

**Public Comments submitted to the
Virginia Department of Environmental Quality
For the Lancaster County No Discharge Zone Application**

Public Comment: From Mr. Tom Neale, Boaters for Clean Water, 2/23/11, following pages.

DEQ Response: Provided on 5/20/11 in concert with response to Mr. Neale's 4/8/11 comments and presented after the 4/8/11 comments in this document.

2/23/2010
2011

Fecal Coliform Reduction by the Electro Scan
As Demonstrated by EPA Test Project Number 0214.00.020
(This review written by Tom Neale)

It has been stated that the above referenced test concludes that the Electro Scan effluent has an average of 82 FCU (fecal coliform units) MPN/100 mL. This is not accurate. The correct value is 2.43 FCU MPN/100mL.

1. Table 4-1 in the test report provides the actual test data as to FCU for the 40 tests of the unit. Column 5 provides Effluent Concentration of Fecal Coliform. Almost all of the results showed FCU MPN/100mL as ND (Not Detected). There wasn't even enough to register, although the lab arbitrarily assigned a value of 1.1 for ND results. A few showed higher values, but none over 14 except one anomaly of 23. (Date 4/10/07 12:15PM) These extremely low effluent FCU values occurred even on days when the influent concentration jumped to extreme overloads of 30,000,000 and 22,000,000 as compared to typical loadings ranging from 4,000,000 to 9,000,000. BUT on day nine, (4/19/2007) at 12:15 and 3:45 PM there are two extremely high aberrant effluent values of 1,600. Sampling protocol requires exclusion of clearly erroneous values in averaging, particularly for an MPN determination. But the EPA included those values, thus forcing the 82 MPN/100mL "average" found on the bottom line. If you remove those two clearly erroneous values (and even include the aberrant value of 23) the true average is 2.43 FCU/100mL, far below the 14FCU/100mL shell fish standard.

2. The explanation for these two aberrant readings of 1,600 is found in the test report at section: "3.5 MSD Operation and Maintenance." It states:

"Day nine – An error message (LOW ELECTRODE AMPS) appeared on the control panel, indicating that the salt in the salt tank should be checked. A visual check of the tank found the salt dosing pump running continuously. *(Which it is designed do when the salt in the tank is low. TN)* The device was reset by shutting off the water and power to the pump, then restarting. The warning was repeated during the day, with about 10 pounds of salt being added to the tank over the course of the day. For the latter part of the day, the power to the pump had to be disconnected between doses to keep it from running continuously and getting control panel operational errors. *(The lab still hadn't put in adequate salt. The unit tells you when this happens and the instructions explain this. TN)* At the end of the day, power was reset to the control panel and the salt tank was cleaned, flushed, and restocked with salt for the next day. The device operated as it had prior to the problems on day nine." (See Section 2.1.1 for brief description of how unit works.)

Note from the same section that they did "no routine maintenance during the testing, as treatment/electrode cleaning is recommended every six months." But this 6 month regimen is for normal use of 1 defecation to 4 urinations consistent with normal pleasure boat use, not at a continuous feed of concentrated untreated effluent from a sewage plant.

data from 1974, 1975, and 1998 that show fecal coliform is reduced below detection limits ranging from 0 to <20 fecal coliform/100 mL. The findings of this performance testing support this claim (mean of <2.4 fecal coliform bacteria MPN/100 mL for 38 samples).

3. It is also significant that these extremely low values of FCU/100mL were achieved by the unit even though it was massively overloaded—far more so than would occur in operations on a pleasure boat. See:

“3.4 Sewage Processing Test

The sewage processing test was performed in accordance with 33 CFR 159.121, except testing was conducted using a feed of fresh domestic human sewage rather than human sewage in a ratio of four urinations to one defecation, as specified at 33 CFR 159.121(c), for reasons of practicality. Testing was performed over an eight-hour period for 10 days (five week days per week for two consecutive weeks).”

See also from the **Executive Summary**: “Performance testing was conducted using procedures for the Sewage Processing Test contained in the USCG’s MSD certification requirements at 33 CFR 159.121. One exception to the USCG’s Sewage Processing Test requirements is that, for reasons of practicality, testing was conducted using a feed of fresh domestic human sewage rather than human sewage in a ratio of four urinations to one defecation, as specified at 33 CFR 159.121(c).”

These onboard devices are for pleasure boat use and they are manufactured to perform under 33CFR 159.121(c). This is influent dosage consistent with defecation and urination of the people on board a pleasure boat. Section C describes it as 1 defecation to 4 urinations. But they tested it under section (d) which is for loading consistent with large commercial boat use. See, in addition to the above, the following from 3.4.2.”

3.4.2 Challenge Wastewater

“...Raw influent was pumped directly into the batch tank from a drawoff point just after the raw water inlet screen to the Waco (*TN: public sewage treatment*) plant. The primary sludge solids were added to the batch tank using a hose attached to a pressure fitting in the primary sludge line from the primary clarifiers to the plant digester.....”

Instead of intermittent human usage to be found on a pleasure boat, the lab fed it concentrated sewage from a local sewage processing plant. Yet, even with this extreme overloading, the FCU values were typically “ND” or other low numbers, except for the two instances when the lab didn’t supply the unit with sufficient salt—at which times the unit signaled the problem.)

Presumably because of these values, the Executive Summary of the tested stated: “...The Electro Scan device removed almost all pathogen indicators (99.99% or greater).” Pathogen Indicators include Fecal Coliform.

This 10 day test was conducted beginning April 9, 2007. But EPA delayed making it public for over two years and only did so after the filing of an FOIA request and other requests. The date on that report was January 2010. An earlier version (Version 3.1) of the test report prepared by the testing contractor, Eastern Research Group, Inc. of Chantilly VA was dated September 18, 2008. It was presumably unedited by the agency’s upper echelon. It reported in its section 4.4.1 (deleted from the later report) that “Raritan Engineering Company, Inc. provided laboratory test

Public Comment:

From: Robert Smoak [chasesmoak@kaballero.com]
Sent: Thursday, February 24, 2011 7:19 PM
To: Smigo, Margaret (DEQ)
Subject: Re: NDZ

Margaret,

My wife and I live on Dymer Creek. WE support the NDX designation.

Robert Smoak
805 Townley Farn Rd.
White Stone

DEQ Response:

From: [Smigo, Margaret \(DEQ\)](#)
To: [Robert Smoak](#)
Sent: Thursday, February 24, 2011 9:52 AM
Subject: RE: NDZ

Good Morning Mr. Smoak,

Thanks again for your support of the proposed NDZs! I didn't see your name on the sign-in sheets for the meeting. I will be placing the presentations online soon if you'd to review them. The application is available on the DEQ website at: <http://www.deq.virginia.gov/tmdl/ndz.html>. The presentations, once they are up, will also be located there.

Best Regards,
Margaret Smigo

Public Comment:

From: John Bieg [johnbieg@msn.com]
Sent: Friday, February 25, 2011 1:15 PM
To: Smigo, Margaret (DEQ)
Subject: HB 1774 - More new laws

I understand there is a bill for consideration concerning dumping in the Chesapeake tributaries: House Bill 1774. I live on the Tabbs Creek drainage. I am against the Bill. There are sufficient regulations already without enforcement. I am concerned with fewer, not more state and federal regulations and laws that create more bureaucracy to enforce those statutes.

I have been sailing around the world for the last few years and I, myself, would not dump waste in any area like Tabbs Creek or in the Chesapeake for that matter. I live here. I don't know anyone that would. I have not seen anything that would indicate to me that anyone has dumped anything in Tabbs Creek. Just because there may be money available for some new regulations I don't think it should be wasted on new laws that will require personnel and spending that will go indefinitely.

Thank you for your consideration.

John W. Bieg
245 Cardinal Lane
White Stone, VA 22578

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, May 20, 2011 10:34 AM
To: 'John Bieg'
Subject: RE: HB 1774 - More new laws (Lancaster Co NDZ comment period)

Good Morning Mr. Bieg,

DEQ thanks you for your comment on the Lancaster NDZ draft received February 25, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

DEQ Response: EPA guidance is used along with best professional judgment to make the determination on adequate availability of pumpout and dump stations. The low mean depth of waters around pumpout/dump stations will determine whether or not exclusions are necessary for boats with greater draught requirements. Draught exclusions for larger craft will allow MSD discharge within NDZs for those craft. DEQ acknowledges that pumpout availability can require additional planning and can be limiting during certain seasons. Also, DEQ acknowledges pump outs may be less available in certain areas despite being generally available across Lancaster County. Nationwide data suggest that the EPA formula to determine adequate pumpout availability *does* establish adequate pumpouts in NDZs.

Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

2. There is strong public opposition to the application.

DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

3. Only impaired tidal **creeks** can be nominated for NDZs.

DEQ Response: DEQ adheres to the historical interpretation of tidal creeks as a generic term for tidal waterbodies where protection of shellfish growing waters is needed.

4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

DEQ Response: It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. While these chemicals are not ideal for onsite systems, they can be even more detrimental to local water quality when discharged via an MSD system.

5. MSDS release very clean effluent. Type I MSD Electro Scan effluent is cleaner than ambient water, removing 99.99% of pathogen indicators and reduce BOD according to EPA test. MSDs contribute minimal nitrogen and phosphorus, MSD reductions of which are not even required by EPA. MSDs also do not discharge protozoa, viruses, deodorants or formaldehyde contrary to DEQ statements.

DEQ Response: DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance and all MSDs are not equal in performance. Direct depositions of bacteria and nutrients have a greater impact on water quality in sensitive shellfish resource areas. DEQ also acknowledges that MSDs do not discharge formaldehyde when operated consistent with the design of the MSD. However, formaldehyde is known to be used by some boaters as an additional deodorizer.

6. DEQ supplies evasive and erroneous miss-information. One example is using old regulatory bacteria limits for MSDs to represent what MSDs discharge.

DEQ Response: DEQ responds in a consistently professional manner and has provided the scientific information requested. Bacteria emissions of MSDs were determined by EPA. While there may be boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide additional protection for shellfish growing waters.

7. NDZs are not needed. The NDZ is a failed solution because very old NDZs in New England now have posted shellfish warnings. It's already illegal to discharge sewage to waters, so why are NDZs needed? Enforce existing laws for boat and land runoff pollution instead.

DEQ Response: NDZs are designated as one tool to protect shellfish growing waters from treated and untreated boat waste. While it is illegal to discharge raw waste per the Clean Water Act, NDZs elevate the message to the public that dumping is illegal and that because the waters are sensitive to pollution, it is necessary to prohibit discharges from MSDs to achieve reductions in sensitive water bodies. It is a watershed stewardship tool that can be effective for improving water quality and given the extent of impairments for bacteria, SAV and DO, the DEQ has determined that they are necessary and beneficial. NDZs in Virginia have proven to be an effective means of reducing bacteria levels in tidal waters, for example in the Lynnhaven River where historically closed shellfish waters are now open for the first time in decades. Additionally, MSDs are designed and certified to technology based limits that meet recreational use Water Quality Standards but are inconsistent with the more restrictive shellfish Water Quality Standards.

8. NDZs are based on weak science. DEQ offers no evidence that pollution in waters comes from boaters, and does not address pollution from shore, including failed septic tanks. What percentage of human vs non-human bacteria exists in NDZ proposed waters in Richmond and Lancaster Cos.? DEQ offers no science to show that water quality improvements are or will be due to NDZs.

DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dymer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

9. NDZs cause economic harm: By promoting NDZs DEQ discourages public purchase of MSDs by reducing opportunities to dump compared with cost of the MSD, and discourages industry technological development of MSDs, reducing installation of MSDs, may reduce those recreating by boat, and harming the commercial producer of MSDS. Pumping out a holding tank is a difficult physical task to do, discouraging women from boating.

DEQ Response: NDZs can provide an economic boost to local economy by improving water quality (which can result in the re-opening of shellfish beds for commercial harvest), increasing the number of stops at local marinas for pumpout/dumpout (NDZs have been show to double the number of pumpouts at marinas) which can also increase the sale of fuel and other merchandise. Because NDZs are only applicable to certain water bodies, there is no detrimental effect to the technological development of MSDs and DEQ supports the use of certified MSDs outside of NDZ areas.

10. An NDZ deprives boaters of using most effective technology (MSD) to discharge waste. NDZs cause more pollution because they cause boaters to illegally dump sewage when they cannot get to a pumpout.

DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,
Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment: From Mr. Tom Neale, Boaters for Clean Water, 3/2/11 and 4/8/11, following pages. *Note: Comments on 4/8/11 included multiple attachments, which will be included in the final application. Please contact Elizabeth.mckercher@deq.virginia.gov, 804-698-4291 to obtain copies of the attachments.*

CERTIFIED RETURN RECEIPT REQUESTED
Request for Information

The following information is necessary relative to comments for the record for the DEQ petition to designate waters in Lancaster County, VA as No Discharge Zones. Complete response is necessary immediately because of the time limit for comment. Provide signature(s) of the person(s) responsible for answers.

