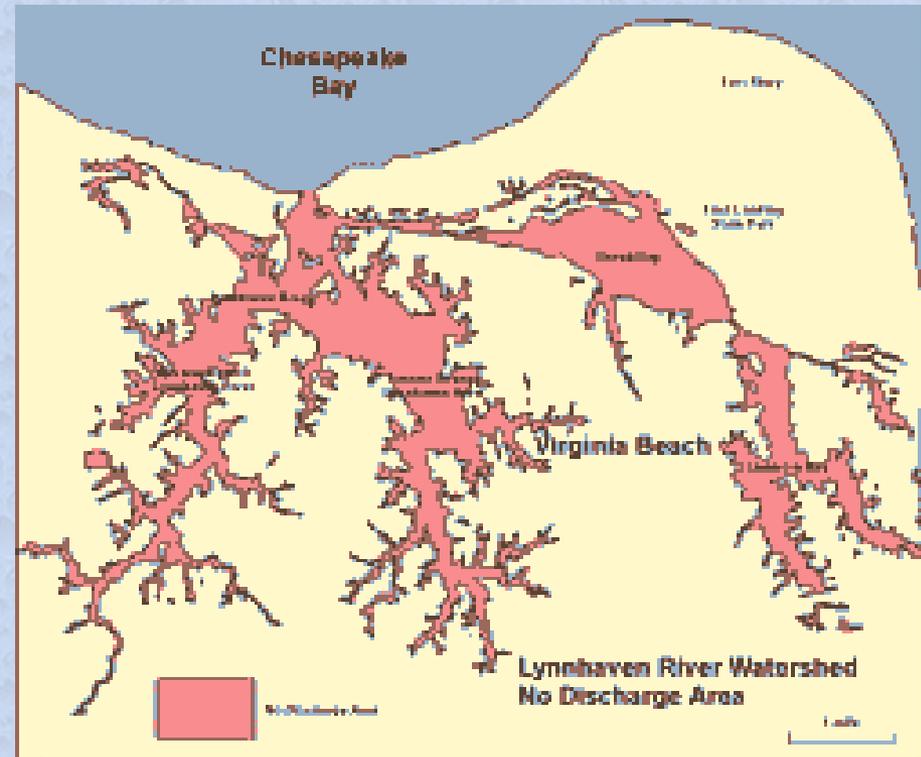
- Smith Mountain Lake, Bedford, Franklin, & Pittsylvania Counties (2000)
- Lynnhaven River, Virginia Beach (2007)
- Broad and Jackson Creeks, Fishing Bay, Middlesex County (2009)

Applications under development

- Owl Creek / Rudee Inlet, Virginia Beach
- Water bodies in the Northern Neck counties of Westmoreland, Northumberland, Lancaster, and Richmond
- Sarah Creek and Perrin River, Gloucester County

Virginia NDZ Experience - Lynnhaven

- TMDL for bacteria impairments
- Implementation included establishment of NDZ
- Positive impact of NDZ outreach:
 - Shellfish growing areas closed since 1930's now re-opened
 - Cavalier Golf & Yacht Club reported more pump-outs
 - Doubled # of pump-outs in the first year
 - Continue to increase # of pump-outs



Federal NDZ Guidance

Criteria for Designation of an NDZ

- Determination that water body requires greater environmental protection (e.g. protection of shellfish growing areas) and there is adequate availability of pump-outs
- Determination that water body requires greater environmental protection regardless of pump-out availability (e.g. endangered species)
- Areas surrounding drinking water intakes regardless of pump-out availability

For more information see,

<http://www.epa.gov/reg3wapd/nodischarge/index.htm>

Virginia NDZ Application Process

- Initiated by
 - Local Stakeholder and/ or State Agency
- Development
 - Determination of necessity
 - pump-out availability
 - draft application is prepared in collaboration with stakeholders
- Public meeting and comment period
- Inform SWCB of application
- Submit to Secretary of Natural Resources (SNR)
- SNR submit to EPA
 - additional public comment process
- Present EPA-approved designation to SWCB
 - Propose update to 9 VAC 25-71-70 to include newly designated areas

Public Comment Period for draft NDZ Application for Sarah Creek and Perrin River in Gloucester County

Presentations and Draft Application Online:

[http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/
NoDischargeZoneDesignations.aspx](http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/NoDischargeZoneDesignations.aspx)

Send Comments by Friday, August 26, 2016 to:

Mail: Anne Schlegel
P.O. Box 1105
Richmond, VA 23219

Email: anne.schlegel@deq.virginia.gov

To report a non-working pump-out contact Preston Smith
at VDH (804)864-7468