1. Upon what facts to you base the following statement? Provide the specific source for said facts. "While terrestrial pollution is a threat to these marine natural resources, vessel pollution is direct and proximate to oyster grounds, and therefore has a larger impact." (From 1.7 of Petition)
2. What steps are being taken to stop terrestrial pollution which is a threat to these marine natural resources, as you say in 1.7 of Petition.
3. Upon what facts to you base the following statement? Provide the specific source for said facts. "Bottlenose dolphins utilize these waters, as well as Harbor Porpoises,....Kemps-Ridley, loggerhead and green sea turtles" utilize these waters. (From 2.2 of the petition.)
4. Upon what facts do you base the following statement? Provide the specific source for said statement and provide the brand name(s) of Type 1 MSDs to which you are referring.. "In addition, the average marine sanitation device provides minimal, if any, treatment for chemical or biological oxygen demand, phosphorus, or nitrogen." (From 2.3 of the petition.)
5. What is your definition, including brand names, of "the average marine sanitation device?"
6. What specific brand(s) of Type 1 MSDs discharge formaldehyde into the water?
7. What specific brand(s) of Type 1 MSDs discharge the pollutants to which you refer in the following statement, and in what amounts. "Depending on the type of MSD, wastewater discharges from marine vessels may also contain additional pollutants, such as protozoa (e.g., *giardia*), viruses (e.g., *norovirus*), and deodorants or sanitizing chemicals (e.g., formaldehyde) that are potentially harmful to humans, wildlife, and the environment." (From 2.3 of the Petition.)
8. State the number of those units in use in the covered waters and state the basis for your conclusion.
9. With regard to the following statement "While terrestrial pollution is a threat to these marine natural resources, vessel pollution is direct and proximate to oyster grounds, and therefore may have a more immediate impact on local water quality. Trends over the past decade have shown that bacteria levels in these waters are increasing, resulting in expanded shellfish condemnations." what data proves that vessel pollution actually does rather than "may" have a more immediate impact. What is the increase in the number of residential homes along the shores during "past decade" to which you refer. (Statement from 2.4 of the petition)
10. What percentage of fecal bacteria referred to in statement below came from discharge from boats? Upon what facts to you base the following statement? Provide the specific source for said facts.: "Bacterial source-tracking (BST) data collected as a component of the Shellfish TMDLs for the subject waters suggest that, averaged annually, approximately between 3% (Taylor Creek)

MS

and 66% percent (Antipoison and Davenport Creeks) of the fecal bacteria in these waters were of human origin. Other sources include wildlife, pets, and livestock. (From 2.4 of the Petition)

11. What is the percentage of human origin fecal bacteria that is found in each of the other designated bodies of water from bacterial source tracking?
12. Who performs what tests in your bacterial source tracking determinations? Provide copies of said test results and procedure and names and contact information for persons conducting said tests.
13. What specific steps has DEQ or any other agency (and name said agency) of the Commonwealth taken to stop the ground source pollution in the areas in which you seek NDZ designation?
14. Upon what do you rely in support of your statement, "The Commonwealth of Virginia believes the waters addressed in this application are appropriate candidates for designation as a *No Discharge Zone*." (5 of the petition) Provide names and positions of officials who have said that the Commonwealth of Virginia so believes, provide copies of any documents asserting said beliefs, and times and dates of said statements.
15. Provide full details of any request by Lancaster County for the petition to declare certain Lancaster County waters as NDZ. Including name and position of requesting official(s) and/or authority(s), time of request and copy of any document containing said request.
16. Provide full details of any request by the Northern Neck Planning District Commission for the petition to declare certain Lancaster County waters as NDZ. Including name and position of requesting official(s) and/or authority(s), time of request and copy of any document containing said request.
17. Under what statutory or other authority do you petition to have the Eastern and Western Branches of the Corrotoman River declared to be No Discharge Zones.
18. What is the name of and contact information for the person at EPA to whom you are required to submit your NDZ petition for Lancaster County.

Sent by email February March 2, 2011 to David K. Paylor (David.paylor@deq.virginia.gov) Director Virginia DEQ; Jefferson D. Reynolds, (Jefferson.reynolds@deq.virginia.gov) Water Policy Manager; Margaret Smigor (Margaret.Smigo@deq.virginia.gov) TMDL Coordinator.


Tom Neale for Boaters for Clean Waters
P.O. Box 631
Lancaster, VA 22503

03-02-2011
Date

To: VA DEQ, VA Water Control Board and US EPA
From: Tom Neale, PO Box 631, 532 Mastons Wharf Road Lancaster, VA 22503
Phone: 804 462 6208
Re: Lancaster County Virginia NDZ Petition, prepared by VA DEQ and NNPDC

I request to speak before the Virginia Water Control Board concerning this petition.

Identification

I am Technical Editor for Soundings Magazine, Contributing Editor for BoatUS Magazine and Columnist for BoatUS.com. I live on a creek in Lancaster County. A few family members and I own considerable waterfront acreage on another Chesapeake Bay tributary. I travel thousands of miles per year on boats and fish, swim and dive in local area waters. I passionately desire clean water. This DEQ petition will cause more pollution not less, and it ignores real causes of pollution. Following are comments in opposition.

Preliminary Statement

The presentation of this petition to the EPA will be tantamount to making false statements to a Federal agency for the purpose of obtaining a rule making decision. See discussion below.

Research has been conducted in a manner to manipulate a predetermined desired result as to whether there are adequate pumpouts and whether there is need for an NDZ. Fundamental conclusions presented in the petition are the result not of fact but of assumption and an EPA formula which creates fiction to support the desired conclusion and is in direct contradiction to 33 USC 1322 (f) (3). They are also the result of misstatements of facts so egregious that they must be assumed to be deliberate. This raises potential liability issues.

Information Specific to the Petition

1. There is not an adequate number of pumpouts in the area. 33 USC 1322 (f) (3) states inter alia: "... except that no such prohibition shall apply until the Administrator determines that adequate facilities for the safe and sanitary removal and treatment of sewage from **all** vessels are reasonably available for such water to which such prohibition would apply." The petition incorrectly states that 4 pumpouts are available. In fact, one, Windmill Point, is closed during weekends in winter, is open only part time in spring and has a severely and continuously shoaling entrance with controlling depth into the harbor, at best times, at around 5.5 feet, but often considerably less. And this worsens with continuous shoaling process. This entrance is on the lee shore of prevailing winds ranging from southeasterly through easterly to southwesterly. The other alleged pumpout facilities, Chesapeake Boat Basin, Yankee Point and Tides Inn are closed from the first freeze until sometime in March. During this period many boats with heads are fishing (Rock Fishing, for example) and much commercial harvesting occurs. None of the stations listed have dump facilities.

2. The designated creeks and rivers include 5,132 acres, 8.02 sq. miles, and shorelines of 178.96 miles. Boat travel distances between creeks without pumpouts and creeks with pumpouts are great, in open

potentially dangerous waters. For example, if the pumpout in Chesapeake Bay Boat Basin is not available, a boat from the northern side of the Northern Neck would probably have to travel out into the Chesapeake, around Windmill Point Light, and up the Rappahannock River to Carter's Creek hoping to find a working pumpout.

3. There is strong public opposition to the petition. When DEQ held a local stakeholder's hearing approximately 40 people in opposition attended. DEQ personnel tried to prevent them from speaking, claiming that it was a "meeting," not a hearing.

DEQ has cited for local support one sentence from a 2009 form letter written by the Lancaster County administrator. DEQ fails to admit that its agent called the County Administrator in February of 2011 asking for a letter of support and he said he didn't have authority to write such a letter. DEQ further fails to admit that its agent called the Chairman of Lancaster County Board of Supervisors and was told that the county had not voted to support same and that said chairman had been present at the DEQ public hearing and observed the strong showing of public opposition at that meeting and DEQ attempts to prevent comment from those people.

DEQ further fails to admit that the Northern Neck Planning District Commission upon which it relies for public support is not a governmental agency, has no authority to speak for citizens and was paid by DEQ \$125,000.00 of Federal Stimulus funds to support the petition. See attachment "Analysis of Questions and Answers Relevant to Lancaster County Petition."

4. DEQ has flagrantly ignored § 62.1-44.33 of the Code of Virginia, as amended, which only authorizes NDZ petitions of *impaired* tidal **creeks** and provides that a petition for any creek be premised upon a finding that said action will improve the impairment of said creek. DEQ is proceeding against rivers, including waters that are not impaired and makes no factual statements and offers not proof that said NDZ designation will improve the impairment of any that are.

5. DEQ erroneously states in its petition that Type 1 MSDs add chemicals to the water and that boaters put chemicals into them. When requested to provide in writing brands of Type 1 MSDs that do this, they could not do so. In fact, no Type 1 adds chemicals to the water. However boaters frequently add chemicals, including formaldehyde, to holding tanks to control smell and other issues. These chemicals are dumped into the water when pumpouts aren't available and dumped into the ground water when they are. But this is the only method that DEQ wants to use.

Holding tanks create dangerous gasses including hydrogen sulfide which has been found by OSHA to be very dangerous. See attached OSHA Fact sheet.

6. This petition would reduce, from two to one, the methodology available to boaters for handling sewage. The one to be outlawed uses advanced technology rather than dumping and is the most effective. The most commonly used Type 1 device, the Electro Scan, was tested by the EPA and its effluent was found to be cleaner than the water usually around the boat. These findings showed a

reduction in FCU to almost nonexistent levels and a reduction in BOD to levels, as quantified in ambient waters, to insignificant levels. DEQ has knowingly and misleadingly misrepresented this test. See full EPA test findings at www.epa.gov/nrmrl/pubs/600r10008/600r10008.pdf . See also attached analyses entitled: **Performance of the Electro Scan As Demonstrated by EPA Test Project Number 0214.00.020, EPA Test Table 4.1, and Executive Summary, unsanitized, of EPA test.**

This test stated that a product, Thermo Pure, performed less than satisfactory. Neither I nor any other boater with whom I have spoken have ever seen such product in use and a survey of the major marine retail catalogues shows that it is not listed therein for sale. This product is not relevant to this determination.

7. DEQ was asked to provide, over signature, information upon which it relied to support its allegations in its draft petition. DEQ did not provide information, instead supplying assumptions and deliberately evasive statements, with no signature of person(s) responsible. Some of the responses are so obviously evasive and erroneous that intend to misinform must be assumed. See attached **Information Request and DEQ Response: Analysis**

8. Many areas (such as in New England) that were designated NDZ years ago now have shellfish warnings posted for periods of heavy boating warning to avoid taking shellfish because of pollution from those boats which have only holding tanks and cannot use Type 1 MSDs. The NDZ is a failed solution. These instances are documented in relevant USCG Notices to Mariners.

9. This petition, by its own express terms, only "assumes" that pollution in the affected waters comes from boaters. It offers no evidence other than *assumptions* and DEQ failed to provide basis in fact for its assumptions when requested in writing.

10. DEA does not address pollution sources from shore although it acknowledges they exist. Most of the creeks that EPA considers to be impaired have low lying shorelines with many residential dwellings and old septic systems. Anti Poison Creek, with alleged high human pollution, is such an example.

11. A direct consequence of this and other conduct of DEQ is to discourage public purchase and development of technology that provides a better solution than the outhouse technology proposed by DEQ.

Information Regarding NDZs in General

1. An NDZ deprives the boater of the most effective way to avoid discharging sewage. That is a certified working onboard treatment device.
2. There are far more malfunction opportunities in a pumpout system than with a certified onboard treatment device.
3. It is already illegal to discharge sewage into our waters.
4. No Discharge Zones (NDZ) generally cause more, not less pollution.

5. For several years DEQ has waged a campaign to mislead the public. News media and the public have been repeatedly given misleading information by DEQ as to facts and issues.
6. There are now two methods of dealing with sewage from boats: EPA certified onboard treatment devices and pumpouts. An NDZ eliminates one of those methods in the area. This cause more pollution because:
 - a. Some boats cannot access pumpouts. Reasons include lack of availability, pumpout breakdowns, insufficient room to navigate to pumpouts, not enough water depth, bad weather, distance.
 - b. Most boats with toilets experience times when the holding tank is full and there is no pumpout available.
 - c. In both the above cases, a properly working certified onboard treatment device allows the boater to discharge treated effluent rather than illegally dump sewage.
 - d. A properly working certified onboard treatment device treats sewage as well as or better than many public treatment centers.
 - e. Pumpouts around the water often dump large concentrated amounts of sewage into septic tanks near the water.

That sewage often contains chemicals that must be added to the boat tank to stabilize smell and gas buildup. Those chemicals are injurious to septic tanks and surrounding waters into which they leach.

DEQ Response:



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

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Doug Domenech
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

March 11, 2011

Mr. Tom Neale
Boaters for Clean Waters
P.O. Box 631
Lancaster, VA 22503

Dear Mr. Neale:

Thank you for your request for information, dated March 2, 2011, regarding the Lancaster County NDZ application and process.

Enclosed are staff responses to your requests. Also, please be reminded that we have extended the public comment period for the Lancaster NDZ application through April 11, 2011, to give you sufficient time to review the supplied information.

I appreciate your group's efforts to participate in the process and look forward to receiving your comments on the proposed NDZ for Lancaster County and trust that we have assisted in resolving remaining issues.

Sincerely,

David S. Lazarus
Watershed Program Manager
Office of Water Quality Programs

Enclosures

Cc: Mark Alling
Margaret Smigo

Attachment

Staff responses to information request from Mr. Tom Neale

- 1) *Vessel pollution is a direct source of fecal material including bacteria, viruses, parasites, nitrogen, phosphorus and biochemical oxygen demand to the waterbody, in or near oyster grounds and/or surface or bottom aquaculture activities. Such direct deposit does not undergo the level of bacterial die-off that land based non-point source (NPS) bacterial loads undergo. This relationship is consistent in all fate and transport bacteria models. The parallel is the impact of cattle direct deposition in the stream vs. land deposition and transport.*
- 2) *DEQ developed TMDLs (approved by EPA and SWCB) for shellfish impairments in Lancaster County for Tabbs, Dymer, Antipoison, Carter, Greenvale, Beach, Lancaster, Mulberry, Deep, Oyster and Mosquito Creeks and the Corrotoman River watershed. These TMDL studies may be viewed on the DEQ TMDL website <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx> by entering Lancaster in the City/County search tool. A pollution budget was developed for each impairment. Local Greenvale Creek stakeholders developed an Implementation Plan (IP) for that shellfish impairment that, when implemented, will lead to bacterial reductions. IPs for other impaired waters have not yet been completed. The Clean Marina Program is active in the county, and the Virginia Department of Health (VDH) monitors approximately 150 shellfish bacterial stations in Lancaster County monthly. In addition, shoreline surveys are revised every 5-8 years.*
- 3) *The source of this information is the Virginia Department of Game and Inland fisheries: - <http://vafwis.org/fwis/?Menu=Home. By+Place%20Name>*
- 4-7) *The majority of the literature and marine sanitation device (MSD) studies focus on the two major brands of equipment: Electro Scan and Thermopure-2. It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional treatment. Information related to treatment efficiency, nutrients, and additional pollutants is from the EPA "Evaluation of Improved Type I Marine Sanitation Devices-Performance Evaluation Report" published in January 2010, and the Fish and Wildlife Service document found at: <HTTP://wsfrprograms.fws.gov/subpages/tooklitfiles/cv>.*
- 8) *The number of MSDs in Lancaster County waterbodies is an estimate. The Department of Environmental Quality (DCQ) relies on the EPA formula (current NDZ Guidance) for calculating the estimated number of MSDs.*
- 9) *See the response to questions #1 & 2. The approved TMDLs draw the conclusion that boat discharges are a potential bacteria source in these impaired waters. VDH long term monthly data, VDH shoreline surveys, and local land use and population data were used in determining the pollution budgets.*
- 10) *Bacteria source tracking (BST) human percent contribution of the magnitude in the 66 percent range for Antipoison / Davenport Creeks or 32 percent for the East Branch Corrotoman River indicates that more than one bacteria source is present in the impairment.*

The likely sources are failed septic systems, and boat discharges. The 2006 VDH Sanitary Survey documented only 2 septic failures and 6 no facilities (straight pipes) in the East Branch Corrotoman River watershed. None of the septic failures and only two of the no facilities were within a half-mile of tidal water. Boat discharges are one logical source of the human component in the Corrotoman River. Refer to the BST portion of the TMDLs for Antipoison Creek and Corrotoman River referenced in the website link in response #2.

11) *Refer to in the website link in response #2. Select the final report for each TMDL and refer to the BST sections of the reports. Other than Taylor and Antipoison Creeks, average BST human percentages in Shellfish Use Impairments in Lancaster County were 65% in Indian Creek, 26% in Dymmer Creek, 18% in Tabbs Creek, 37% in West Branch Carter Creek, 18% in Central Branch Carter Creek, 20% in East Branch Carter Creek, 33% in West Branch Corrotoman River, 29% in Senior Creek, 24% in Ewells Prong, 27% in Millenbeck Prong, 25% in Hills Creek, 26% in Bells Creek, 32% in East Branch Corrotoman River, 16% in Myer Creek, 20% in Greenvale Creek, 14% in Beach Creek, 16% in Lancaster Creek, 18% in Mulberry Creek, 13% in Deep Creek, 54% in Oyster Creek, and 62% in Mosquito Creek. BST is one current technology for estimating differentiation of sources. DEQ used this along with VDH shoreline surveys, land use and population data for determining pollution budgets in the TMDLs.*

12) *The BST samples were collected, under the supervision of Rob Whittman, who worked for VDH at that time. MapTech, Inc. performed the BST analysis for bacterial impairments. Contact Phillip McClellan, president, 1715 Pratt Drive, Blacksburg, VA 24060, phone 540-961-7864.*

13) *See response #2.*

14) *See response #2. Also see the Va. Code Section 62.1-44.33, which authorizes the State Water Control Board (SWCB) to pursue the designation of impaired tidal creeks as NDZs.*

15 & 16) *Multiple communications have occurred between county leadership, NNPDC, DCR, VDH, and DEQ. Most NN localities have been supportive but neutral in these efforts. Starting in 2007, three presentations have been given to the Rappahannock River Basin Commission, one to the Board of Supervisor of Westmoreland and Northumberland Counties (April 10, 2008). Concerning Lancaster County, in an email communication between Mr. William Pennell and Jeff Chanat (DEQ), dated February 23, 2009, Mr. Pennell stated "Please know that we will do whatever we can to assist in this project." The communication cites VA GA Bill 1774 and the pursuit of No Discharge Zones in the Northern Neck. Additionally, Mr. Jerry Davis, Executive Director of the NNPDC, has monthly meetings with the County Administrators and has kept them apprised of the regional NDZ effort. No negative communications have been received following those meetings.*

17) *Va. Code Section 62.1-44.33 and the Federal Clean Water Act.*

18) *Mr. Michael Hoffman, US EPA, Region III, 1650 Arch Street, Philadelphia, PA 19103*

DEQ Response:

From: Smigo, Margaret (DEQ)

Sent: Friday, May 20, 2011 10:20 AM

To: 'tomneale@juno.com'

Cc: Alling, Mark (DEQ); Lazarus, David (DEQ); McKercher, Elizabeth (DEQ)

Subject: RE: Lancaster Co NDC Public Comment

Good Morning Mr. Neal,

DEQ thanks you for your comment on the Lancaster NDZ draft received April 9, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

DEQ Response: EPA guidance is used along with best professional judgment to make the determination on adequate availability of pumpout and dump stations. The low mean depth of waters around pumpout/dump stations will determine whether or not exclusions are necessary for boats with greater draught requirements. Draught exclusions for larger craft will allow MSD discharge within NDZs for those craft. DEQ acknowledges that pumpout availability can require additional planning and can be limiting during certain seasons. Also, DEQ acknowledges pump outs may be less available in certain areas despite being generally available across Lancaster County. Nationwide data suggest that the EPA formula to determine adequate pumpout availability does establish adequate pumpouts in NDZs. Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

2. There is strong public opposition to the application.

DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

3. Only impaired tidal creeks can be nominated for NDZs.

DEQ Response: DEQ adheres to the historical interpretation of tidal creeks as a generic term for tidal waterbodies where protection of shellfish growing waters is needed.

4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

DEQ Response: It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. While these chemicals are not ideal for onsite systems, they can be even more detrimental to local water quality when discharged via an MSD system.

5. MSDs release very clean effluent. Type I MSD Electro Scan effluent is cleaner than ambient water, removing 99.99% of pathogen indicators and reduce BOD according to EPA test. MSDs contribute minimal nitrogen and phosphorus, MSD reductions of which are not even required by EPA. MSDs also do not discharge protozoa, viruses, deodorants or formaldehyde contrary to DEQ statements.

DEQ Response: DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance and all MSDs are not equal in performance. Direct depositions of bacteria and nutrients have a greater impact on water quality in sensitive shellfish resource areas. DEQ also acknowledges that MSDs do not discharge formaldehyde when operated consistent with the design of the MSD. However, formaldehyde is known to be used by some boaters as an additional deodorizer.

6. DEQ supplies evasive and erroneous miss-information. One example is using old regulatory bacteria limits for MSDs to represent what MSDs discharge.

DEQ Response: DEQ responds in a consistently professional manner and has provided the scientific information requested. Bacteria emissions of MSDs were determined by EPA. While there may be boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide additional protection for shellfish growing waters.

7. NDZs are not needed. The NDZ is a failed solution because very old NDZs in New England now have posted shellfish warnings. It's already illegal to discharge sewage to waters, so why are NDZs needed? Enforce existing laws for boat and land runoff pollution instead.

DEQ Response: NDZs are designated as one tool to protect shellfish growing waters from treated and untreated boat waste. While it is illegal to discharge raw waste per the Clean Water Act, NDZs elevate the message to the public that dumping is illegal and that because the waters

are sensitive to pollution, it is necessary to prohibit discharges from MSDs to achieve reductions in sensitive water bodies. It is a watershed stewardship tool that can be effective for improving water quality and given the extent of impairments for bacteria, SAV and DO, the DEQ has determined that they are necessary and beneficial. NDZs in Virginia have proven to be an effective means of reducing bacteria levels in tidal waters, for example in the Lynnhaven River where historically closed shellfish waters are now open for the first time in decades. Additionally, MSDs are designed and certified to technology based limits that meet recreational use Water Quality Standards but are inconsistent with the more restrictive shellfish Water Quality Standards.

8. NDZs are based on weak science. DEQ offers no evidence that pollution in waters comes from boaters, and does not address pollution from shore, including failed septic tanks. What percentage of human vs non-human bacteria exists in NDZ proposed waters in Richmond and Lancaster Cos.? DEQ offers no science to show that water quality improvements are or will be due to NDZs.

DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dyer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

9. NDZs cause economic harm: By promoting NDZs DEQ discourages public purchase of MSDs by reducing opportunities to dump compared with cost of the MSD, and discourages industry technological development of MSDs, reducing installation of MSDs, may reduce those recreating by boat, and harming the commercial producer of MSDS. Pumping out a holding tank is a difficult physical task to do, discouraging women from boating.

DEQ Response: NDZs can provide an economic boost to local economy by improving water quality (which can result in the re-opening of shellfish beds for commercial harvest), increasing the number of stops at local marinas for pumpout/dumpout (NDZs have been shown to double the number of pumpouts at marinas) which can also increase the sale of fuel and

other merchandise. Because NDZs are only applicable to certain water bodies, there is no detrimental effect to the technological development of MSDs and DEQ supports the use of certified MSDs outside of NDZ areas.

10. An NDZ deprives boaters of using most effective technology (MSD) to discharge waste. NDZs cause more pollution because they cause boaters to illegally dump sewage when they cannot get to a pumpout.

DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator



Friends of the Rappahannock
Advocacy • Restoration • Education

P.O. Box 7254 • Fredericksburg, VA 22404
Ph (540) 373-3448 • Fax (540) 373-8111
Email: info@riverfriends.org
Web: www.riverfriends.org

February 25, 2011

VADEQ – Piedmont Regional Office
ATTN: Margaret Smigo, TMDL Coordinator
4949-A Cox Road Glen Allen, VA 23060-6296

RE: No Discharge Zone (NDZ) application for selected Creeks in Lancaster County (*Mulberry, Deep, Greenvale, Paynes, Beach, Whitehouse, Town, Myer, Moran, Taylor, Carter, Mosquito, Oyster, Windmill Point Resort Boat Basin, Antipoison, Davenport, Tabbs, and Dyer Creek and both East and Western Branches of the Corrotoman River*) and a portion of one creek in Northumberland County (*Indian Creek*)

Dear Ms. Smigo,

On behalf of the Friends of the Rappahannock, I would like to express our strong support for the establishment of No Discharge Zones (NDZs) in the above referenced creeks in Lancaster and Northumberland Counties.

These water bodies have been or are currently listed on the 303(d) list of impaired waters for exceedance of bacteria water-quality standards for shellfish use, dissolved oxygen, excess nutrients, and aquatic plant impairments. The TMDLs indicate that there are many sources of bacterial and nutrient impairments of the Rappahannock and its tidal tributaries. Failing septic systems, agricultural runoff, residential runoff, and boat discharges all contribute to the problem. *Each* of these sources must be addressed if we are to achieve restoration of safe water and viable a shellfishery in the tidal Rappahannock.

Boat discharges represent a pollution source that is readily identifiable, undisputable, and solvable at minimal cost relative to other sources.

Even treated sanitary wastewater discharged from boats contains concentrated bacterial loads, having fecal coliform counts ranging from 200 to more than 1,000 Most Probable Number (MPN) per 100 milliliters of water (Source: Lynnhaven Boat Wastewater Sampling Program. January 7, 2008). The current shellfish standard for fecal coliform bacteria allows for a maximum geometric mean of 14 per 100 milliliters (ml) of water and a 90th percentile not to exceed 49 MPN/100ml over a 30-month period. Clearly, boat discharges can and do discharge waters that contribute to the ongoing bacterial impairment in these watersways. By extension, they contribute to the 9,456 acres of “Restricted” shellfish harvest areas in the Rappahannock, and the depressed seafood economy in the Northern Neck.

Further, the average marine sanitation device provides little, if any, treatment for chemical or biological oxygen demand, phosphorus, or nitrogen. These pollutants are being discharged into the Rappahannock, a nitrogen-limited estuary that already experiences more than 2 cubic kilometers of hypoxic water each summer (Chesapeake Bay Program. August, 2009) – seven

times the sum of the hypoxic volume in all Virginia's other Bay tributaries combined. As such, boat discharges are a clear contributor to a major water quality and living resource impairment.

While the relative magnitude of loads from boat discharges vs. failed septic systems may be arguable within some tributaries, that does not constitute a valid reason to avoid or delay the implementation of measures to curb these loads. It is a responsibility of the Commonwealth to move forward on implementation of the TMDL, of which limitations on discharge is an important part. This is especially true given that the solution (tank pumping or discharge outside the zones) represents a relatively minor inconvenience to the affected parties.

As presented in the NDZ application, there are four (4) pumpout facilities located within a reasonable distance of the proposed no-discharge zones, and the calculations show that they have adequate capacity to handle the increased load.

We urge DEQ to move forward with the establishment of these No Discharge Zones as soon as possible.

Thank you for your consideration of our comments. If you have any questions, please feel free to contact me at 540-373-3448 x111.

A handwritten signature in black ink that reads "John P. Tippet". The signature is written in a cursive, flowing style.

John P. Tippet
Executive Director

cc: May Sligh, VaDCR
Stuart McKenzie, NNPDC

Public Comment: From John Tippet, Friends of the Rappahannock on preceding pages.

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Thursday, April 14, 2011 2:47 PM
To: 'John Tippet'
Cc: Sligh, May (DCR); Stuart McKenzie
Subject: RE: Comments on Proposed NDZ in Lancaster and Northumberland Counties

Good Afternoon Mr. Tippet,

Thank you and the Friends of the Rappahannock for the letter received in support of the draft NDZ application for waterbodies in Lancaster County.

DEQ agrees with your statement that: "Boat discharges represent a pollution source readily identifiable, undisputable, and solvable at minimal cost relative to other sources".

We greatly appreciate the support of the "FOR" and will submit your letter along with the draft application to EPA for review.

Best Regards,
Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

No Discharge Zones (NDZs) should be established in all tidal water bodies in Virginia except for major rivers (Potomac, Rappahannock, York, James) and the open Bay. Major rivers and the Bay are sufficiently large, deep and circulated so small quantities of pathogens discharged from Type I and Type II MSDs do not pose a threat to human health or commercial shellfish. In no cases should NDZs not incorporate the maximum historical extent of restrictions for the harvesting of shellfish as imposed by VDH Shellfish Sanitation.

DEQ must take into account the fact that oyster aquaculture using bottom cages is expanding very rapidly and areas that do not harbor bottom cages at present may harbor them in the future. Concerns about *Vibrio* contamination have caused severe restrictions on summer oyster harvesting procedures. Overboard discharge from MSDs is inappropriate any place where water circulation is even mildly restricted and where oysters are being or could likely be cultured for human consumption.

The primary objection to establishing NDZs seems to be from boaters who have heads and MSDs but no holding tank. Numerous owners of marinas and boat repair facilities have told me that such boats are not common. For those who object to installing holding tanks, or who cannot do so because of space restrictions, many inexpensive "camping toilets" are available, and one can be constructed from a 5 gal. bucket partly filled with sawdust, with a toilet seat attached. It is much more important to keep pathogens and nutrients from human waste out of the water than it is to inconvenience a few people with relatively large boats who can afford to deal with their waste responsibly.

Dr. Lynton S. Land, PO Box 539, Ophelia VA 22530 (804) 453-6605 voice and fax

JandL@nnwifi.com

www.VaBayBlues.org

03/04/11

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, March 04, 2011 12:00 PM
To: 'Judith Lang/ Lynton Land'
Cc: Alling, Mark (DEQ); Sligh, May (DCR); Lazarus, David (DEQ)
Subject: RE: Public Comments Re: NDZ

Thanks Dr. Land. If other members of the oyster aquaculture (or anyone else you are affiliated with who has an interest) is so inclined, their support stated in public comments of NDZs, would be greatly appreciated.

There will be an extension of the comment period (will announce to all contacts via email later today) - new end of comment will be 4/11/11 (extra two weeks). A formal response will follow for your comments.

I will add the two email contacts you mentioned to the Northumberland application contact list. That list will be assembled from previous TMDL contacts there - if you know of anyone else I might include please let me know.

Best Regards,
Margaret Smigo

Public Comment:

From: Lee and Carol Jacobsen [<mailto:jacobsenlc@gmail.com>]
Sent: Monday, March 07, 2011 11:40 AM
To: Smigo, Margaret (DEQ)
Subject: Lancaster County NDZ public comment - Lee and Carol Jacobsen

We support the NDZ (No discharge zone) designations in Lancaster County. We live in Lancaster County on Myer Creek, the same location as Yankee Point Sailboat Marina. We also grow oysters for consumption. The concentration of marine sanitation devices is higher in marina locations, just as the concentration of boats is higher on creeks where marinas are located. The problems of incompletely processed sewage by onboard systems is multiplied significantly in the locations where boats are USED.

The NDZ designation for the creeks on which marinas are located is particularly important. On the weekends, slip holders come to the marina and "live" on their boats. If they have inboard sanitation systems, that means that they are pumping sewage into the creek even though the marina has a pump-out system. Since Yankee Point Sailboat Marina was promoting the installation of these systems in the past, it is likely that there are a significant number installed and in use on Myer Creek. The area around the marina is closed to shellfish in the summers which corresponds to the boating season. Furthermore, there are regattas at the marina where people come from elsewhere and anchor out or take a slip for these occasions. The Hospice regatta has over 100 sailboats with half likely to have holding tanks or sewage systems, and this is in October when oysters are being harvested.

Thank you for registering our support for the NDZ designation for Lancaster County creeks.

Lee and Carol Jacobsen

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Monday, March 07, 2011 12:13 PM
To: 'Lee and Carol Jacobsen'
Cc: Lazarus, David (DEQ)
Subject: RE: Lancaster County NDZ public comment - Lee and Carol Jacobsen

Dear Mr. and Mrs. Jacobsen,

DEQ sincerely appreciates your public comment letter of support for NDZ designations in Lancaster County. Your comment will be included with the final NDZ application which is submitted to EPA for approval. Thank you both for taking the time to declare your concerns regarding the shellfish growing waters on Myer Creek. DEQ believes the NDZ will be a beneficial tool for these waterways.

Best Regards,
Margaret Smigo
DEQ-Piedmont Regional TMDL Coordinator

Public Comment:

From: John Payne [<mailto:johnpayne@nnwifi.com>]
Sent: Monday, March 07, 2011 1:08 PM
To: margaret.smigo@virginia.deq.gov
Subject: Fw: Lancaster Co NDZ Public Comment

I fully support the designation of Myer Creek in Lancaster as a NDZ. I reside on the creek a short distance from Yankee Point Marina. Myer Creek is a relatively small, confined body of water with a large amount of boat traffic due to the presence of the marina. I, as well as many of my neighbors, have children and grandchildren who play, swim, and ski in the creek. I also raise oysters for personal consumption and so far we still remain in an area not designated as contaminated--although this designation applies to areas of the creek not far from us around the marina. I believe that designating Myer as a non discharge zone and requiring boats to reach more open water, such as the Rappahannock or the bay before discharging is the correct decision to make.

John Payne
676 Yankee Point Road
Lancaster, VA 22503

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Monday, March 07, 2011 1:16 PM
To: 'John Payne'
Cc: Lazarus, David (DEQ)
Subject: RE: Lancaster Co NDZ Public Comment

Good Afternoon Mr. Payne,

DEQ is very appreciative of your public comment for the Lancaster NDZ application. Your comment will be included in the document provided to EPA for approval. Again, we thank you for taking the time to express your support of the proposed NDZs. DEQ believes that NDZs are a good tool for improving the water quality of shellfish growing areas, such as those in Myer Creek.

Best Regards,
Margaret Smigo
DEQ-Piedmont Regional TMDL Coordinator

Public Comment:

From: cjdm3 [cjdm3@rivnet.net]
Sent: Tuesday, March 08, 2011 10:10 AM
To: Smigo, Margaret (DEQ)
Subject: NDZ Commnets

Margaret Smigo
Piedmont Regional TMDL Coordinator
4949-A Cox Road
Glen Allen, VA 23060

Margaret:

This is a comment regarding the NDZ application.

It is the position of Boaters for Clean Water (BCW) and myself that the application of NDZ to the creeks designated at the meeting or any other creeks in Virginia would be detrimental to the goal of improving water quality for all of the following reasons along with the reasons others have mentioned in their comments.

1. The installation of an MSD in a vessel regardless of size cost an estimated \$2000.00. That is a substantial outlay and one that the boat owner will evaluate based on cost and benefits like all of us would. His option against which he weighs this cost is the amount of use he will get from the MSD. Here the size of the boat comes into play. If you have a smaller boat the cost is applied to a smaller overall value and becomes a larger investment related to the overall cost and vice versa with a larger boat. In other words the smaller the boat the harder it is for the owner to justify an outlay that represents a high percentage of the total dollar value of the boat.

Another option he compares is how much use he will get out of the NDZ. If the boat owner can use the MSD in all of the waters in which he sails he has an opportunity to defray the cost over many, many more uses and is more likely to install one rather than if there is a substantial amount of the sailing territory within which he cannot use his new \$2000.00 installation. If these suggested NDZ areas are put into effect it is obvious that some boaters will decide that it is not worth the \$2000.00 to put in an MSD. Boaters are more likely to use an MSD while at anchor either in the evening or before weighing anchor after breakfast in the morning. So, where he might use the MSD the most is now put off limits. Other submissions have shown that the MSD produces water that often is Cleaner than the water into which it is discharging.

This result will have a negative effect on the economy of the area. Less boat yards will install MSD's; more boaters will day sail rather than stay out overnight: thereby using their boats less and consequently evaluating the total value of their boat using less time on board which will increase the hourly cost of owning a boat.. This will cause some boaters to get another hobby.

This will also effect the rest of the Bay in that if the owners do not install the MSD then while sailing the larger bay they will have a greater tendency to discharge overboard rather than fill up

their holding tank. Since it is very simple to switch from going overboard to directing the raw sewage to the holding tank the likely scenario of some boaters is that if the boater is anchored he will keep the Y-valve directed overboard and if someone suspicious approaches the boat he or one of his crew will re-install the lock to avoid a ticket. All of this means the creeks and Bay will receive more pollution...not less.

2. The sailing industry and most yacht clubs try to promote women sailing. There are courses up and down the Bay for women only. Yacht Clubs and other organizations successfully promote cruises as well as races for women. It is evident that if the husband is to really get the enjoyment out of boating that is possible then it behooves him to involve his wife and promote her happiness as well as his own. This usually means making life on board the boat as near like the home they live in as possible. Making all parts of the boat functionally modern, easy to use etc. That is why electric winches, sails that roll up like a shade, propane stoves that you simply turn on just as you would at home and many other devices have become so popular. The pump out system runs completely counter to all of that effort

Margaret, Using a pump out system is nothing like anything you have at home or have ever done. At Yankee Point Marina we installed a pump out system about eight years before I sold the marina in 1999. It was the one that is still in use there today. I do not recall a time when men used it through the complete cycle without needing some form of assistance. Often a lot of assistance and occasionally the attendant on duty combined with the skipper were unable to accomplish the goal. To be useful it must be powerful enough to pump out the largest holding tanks as well as the smallest and then transfer the effluent to the septic tank, which is perhaps a hundred yards uphill from the pump out facility. This takes a very powerful motor. There are several valves involved to get the effluent out of the boat to the tank, then more to get the pump to pump it uphill. The directions were as simple as we could make them and on many occasions the boater just gave up and left.

I would like for each of you who were at the meeting in Lancaster County to get on a boat and go into several different marinas over a nice weekend and attempt to pump out the holding tank. Time yourself at each stop and see how successful you ended up being and I think you would understand that the modified outhouse mentality that is represented by the pump out system is ineffective and consequently rarely used by boaters and never have I seen women want to even come near the unit when it is in operation.

The suggestion that we use that system rather than modern technology where all you do is push a button is down right ludicrous. Describe the two scenarios to anyone; either use the head like at home and push this button or keep the effluent on board in a container under our bunks while we cook and eat and sleep until sometime in the future we find a marina with a pump out system that is working and spend a fair amount of time making the transfer from boat to shore. Margaret, if you were offered those two choices, which would you choose? To throw technology out of the window or to throw the outhouse away?

If you have gotten this far and your group would like to go out and test drive the system I would be glad to arrange it.

John McConnico

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, May 20, 2011 10:25 AM
To: 'cjdm3'
Cc: Alling, Mark (DEQ); Lazarus, David (DEQ); McKercher, Elizabeth (DEQ)
Subject: RE: NDZ Comments

Good Morning Mr. McConnico,

DEQ thanks you for your comment on the Lancaster NDZ draft received March 8, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

DEQ Response: EPA guidance is used along with best professional judgment to make the determination on adequate availability of pumpout and dump stations. The low mean depth of waters around pumpout/dump stations will determine whether or not exclusions are necessary for boats with greater draught requirements. Draught exclusions for larger craft will allow MSD discharge within NDZs for those craft. DEQ acknowledges that pumpout availability can require additional planning and can be limiting during certain seasons. Also, DEQ acknowledges pump outs may be less available in certain areas despite being generally available across Lancaster County. Nationwide data suggest that the EPA formula to determine adequate pumpout availability does establish adequate pumpouts in NDZs. Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

2. There is strong public opposition to the application.

DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

3. Only impaired tidal creeks can be nominated for NDZs.

DEQ Response: DEQ adheres to the historical interpretation of tidal creeks as a generic term for tidal waterbodies where protection of shellfish growing waters is needed.

4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

DEQ Response: It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. While these chemicals are not ideal for onsite systems, they can be even more detrimental to local water quality when discharged via an MSD system.

5. MSDs release very clean effluent. Type I MSD Electro Scan effluent is cleaner than ambient water, removing 99.99% of pathogen indicators and reduce BOD according to EPA test. MSDs contribute minimal nitrogen and phosphorus, MSD reductions of which are not even required by EPA. MSDs also do not discharge protozoa, viruses, deodorants or formaldehyde contrary to DEQ statements.

DEQ Response: DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance and all MSDs are not equal in performance. Direct depositions of bacteria and nutrients have a greater impact on water quality in sensitive shellfish resource areas. DEQ also acknowledges that MSDs do not discharge formaldehyde when operated consistent with the design of the MSD. However, formaldehyde is known to be used by some boaters as an additional deodorizer.

6. DEQ supplies evasive and erroneous miss-information. One example is using old regulatory bacteria limits for MSDs to represent what MSDs discharge.

DEQ Response: DEQ responds in a consistently professional manner and has provided the scientific information requested. Bacteria emissions of MSDs were determined by EPA. While there may be boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide additional protection for shellfish growing waters.

7. NDZs are not needed. The NDZ is a failed solution because very old NDZs in New England now have posted shellfish warnings. It's already illegal to discharge sewage to waters, so why are NDZs needed? Enforce existing laws for boat and land runoff pollution instead.

DEQ Response: NDZs are designated as one tool to protect shellfish growing waters from treated and untreated boat waste. While it is illegal to discharge raw waste per the Clean Water Act, NDZs elevate the message to the public that dumping is illegal and that because the waters are sensitive to pollution, it is necessary to prohibit discharges from MSDs to achieve reductions in sensitive water bodies. It is a watershed

stewardship tool that can be effective for improving water quality and given the extent of impairments for bacteria, SAV and DO, the DEQ has determined that they are necessary and beneficial. NDZs in Virginia have proven to be an effective means of reducing bacteria levels in tidal waters, for example in the Lynnhaven River where historically closed shellfish waters are now open for the first time in decades. Additionally, MSDs are designed and certified to technology based limits that meet recreational use Water Quality Standards but are inconsistent with the more restrictive shellfish Water Quality Standards.

8. NDZs are based on weak science. DEQ offers no evidence that pollution in waters comes from boaters, and does not address pollution from shore, including failed septic tanks. What percentage of human vs non-human bacteria exists in NDZ proposed waters in Richmond and Lancaster Cos.? DEQ offers no science to show that water quality improvements are or will be due to NDZs.

DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dymer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

9. NDZs cause economic harm: By promoting NDZs DEQ discourages public purchase of MSDs by reducing opportunities to dump compared with cost of the MSD, and discourages industry technological development of MSDs, reducing installation of MSDs, may reduce those recreating by boat, and harming the commercial producer of MSDs. Pumping out a holding tank is a difficult physical task to do, discouraging women from boating.

DEQ Response: NDZs can provide an economic boost to local economy by improving water quality (which can result in the re-opening of shellfish beds for commercial

harvest), increasing the number of stops at local marinas for pumpout/dumpout (NDZs have been show to double the number of pumpouts at marinas) which can also increase the sale of fuel and other merchandise. Because NDZs are only applicable to certain water bodies, there is no detrimental effect to the technological development of MSDs and DEQ supports the use of certified MSDs outside of NDZ areas.

10. An NDZ deprives boaters of using most effective technology (MSD) to discharge waste. NDZs cause more pollution because they cause boaters to illegally dump sewage when they cannot get to a pumpout.

DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

28 March 2011

From: Dave Bresett, Boaters for Clean Water

**To: Margaret Smigo, Piedmont Regional TMDL Coordinator DEQ,
4949-A Cox Road, Glen Allen, VA 23060**

Subject: Comments in re 22 February Stakeholder Hearing in Lancaster

Thank you for this opportunity to comment on an issue of importance to Boaters and the Boating Community in Virginia.

I represent Boaters for Clean Water, a grassroots organization created to oppose DEQ attempts to establish NDZ's in Lancaster County.

We have determined that DEQ has an overall objective of ultimately designating the entire Northern Neck, both tidal and otherwise, and surrounding Chesapeake waters as NDZ's. If DEQ is successful, government regulators will likely be the problem rather than the solution.

Overboard discharge of sewage is already prohibited. NDZ's by definition make any overboard discharge illegal, even if that discharge is treated by an EPA certified onboard treatment device. DEQ plans to force the use of holding tanks and pump out stations as the only legal means of

dealing with sewage allegedly produced by boats. DEQ officials have admitted that they interpret the availability of pump out stations as the only requirement for NDZ designation.

BCW favors using all weapons in the war on pollution in the Chesapeake region; especially Type 1 and 2 MSD's. These onboard treatment devices not only enhance our ability to fight pollution, but moreover, provide a more comprehensive arsenal targeting pollution than antiquated pump out technology alone. BCW does, however, support the use of pump outs if used in conjunction with Type 1 and 2 MSD's.

EPA testing of two Type 1 onboard treatment devices was started in April 2007 and addressed the viability of the Electro-Scan by Raritan and the Thermopure2 by Groco. EPA delayed making the results public for over two years and only did so after a FOIA request was filed. The final report was issued in January 2010 and demonstrated that the Electro-Scan removed 99.99% of pathogen indicators and substantially reduced BOD content. We have analyzed the test results for the Raritan and have shared our findings with DEQ to no avail.

BCW has determined that the Groco device, found to have shortcomings in the EPA test, was never in widespread use. We question why it was selected by EPA for testing of this kind in the first place.

Use of Electro Scan in impaired waters does not increase impairment even a little, as DEQ maintains. Its use lessens impairment because its effluent is better than shellfish standards, better than the ambient water - its discharge is generally cleaner than the water it takes in - and there are many people who, without an Electro Scan aboard will dump raw sewage rather than carry it many miles to a pump out that may or may not be accessible.

DEQ dishonestly describes Type I and II MSDs as producing high pollutant numbers. But these are not the actual effluent values of these devices. They come from 1973 federal standards and are not real numbers which are actually produced by the Electro Scan and other good products. Environmental Groups, the NMMA, (National Marine Manufacturers Association) BoatUS, Raritan and others have petitioned that those federal standards be made far more stringent .

Our community needs to be aware that DEQ is not acting in the best interests of boaters, including commercial watermen. Boaters are already responsible stewards of the environment. DEQ bases its strategy on an over-zealous interpretation, intentional or otherwise, of enabling legislation sponsored by our local elected officials.

NDZ designation is determined by EPA upon petition by the states and is contingent on the state's demonstrating: (1) the need for enhanced protection of water quality (2) the availability of suitable pump out stations and (3) local stakeholder support.

The enabling legislation makes it clear that only *impaired tidal creeks* are to be targeted, not all creeks or rivers as DEQ may lead you to believe. The availability of pump out facilities is based on an arcane formula that, in the Richmond County example at least, came up with a requirement of 0.44 pump outs for the two tidal creeks in the County. 33 US Code 1322 (f) (3) states that there must be pump outs for "all" vessels, without equivocation or type. A regulatory agency has no authority to make regulations or devise formulas to override US Code. That same formula is being used to determine the number of pump out stations in Lancaster. Lastly, if tonight's turnout is an indicator, DEQ's attempt to garner local stakeholder support has failed.

DEQ is targeting non-contributors; in this example boaters in order to make itself look like it's doing something while overlooking huge land-based polluters and flagrantly wasting taxpayer dollars.

Thank you.

Dave Bresett /s/
boatersforcleanwaters@hotmail.com

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, May 20, 2011 10:19 AM
To: 'Dave Bresett'
Cc: tomneale@juno.com; S Wallace Dawson Jr.; fmillerpe@aol.com;
Wally Beauchamp; cjdm3; mike conroy; Lazarus, David (DEQ);
McKercher, Elizabeth (DEQ); Alling, Mark (DEQ)
Subject: RE: Comments in re Lancaster County NDZ petition

Good Morning Mr. Bresett,

DEQ thanks you for your comment on the Lancaster NDZ draft received March 28, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

DEQ Response: EPA guidance is used along with best professional judgment to make the determination on adequate availability of pumpout and dump stations. The low mean depth of waters around pumpout/dump stations will determine whether or not exclusions are necessary for boats with greater draught requirements. Draught exclusions for larger craft will allow MSD discharge within NDZs for those craft. DEQ acknowledges that pumpout availability can require additional planning and can be limiting during certain seasons. Also, DEQ acknowledges pump outs may be less available in certain areas despite being generally available across Lancaster County. Nationwide data suggest that the EPA formula to determine adequate pumpout availability does establish adequate pumpouts in NDZs. Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

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DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

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DEQ Response: DEQ adheres to the historical interpretation of tidal creeks as a generic term for tidal waterbodies where protection of shellfish growing waters is needed.

4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

DEQ Response: It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. While these chemicals are not ideal for onsite systems, they can be even more detrimental to local water quality when discharged via an MSD system.

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DEQ Response: DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance and all MSDs are not equal in performance. Direct depositions of bacteria and nutrients have a greater impact on water quality in sensitive shellfish resource areas. DEQ also acknowledges that MSDs do not discharge formaldehyde when operated consistent with the design of the MSD. However, formaldehyde is known to be used by some boaters as an additional deodorizer.

6. DEQ supplies evasive and erroneous miss-information. One example is using old regulatory bacteria limits for MSDs to represent what MSDs discharge.

DEQ Response: DEQ responds in a consistently professional manner and has provided the scientific information requested. Bacteria emissions of MSDs were determined by EPA. While there may be boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide additional protection for shellfish growing waters.

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DEQ Response: NDZs are designated as one tool to protect shellfish growing waters from treated and untreated boat waste. While it is illegal to discharge raw waste per the Clean Water Act, NDZs elevate the message to the public that dumping is illegal and that because the waters are sensitive to pollution, it is necessary to prohibit discharges from MSDs to achieve reductions in sensitive water bodies. It is a watershed stewardship tool that can be effective for improving water quality and given the extent of impairments for bacteria, SAV and DO, the DEQ has determined that they are necessary and beneficial. NDZs in Virginia have proven to be an effective means of reducing bacteria levels in tidal waters, for example in the Lynnhaven River where historically closed shellfish waters are now open for the first time in decades. Additionally, MSDs are designed and certified to technology based limits that meet recreational use Water Quality Standards but are inconsistent with the more restrictive shellfish Water Quality Standards.

8. NDZs are based on weak science. DEQ offers no evidence that pollution in waters comes from boaters, and does not address pollution from shore, including failed septic tanks. What percentage of human vs non-human bacteria exists in NDZ proposed waters in Richmond and Lancaster Cos.? DEQ offers no science to show that water quality improvements are or will be due to NDZs.

DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dymmer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

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recreating by boat, and harming the commercial producer of MSDS. Pumping out a holding tank is a difficult physical task to do, discouraging women from boating.

DEQ Response: NDZs can provide an economic boost to local economy by improving water quality (which can result in the re-opening of shellfish beds for commercial harvest), increasing the number of stops at local marinas for pumpout/dumpout (NDZs have been shown to double the number of pumpouts at marinas) which can also increase the sale of fuel and other merchandise. Because NDZs are only applicable to certain water bodies, there is no detrimental effect to the technological development of MSDs and DEQ supports the use of certified MSDs outside of NDZ areas.

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DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: FMILLERPE@aol.com [mailto:FMILLERPE@aol.com]

Sent: Wednesday, March 30, 2011 8:54 PM

To: Smigo, Margaret (DEQ)

Subject: Lancaster Co. NDZ's

It would be difficult to add to the thorough comments provided by Boaters for Clean Water except to question why DEQ is expending so much time and money on eliminating the use of a proven pollution abatement tool, MSD's. When compared to pump outs MSD's are available 24/7, have fewer potential failure points, and are used without exception by boaters who have installed them. Promoting the use of MSD's in more vessels would result in a far more significant improvement in water quality.

Frank Miller PE, DEE retired.

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, May 20, 2011 10:32 AM
To: 'FMILLERPE@aol.com'
Cc: Alling, Mark (DEQ); Lazarus, David (DEQ); McKercher, Elizabeth (DEQ)
Subject: RE: Lancaster Co. NDZ's

Good Morning Mr. Miller,

DEQ thanks you for your comment on the Lancaster NDZ draft received March 30, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

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Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

2. There is strong public opposition to the application.

DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

3. Only impaired tidal creeks can be nominated for NDZs.

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4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

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DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dymer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

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DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: Sue Johnson [sue@grandloving.com]
Sent: Tuesday, April 05, 2011 6:57 PM
To: Smigo, Margaret (DEQ)
Subject: Lancaster Co NDZ Public Comment

Thank you for registering my support of the NDZ (No discharge zone) for Lancaster County. I have lived on Myer Creek in Lancaster County for 11 years and would like to go on record in support of making Lancaster County and Myer Creek a No Discharge Zone. As Yankee Point Yacht Club is on Myer Creek this is an especially important issue on this creek.

Susan S. Johnson
49 Starview Place, Lancaster, VA 22503

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Wednesday, April 06, 2011 7:58 AM
To: 'Sue Johnson'
Cc: Lazarus, David (DEQ)
Subject: RE: Lancaster Co NDZ Public Comment

Good Morning Ms. Johnson,

DEQ and the NN PDC appreciate your letter of support for the Lancaster Co proposed No Discharge Zones. Your correspondence will accompany the draft application which will be reviewed by EPA for approval.

Best Regards,
Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:



April 7, 2011

David S. Lazarus
Commonwealth of Virginia
Department of Environmental Quality
Piedmont Regional Office
4949A Cox Road
Glenn Allen, VA 23060

Dear Mr. Lazarus:

As a party of interest and concern regarding the Department of Environmental Quality, (DEQ) Commonwealth of Virginia, decision to petition the USEPA to designate waters in Lancaster County, VA as No Discharge Zones I respectfully submit comments on behalf of Raritan Engineering Company Incorporated. Raritan Engineering manufactures USCG Certified Type I and II Marine Sanitation Devices.

DEQ seeks to ban the use of these devices through the designation of No Discharge Zones. These devices are in use on vessels in Virginia and are sold to vessel owners in Virginia from our distributors in Virginia. After review of the draft application for Federal No Discharge Zone designation for waters in Lancaster County, Virginia I offer the following comments:

Under Certification of Need: DEQ claims that “while terrestrial pollution is a threat to these marine natural resources, vessel pollution is direct and proximate to oyster grounds, and therefore may have a more immediate impact on local water quality.

Comment: In all waters of Virginia and the United States it is a violation of State and Federal law to discharge untreated waste into any waters within the state. A Federal NDZ is only a ban on the use of Type I & II MSD’s that treat waste by destroying the

bacteria that DEQ is addressing. The most popular device used by recreational vessels under 65 ft. is the Electro Scan (formerly Lectra San) which treats waste water with bacterial reductions 100 times greater than the EPA standards. As most boats use raw water for flushing, the treated discharge water returns cleaner than the receiving waters.

Comment: The current existing laws “prohibit the discharge” of untreated human waste. Banning the only alternative that is clean, safe and will not cause water quality impairment in already impaired waters in the form of current USCG approved MSD’s is not a logical nor effective means of attempting to improve water quality. Enforcement of existing laws and regulations is what is needed.

Monitoring: DEQ states that “although many sources potentially contribute to declining water quality in these waters, it should be assumed that discharges from vessels anchored, docked, moored, or operating within them, have the potential to be contributory sources to the overall bacterial load.”

Comment: Has DEQ conducted any DNA analysis of the bacterial found in the listed impaired creeks to establish the source? If this has been done and human bacteria found, it should not be “assumed” that said bacteria comes from boats, particularly inasmuch as there are so many low lying septic systems.

Comment: According to a study conducted in the mid 1990’s to determine non point sources of bacteria done by Professor George Simmons, Virginia Polytech, on the eastern shore of Virginia, the high fecal coliform and ecoli levels were attributed to wildlife, not human. The bacteria was identified via DNA fingerprinting and other means. Has DEQ conducted similar tests in the tidal creek areas slated for NDZ designation? What is the percentage or ratio of animal sources versus human sources?

Monitoring: DEQ states that “In addition, the average Marine Sanitation Device provides minimal, if any, treatment for chemical or biological oxygen demand, phosphorus or nitrogen.”

Comment: EPA effluent standards for Type I & II MSD’s do not require that current devices address nutrients, COD or BOD other than reductions of TSS because of so few vessels that would be using these devices when compared to all other point and non point sources which contribute over 99% of the above. An example of how few nutrients are released using the Raritan Electro Scan (see USEPA “evaluation of improved Type I Marine Sanitation Devices – Performance Evaluation Report published January 2010). See pages 4 - 14

Table 4-8, total Kjeldahl nitrogen – Electro Scan and page 4 – 16, table 4-10, total phosphorus – Electro Scan.

| Effect of Discharge From Electro Scan | | | | | | |
|---|-------|---------|--------------|------------|--------------|-------------|
| | | | Flush Volume | | | |
| | | | Gallon | 100 Gallon | 500 Gallon | 1000 Gallon |
| | Mg/l* | kg/G | Lb/G | Lb/100 G | Lb/500 G | Lb. 1000 G |
| Total Kjeldahl Nitrogen | 45 | 0.00017 | 0.000375 | 0.0170325 | 1.18769815 | 0.3753963 |
| Total Phosphate | 2.2 | 8.33E-6 | 184E-05 | 0.0008327 | 0.0009176354 | 0.018352708 |
| *average of 10 day test table 4-8 to 4-10 as per "Evaluation of Type I Marine Sanitation Devices" report by EPA | | | | | | |

To put the MSD nutrient discharge into proper perspective see:
http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/FinalBayTMDL/CBayFinalTMDLExecSumSection1through3 final.pdf

See 3rd paragraph contained in the above link to Chesapeake Bay/Final Bay TMDL Executive Summary Section 1 through 3 – The TMDL – The largest ever developed by EPA – Specifically, the TMDL sets by watershed limits of **185.9 Million Pounds** of nitrogen, **12.5 Million Pounds** of Phosphorus and **6.45 Billion Pounds** of sediment **Per Year!** Boat toilets with Electro Scan devices use on average ½ - ¾ gallon per flush. The amount (wt.) of the total nitrogen for 10,000 gallons of treated waste is **3.75 Pounds** and the amount of phosphorus for 10, 000 gallons of treated waste is **0.18 Pounds**.

Monitoring: DEQ further states that “Depending on the Type of MSD, wastewater discharges from marine vessels may also contain additional pollutants, such as protozoa (e.g., Giardia), viruses (e.g., Norovirus), and deodorants or sanitizing chemicals (e.g. Formaldehyde) that are potentially harmful to humans, wildlife, and the environment.”

Comments: This is not only incorrect it is misleading. The only “MSD” that could potentially discharge some of the things the DEQ contents is a Type III MSD or holding tanks which if that is the case is and has been, regardless of NDZ designation, a violation of state and federal laws. USCG Type I & II MSD’s Do Not discharge these elements but rather eliminate harmful bacteria and even viruses which POTW’s (Publicly Owned Treatment Works) are not required to do. DEQ’s desire to require a 100% dependence on the only system that can, if done illegally, cause problems in favor of accepting other forms of technology that would otherwise prevent this is counter to DEQ’s and the public’s desire for unimpaired water.

DEQ, through its public comments and statements to the media has caused financial damage to our company, Raritan Engineering Company, Inc. by using false and misleading assumptions and incorrect information in describing the operation and

effectiveness of our product(s). This also impairs the further development and improvements in technology that could result in even better environmental protection.

Final Comments: DEQ reports that there are 732 vessels from 27 ft. to over 40 ft. in Lancaster County, VA.

DEQ lists 18 creeks to be designated as NDZ's so of these the NDZ would address 40.67 boats per creek that must find a pump out, and not be allowed to use a Type I MSD such as the Electro Scan.

DEQ states that the 18 creeks to be designated as NDZ's consist of a total of 5132 acres. This means that there will be 7 acres of creek waters per boat.

DEQ lists the collective square miles of the 18 creeks to be designated as NDZ's to be 8.02 square miles and DEQ lists the collective shoreline distance for the 18 creeks to be 178.96 miles. Of the 4 pump out facilities listed by DEQ to provide services to all boats over this vast area, 2 are not operating during winter months and 1 does not operate on weekends and at other times during winter months. Boating continues during this time. Fishing seasons and shellfish harvesting are among boating activities during this time. Based on these facts it appears that the existing pump outs will not be reasonably available or adequate. What is DEQ's plan when one or more pump outs is out of order? These are mechanical systems that will have mechanical breakdowns occasionally.

According to the National Marine Manufactures Association (NMMA) in a letter sent to the USEPA office of water November 9, 2010 that "use patterns should be evaluated when considering MSD regulations of recreational boats." Boats in the US were used an average of 29 days in 2009. Boats smaller than 13 feet were used an average of 21 days, boats 14 feet to 29 feet were used an average of 31 days, and boats 30 feet and larger were used an average of 34 days. (NMMA, 2009 statistical abstract (table 1.17k).

Based on the number of boats (732) and the low average use patterns of recreational boats and the comparative large area of waters targeted by DEQ to be NDZ's it is unrealistic to expect any water quality improvement as a result of NDZ's and it may actually result in unnecessary pollution from boats forced to empty holding tanks when pump outs are not functioning or not accessible. This can be avoided in an environmentally safe, clean and intelligent way by not removing the only rational alternatives to a one size fits all approach.

Sincerely,

Dale T. Weatherstone
Managing Director Ft. Lauderdale Operations
Raritan Engineering Company, Incorporated
3101 S.W. 2nd Avenue
Ft. Lauderdale, Florida 33315
Phone: 954-525-0378 ext. 300
Fax: 954-764-4370
Email: Dalew@raritaneng.com

Sent by email to on April David K. Paylor (David.paylor@deq.virginia.gov)
Director Virginia DEQ; Jefferson D. Reynolds, (Jefferson.reynolds@deq.virginia.gov)
Water Policy Manager; Margaret Smigor (Margaret.Smigo@deq.virginia.gov) TMDL
Coordinator.

DEQ Response: (Following Page)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

May 20, 2011

Mr. Dale T. Weatherstone
Managing Director Ft. Lauderdale Operations
Raritan Engineering Company, Inc.
3101 S.W. 2nd Avenue
Ft. Lauderdale, Florida 33315

Dear Mr. Weatherstone:

We are in receipt of your letter and comments, dated April 7, 2011, concerning the development of a No-Discharge Zone (NDZ) application for impaired waterbodies within Lancaster County, Virginia.

As both an Environmental Program Manager and a life-time boater, I commend Raritan Engineering for being a leader in the marine sanitation field! VADEQ fully supports the installation and use of certified MSDs outside of No-Discharge Designations to protect and preserve our precious water bodies.

DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance—all MSDs are not equal in performance. Some MSDs can discharge protozoa, viruses and other potentially harmful organisms depending on the level of treatment and it is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. Additionally, MSDs are designed and certified to technology based limits that are inconsistent with Water Quality Standards protective of shellfish growing areas.

NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. Land-based bacteria reductions are also necessary (as stated in completed TMDL reports). They are achieved through education and a full suite of best management practices throughout the watershed.

Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. The low level bacteria standard for shellfish growing areas is a federal standard. While there may be

boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide the additional protection for shellfish growing waters.

Antibiotic Resistance Analysis (ARA) bacteria source tracking (developed jointly by Drs. Simmons, Wiggins, and Hagadorn) was used to determine human bacteria source percentages in Lancaster County waterbodies: Indian Creek 65%, Dymmer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%.

By statute, the Commonwealth of Virginia has directed DEQ to pursue NDZ designations in impaired tidal waterbodies. NDZs are one stewardship tool effective at protecting our shellfish resources. Given the extent of impairments for bacteria, SAV and DO, it has been determined that they are necessary and beneficial in these waters and are consistent with local and Chesapeake Bay cleanup plans (TMDL) goals. The Federal Clean Water Act defines a protective NDZ as a NDZ, allowing no exception for level of treatment (unless draught requirements dictate an exclusion). **EPA states, "Although individual discharges from vessels and marinas are relatively small scale, their combined effects can significantly degrade water quality and marine habitats".**

Our intent is to pursue NDZs in impaired waterbodies, and to exclude major rivers/tributaries and the Chesapeake Bay from such designation. The Commonwealth has multiple programs supporting certified MSD use as well as the Clean Marina Program.

Be assured that we take your comments and concerns very seriously and thank you for your input. Your comments are part of the formal record and will be included in the application submittal package when submitted to EPA.

Regards,



David S. Lazarus
Watershed Program Manager
Office of Water Quality Programs

Cc: David K. Paylor, DEQ
Jefferson D. Reynolds, DEQ
Margaret Smigo, DEQ

Public Comment: (Following Page)

Public Comment:

Douglas W. Domenech
Secretary of Natural Resources



David A. Johnson
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street
Richmond, Virginia 23219-2010
(804) 786-1712

REPLY TO:
DCR Tappahannock Regional Office
P. O. Box 1425
Tappahannock, VA 22560
Telephone: (804) 443-1494

April 6, 2011

Ms. Margaret Smigo
VADEQ – Piedmont Regional Office
4949A Cox Road
Glen Allen, Virginia 23060-6296

RE: No Discharge Zone (NDZ) application for selected Creeks in Lancaster County (*Mulberry, Deep, Greenvale, Paynes, Beach, Whitehouse, Town, Myer, Moran, Taylor, Carter, Mosquito, Oyster, Windmill Point Resort Boat Basin, Antipoison, Davenport, Tabbs, and Dyer Creek and both East and Western Branches of the Corrotoman River*) and a portion of one creek in Northumberland County (*Indian Creek*)

Dear Ms. Smigo,

The VA DCR Tappahannock Regional Office would like to offer strong support for the designation of No Discharge Zones (NDZs) in the above referenced creeks.

As these creeks are currently designated as impaired for bacterial contamination of shellfish waters, any measures taken to reduce the discharge of bacteria laden boat waste will serve as a benefit towards their restoration. These creeks are also impaired for dissolved oxygen due to excessive nutrients and, like the Rappahannock River and the Chesapeake Bay, would stand to benefit as well from reduced nutrient pollution.

As expressed in the TMDL studies for these creeks, there are numerous sources of bacteria from terrestrial sources in these watersheds. An implementation plan for the clean-up of Greenvale, Beach and Paynes Creeks supports the establishment of an NDZ to further efforts in the removal of human bacteria sources and complement recommended boater education programs. While best management practices for farmed land and problematic septic systems have been and

continue to be used to reduce bacteria and nutrient contributions in this region, efforts must be made to control any direct discharges of human waste to these waterways.

The proper management of boat waste is an integral part of protecting these small, shallow tidal coves and the shellfish habitat they provide. A requirement for MSD “treated” boat waste to be pumped out into holding tanks at marinas is just one tool of many that may restore these creeks, providing for safer fisheries and recreation. Efforts must be made to reduce all sources of bacteria entering shellfish growing areas due to the very restrictive water column bacteria standard for shellfish consumption. Even though the contribution of bacteria from boat waste may not compare to the level from other land based runoff sources, the opportunity to reduce human waste to these creeks and the Rappahannock River will further citizen awareness of the actions we must all take in watershed restoration and stewardship of healthy, viable aquatic ecosystems.

We commend the Northern Neck Planning District Commission for the extensive research and mapping provided for this application. The document is clear and provides the necessary details for EPA to use in evaluating the ability of a NDZ to work in these areas. If not already incorporated into the application, it is recommended that some consideration be given to whether the marina facilities are able to maintain weekend hours, especially during major holidays when boating traffic may be more significant.

Coupled with an educational/outreach effort for local and transient boaters, a NDZ in these areas could have a positive impact to shellfish harvesting. Building a stronger community of responsible boaters throughout the region can only be a benefit to the work we do for Chesapeake Bay restoration. The VA DCR Tappahannock Regional Office is pleased to see the NDZ initiative taking place in our region and applaud the efforts of citizens, planners and VA DEQ staff for initiating this process.

Sincerely,

May Sligh
TMDL Watershed Field Coordinator

Cc: Charlie Lunsford, VA DCR
Wayne Davis, TRO

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Thursday, April 14, 2011 4:05 PM
To: Sligh, May (DCR)
Cc: Davis, Wayne (DCR)
Subject: RE: Lancaster/Northumberland NDZ support letter

Good Afternoon Ms. Sligh,

DEQ greatly appreciates the letter of support submitted by you on behalf of DCR. DEQ agrees with your statement that:

“While best management practices for farmed land and problematic septic systems have been and continue to be used to reduce bacteria and nutrient contributions in this region, efforts must be made to control any direct discharges of human waste to these waterways.” And, “The proper management of boat waste is an integral part of protecting these small, shallow tidal coves and the shellfish habitat they provide. A requirement for MSD “treated” boat waste to be pumped out into holding tanks at marinas is just one tool of many that may restore these creeks, providing for safer fisheries and recreation. ... Even though the contribution of bacteria from boat waste may not compare to the level from other land based runoff sources, the opportunity to reduce human waste to these creeks and the Rappahannock River will further citizen awareness of the actions we must all take in watershed restoration and stewardship of healthy, viable aquatic ecosystems.”

To address a suggestion made on the second page of your comment,...” ...it is recommended that some consideration be given to whether the marina facilities are able to maintain weekend hours, especially during major holidays when boating traffic may be more significant.” The hours of operation listed in the application are actually very conservative. During off season months (outside the months between Memorial Day and Labor Day), the marina states their hours of operation are 8am-5pm Monday – Friday and Saturday 8am-12pm. The reason the hours of 8am-12pm Saturdays were used in the application, is because the marina stated those hours in a marina survey which they completed and submitted to the NN PDC. When I called the marina today, 4/14/11 at 3:30pm to verify, they stated that the Monday-Friday and Saturday hours were correct (hours are also listed on their website) and that during the seasonal months between Memorial Day and Labor Day, they do in fact open the shop on Sundays as well (but did not specify hours of operation) and that pump-outs could be accommodated.

In addition, given the fact that some boats simply cannot access the marina which has an average water depth of 3' at low tide, DEQ will be including an exclusion for boats which have a draught > or = 3'. It is unlikely that boats of this size could access the waterbody regardless, however, we felt this exclusion would be appreciated by EPA and protect not only the safety of boaters and their property but of the marina operators as well. The exclusion will allow those with draughts = or > 3' to operate their MSD

within the NDZ area. Because boats of such size on this waterbody are less common, it results in a relatively low percentage of boats being excluded. It should be noted the excluded boats will be left in the EPA calculations in the draft. The existing conservative estimates should illustrate quite clearly that peak-demand for pump-outs and dump-outs on Farnham and Lancaster Creeks will be covered by the single pump-out at Whelan's Marina. Should demand not be met or should the pump-out or dump-out be non-operational, there is the marina across the Rappahannock and boats are not prohibited from using their MSDs outside of the NDZ designated areas.

Thank you again for your thoughtful letter of support and your participation in our public meetings.

Best Regards,
Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: Charlie & Anne Costello [chanoew@peoplepc.com]
Sent: Friday, April 08, 2011 12:19 PM
To: Smigo, Margaret (DEQ)
Subject: Lancaster Co NDZ Public Comment

I disagree with the ban on MSD I/II in the NDZ, but it is the law and I will comply. It will contribute so little to cleaning up any creek that it is a waste of my time even to reply.

When Virginia gets serious about attacking the real sources of pollution, then please contact me.

Sincerely,
Charles Costello

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, April 08, 2011 3:37 PM
To: 'Charlie & Anne Costello'
Subject: RE: Lancaster Co NDZ Public Comment

Thank you for your comment Mr. and Mrs. Costello. It will be included in the NDZ application presented to EPA for review.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional

Public Comment:

From: kb3cxz@gmail.com on behalf of Jim Bearden [kb3cxz@amsat.org]
Sent: Friday, April 08, 2011 12:16 PM
To: Smigo, Margaret (DEQ)
Cc: delapollard@house.virginia.gov
Subject: Lancaster Co NDZ

Margaret Smigo

I am against the establishment of No Discharge Zones in Lancaster Co VA and any other county in VA.

This objection is based on the fact that the principle pollution is land based and not boater based, as stated by the officials at the public meeting on Feb 22, 2011. They went on to say that there is insufficient funds to go after land based sources so this is what we are doing, and because it cannot hurt to do this. That is wrong in so many ways it is impossible to address.

One basic question, how many boats is this really going to affect? And will impacting that small

of a number of boats really address the real problem or is this a feel good and flag waving, look what we have done, exercise? And don't say "It can't hurt".

You would do much better enforcing the laws already on the books - no discharge of untreated waste - if you want to go after boaters - that is the real issue. When we were looking at boats, more that one owner proudly stated - and the holding tank is virgin - in +20 year old boats.

Looking at test results from Type 1 MSD systems (Raritan), the effluent from those systems are well below any shell fish or any other water quality standard for the Chesapeake Bay. This being said, it seems that you should be encouraging the use of Type I MSDs as a way to improve water quality directly - since the water used to flush a toilet with a Marine Type I MSD is from the bay and with the treatment improves water quality.

--

Jim Bearden

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, May 20, 2011 10:41 AM
To: 'kb3cxz@gmail.com'; 'kb3cxz@amsat.org'
Cc: 'Albert Pollard'; Alling, Mark (DEQ); Lazarus, David (DEQ); McKercher, Elizabeth (DEQ)
Subject: RE: Lancaster Co NDZ public comments

Good Morning Mr. Bearden,

DEQ thanks you for your comment on the Lancaster NDZ draft received April 8, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

DEQ Response: EPA guidance is used along with best professional judgment to make the determination on adequate availability of pumpout and dump stations. The low mean depth of waters around pumpout/dump stations will determine whether or not exclusions are necessary for boats with greater draught requirements. Draught exclusions for larger craft will allow MSD discharge within NDZs for those craft. DEQ acknowledges that pumpout availability can require additional planning and can be limiting during certain seasons. Also, DEQ acknowledges pump outs may be less available in certain areas despite being generally available across Lancaster County.

Nationwide data suggest that the EPA formula to determine adequate pumpout availability does establish adequate pumpouts in NDZs. Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

2. There is strong public opposition to the application.

DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

3. Only impaired tidal creeks can be nominated for NDZs.

DEQ Response: DEQ adheres to the historical interpretation of tidal creeks as a generic term for tidal waterbodies where protection of shellfish growing waters is needed.

4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

DEQ Response: It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. While these chemicals are not ideal for onsite systems, they can be even more detrimental to local water quality when discharged via an MSD system.

5. MSDS release very clean effluent. Type I MSD Electro Scan effluent is cleaner than ambient water, removing 99.99% of pathogen indicators and reduce BOD according to EPA test. MSDs contribute minimal nitrogen and phosphorus, MSD reductions of which are not even required by EPA. MSDs also do not discharge protozoa, viruses, deodorants or formaldehyde contrary to DEQ statements.

DEQ Response: DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance and all MSDs are not equal in performance. Direct depositions of bacteria and nutrients have a greater impact on water quality in sensitive shellfish resource areas. DEQ also acknowledges that MSDs do not discharge formaldehyde when operated consistent with the design of the MSD. However, formaldehyde is known to be used by some boaters as an additional deodorizer.

6. DEQ supplies evasive and erroneous miss-information. One example is using old regulatory bacteria limits for MSDs to represent what MSDs discharge.

DEQ Response: DEQ responds in a consistently professional manner and has provided the scientific information requested. Bacteria emissions of MSDs were determined by EPA. While there may be boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide additional protection for shellfish growing waters.

7. NDZs are not needed. The NDZ is a failed solution because very old NDZs in New England now have posted shellfish warnings. It's already illegal to discharge sewage to waters, so why are NDZs needed? Enforce existing laws for boat and land runoff pollution instead.

DEQ Response: NDZs are designated as one tool to protect shellfish growing waters from treated and untreated boat waste. While it is illegal to discharge raw waste per the Clean Water Act, NDZs elevate the message to the public that dumping is illegal and that because the waters are sensitive to pollution, it is necessary to prohibit discharges from MSDs to achieve reductions in sensitive water bodies. It is a watershed stewardship tool that can be effective for improving water quality and given the extent of impairments for bacteria, SAV and DO, the DEQ has determined that they are necessary and beneficial. NDZs in Virginia have proven to be an effective means of reducing bacteria levels in tidal waters, for example in the Lynnhaven River where historically closed shellfish waters are now open for the first time in decades. Additionally, MSDs are designed and certified to technology based limits that meet recreational use Water Quality Standards but are inconsistent with the more restrictive shellfish Water Quality Standards.

8. NDZs are based on weak science. DEQ offers no evidence that pollution in waters comes from boaters, and does not address pollution from shore, including failed septic tanks. What percentage of human vs non-human bacteria exists in NDZ proposed waters in Richmond and Lancaster Cos.? DEQ offers no science to show that water quality improvements are or will be due to NDZs.

DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dymer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

9. NDZs cause economic harm: By promoting NDZs DEQ discourages public purchase

of MSDs by reducing opportunities to dump compared with cost of the MSD, and discourages industry technological development of MSDs, reducing installation of MSDs, may reduce those recreating by boat, and harming the commercial producer of MSDs. Pumping out a holding tank is a difficult physical task to do, discouraging women from boating.

DEQ Response: NDZs can provide an economic boost to local economy by improving water quality (which can result in the re-opening of shellfish beds for commercial harvest), increasing the number of stops at local marinas for pumpout/dumpout (NDZs have been show to double the number of pumpouts at marinas) which can also increase the sale of fuel and other merchandise. Because NDZs are only applicable to certain water bodies, there is no detrimental effect to the technological development of MSDs and DEQ supports the use of certified MSDs outside of NDZ areas.

10. An NDZ deprives boaters of using most effective technology (MSD) to discharge waste. NDZs cause more pollution because they cause boaters to illegally dump sewage when they cannot get to a pumpout.

DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: kb3cwy@gmail.com on behalf of Kathy Bearden
[kb3cwy@amsat.org]
Sent: Friday, April 08, 2011 11:56 AM
To: Smigo, Margaret (DEQ)
Subject: Lancaster NDZ

Dear Ms. Smigo

I am a homeowner on Bells Creek in Lancaster County and a boatowner with a Coast Guard Approved Type I MSD. We are year round boaters and are very much opposed to the wholesale application of NDZs to Lancaster County creeks and rivers.

Although we are very much in favor of clean water, we feel that the NDZ approach is fundamentally flawed and will do little to help water cleanliness. I have reviewed your documentation and I find no support for claims that boaters with Type I MSDs contribute a measurable quantity of waste to the waters. 1) Can you tell me how many boaters in these waters use Type I Devices? 2) Can you tell me, how much waste the boats with Type I Devices contribute? 3) Have you done proper due-diligence and surveyed the boaters in Lancaster County to ascertain the number that have Type I devices.

Despite your claim of adequate pumpout facilities, as you have been told, these pumpout facilities are closed in the winter and not available for use. 4) Are you suggesting that watermen and pleasure boaters be banned from winter use of the Lancaster County waters? I anticipate that the answer to this question is no. 5) If no, then how do you propose that these boaters deal with their waste? Further more, at least one of the pumpouts, Windmill Point, is not accessible to deep draft vessels.

I suggest that your dollars would be far better spent in encouraging greater use of Type I devices rather than illegal dumping of waste, the only alternative currently available to off-season boaters without a Type I MSD.

Sincerely

Kathy Bearden
201 Mastons Wharf Rd
Lancaster, VA 22503

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, May 20, 2011 10:44 AM
To: 'Kathy Bearden'; 'kb3cwy@gmail.com'
Cc: Alling, Mark (DEQ); Lazarus, David (DEQ); McKercher, Elizabeth (DEQ)
Subject: RE: Lancaster NDZ

Good Morning Mrs. Bearden,

DEQ thanks you for your comment on the Lancaster NDZ draft received April 8, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

DEQ Response: EPA guidance is used along with best professional judgment to make the determination on adequate availability of pumpout and dump stations. The low

mean depth of waters around pumpout/dump stations will determine whether or not exclusions are necessary for boats with greater draught requirements. Draught exclusions for larger craft will allow MSD discharge within NDZs for those craft. DEQ acknowledges that pumpout availability can require additional planning and can be limiting during certain seasons. Also, DEQ acknowledges pump outs may be less available in certain areas despite being generally available across Lancaster County. Nationwide data suggest that the EPA formula to determine adequate pumpout availability does establish adequate pumpouts in NDZs. Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

2. There is strong public opposition to the application.

DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

3. Only impaired tidal creeks can be nominated for NDZs.

DEQ Response: DEQ adheres to the historical interpretation of tidal creeks as a generic term for tidal waterbodies where protection of shellfish growing waters is needed.

4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

DEQ Response: It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. While these chemicals are not ideal for onsite systems, they can be even more detrimental to local water quality when discharged via an MSD system.

5. MSDS release very clean effluent. Type I MSD Electro Scan effluent is cleaner than ambient water, removing 99.99% of pathogen indicators and reduce BOD according to EPA test. MSDs contribute minimal nitrogen and phosphorus, MSD reductions of which are not even required by EPA. MSDs also do not discharge protozoa, viruses, deodorants or formaldehyde contrary to DEQ statements.

DEQ Response: DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance and all MSDs are not equal in performance. Direct depositions of bacteria and nutrients have a greater impact on water quality in sensitive shellfish resource areas. DEQ also acknowledges that MSDs do not discharge formaldehyde when operated consistent with the design of the MSD. However, formaldehyde is known to be used by some boaters as an additional deodorizer.

6. DEQ supplies evasive and erroneous miss-information. One example is using old regulatory bacteria limits for MSDs to represent what MSDs discharge.

DEQ Response: DEQ responds in a consistently professional manner and has provided the scientific information requested. Bacteria emissions of MSDs were determined by EPA. While there may be boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide additional protection for shellfish growing waters.

7. NDZs are not needed. The NDZ is a failed solution because very old NDZs in New England now have posted shellfish warnings. It's already illegal to discharge sewage to waters, so why are NDZs needed? Enforce existing laws for boat and land runoff pollution instead.

DEQ Response: NDZs are designated as one tool to protect shellfish growing waters from treated and untreated boat waste. While it is illegal to discharge raw waste per the Clean Water Act, NDZs elevate the message to the public that dumping is illegal and that because the waters are sensitive to pollution, it is necessary to prohibit discharges from MSDs to achieve reductions in sensitive water bodies. It is a watershed stewardship tool that can be effective for improving water quality and given the extent of impairments for bacteria, SAV and DO, the DEQ has determined that they are necessary and beneficial. NDZs in Virginia have proven to be an effective means of reducing bacteria levels in tidal waters, for example in the Lynnhaven River where historically closed shellfish waters are now open for the first time in decades. Additionally, MSDs are designed and certified to technology based limits that meet recreational use Water Quality Standards but are inconsistent with the more restrictive shellfish Water Quality Standards.

8. NDZs are based on weak science. DEQ offers no evidence that pollution in waters comes from boaters, and does not address pollution from shore, including failed septic tanks. What percentage of human vs non-human bacteria exists in NDZ proposed waters in Richmond and Lancaster Cos.? DEQ offers no science to show that water quality improvements are or will be due to NDZs.

DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dymer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter Creek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor

Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

9. NDZs cause economic harm: By promoting NDZs DEQ discourages public purchase of MSDs by reducing opportunities to dump compared with cost of the MSD, and discourages industry technological development of MSDs, reducing installation of MSDs, may reduce those recreating by boat, and harming the commercial producer of MSDs. Pumping out a holding tank is a difficult physical task to do, discouraging women from boating.

DEQ Response: NDZs can provide an economic boost to local economy by improving water quality (which can result in the re-opening of shellfish beds for commercial harvest), increasing the number of stops at local marinas for pumpout/dumpout (NDZs have been show to double the number of pumpouts at marinas) which can also increase the sale of fuel and other merchandise. Because NDZs are only applicable to certain water bodies, there is no detrimental effect to the technological development of MSDs and DEQ supports the use of certified MSDs outside of NDZ areas.

10. An NDZ deprives boaters of using most effective technology (MSD) to discharge waste. NDZs cause more pollution because they cause boaters to illegally dump sewage when they cannot get to a pumpout.

DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: Ted Kvell [tkvell@aol.com]
Sent: Friday, April 08, 2011 11:00 PM
To: Smigo, Margaret (DEQ)
Cc: kb3cxz@amsat.org

Subject: Lancaster Co NDZ Public Comment

As a boater and waterfront resident in Lancaster County I strongly oppose the proposed establishment of an NDZ in the county. I am concerned that an NDZ which would prohibit discharge from approved treatment systems such as Lectra/San would result in increased illegal discharge of untreated sewage, as there are insufficient pump out stations available. I believe that far less pollution will occur if boaters discharge effluent from approved treatment systems, than if they illegally discharge untreated sewage and/or chemicals that are added to holding tanks.

Ted Kvell
319 Bells Creek Lane
Lancaster, VA 22503

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Monday, April 11, 2011 8:24 AM
To: 'Ted Kvell'
Subject: RE: Lancaster Co NDZ Public Comment

Thank you for your comment Mr. Kvell. It will be included with the draft NDZ application for EPA review.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: E Walker Stevens [ewstevens1@gmail.com]
Sent: Saturday, April 09, 2011 3:48 PM
To: Smigo, Margaret (DEQ)
Subject: non-discharge zones

I am against the establishment of the NDZs in Lancaster County, VA.

--

Regards,

WALKER

Dr. E Walker Stevens
4 Round Hill Ct
Greensboro NC 27408
Greensboro 336-288-2084
472 Yopps Cove Road
White Stone VA 22578

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Monday, April 11, 2011 8:31 AM
To: 'E Walker Stevens'
Subject: RE: non-discharge zones

Thank you for your comment Mr. Stevens. It will be included with the NDZ application to be reviewed by EPA.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: Ferriter@aol.com [<mailto:Ferriter@aol.com>]
Sent: Sunday, April 10, 2011 12:03 PM
To: Smigo, Margaret (DEQ)
Subject: Lancaster Co NDZ Public Comment

Margaret -

This is a "no brainer" everyone should be in favor of making all of the Creeks in Virginia including Lancaster County "no discharge zones". There is no reason not to and every reason these creeks should be NDZs.

Please make Greenvale Creek a no discharge zone along with all of the other Lancaster County Creeks. Please make this happen now!

Nick Ferriter
1365 Rocky Neck Road
Mollusk, VA 22517

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Monday, April 11, 2011 8:37 AM
To: 'Ferriter@aol.com'
Subject: RE: Lancaster Co NDZ Public Comment

Good Morning Mr. Ferriter,

Thank you for your comment of support for the NDZ application in Lancaster County. Your comment will be included with the application for EPA review.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment: Letter from Chris Moore of the Chesapeake Bay Foundation dated 4/11/11 follows.



CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

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ALEEN BOWDIN TRAIN

April 11, 2011

Margaret Smigo
Piedmont Regional TMDL Coordinator
4949-A Cox Road
Glen Allen, VA 23060

RE: Lancaster County No Discharge Zone

The Chesapeake Bay Foundation (CBF) is the largest conservation organization dedicated solely to saving the Chesapeake Bay watershed. Our motto, *Save the Bay*, defines the organization's mission and commitment to reducing pollution, improving fisheries, and protecting and restoring natural resources such as wetlands, forests, and underwater grasses. CBF has approximately 80,600 members in Virginia.

CBF believes implementation of a no discharge zone in Lancaster County waterways would help Lancaster meet the quantifiable nutrient and sediment reductions that will be required by Phase II of Chesapeake Bay Watershed Implementation Plans.

In its efforts to restore the Bay and its tributaries, CBF has been focused on reducing nutrients (nitrogen and phosphorus), identified as the primary source of impairment for these waters. Solids, sometimes referred to as sediments, are also a significant source of concern throughout the watershed. The current Chesapeake Bay Total Maximum Daily Load focuses clean-up actions on these three pollutants, which cause a variety of problems for the Chesapeake Bay that can limit recreational and economic development opportunities.

Excess nutrients are responsible for producing algal blooms that block much needed sunlight from passing through the water, stunting vital underwater grasses, and also create low oxygen conditions as the algae die and decompose. Solids also reduce light passing through the water and can lead to the sedimentation (covering) of various benthic habitats, including oyster habitat.

Currently, the most readily available marine sanitation devices (MSD) on the market offer no reduction in the amount of nutrients in the waste stream. In addition, current MSDs treat solids, which will eventually become sediments, only through maceration and do not remove them as more advanced wastewater treatment techniques typically do.

Because of this, making the proposed waterways in Lancaster County no-discharge zones and ensuring that all wastes are treated with more advanced wastewater treatment techniques will only help in the ongoing efforts to restore these waterways. CBF believes that the timing of this proposed No Discharge Zone is fortuitous in that it could improve waterway quality, expand water-related economic opportunities, and also help Lancaster County meet its nutrient reduction requirements.

Sincerely,

Chris Moore
Hampton Roads Scientist
Chesapeake Bay Foundation

DEQ Response:



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

May 20, 2011

Mr. Chris Moore
Hampton Roads Scientist
Chesapeake Bay Foundation
142 W. York Street, Suite 618
Norfolk, VA 23510

Dear Mr. Moore,

DEQ greatly appreciates the public comments submitted on your behalf by Ms. Ihrig on April 11, 2011. Your comments of support for the Lancaster NDZs will be considered by EPA during their review process.

While NDZs have historically been used to reduce the bacteria concentrations of shellfish growing waters for protection of human health, we agree with your rationale that they will also be beneficial in reducing the nutrients and suspended solids which result from MSD Type I/II use. The timing of the NDZ application along with the development of Virginia's Phase II watershed implementation plans for the Bay TMDL is indeed, ideal. Promotion and education to the public of the new NDZs along with watershed stewardship for the next WIP phases will provide a more comprehensive message in regard to local water quality issues.

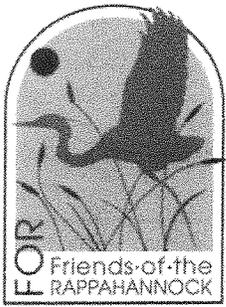
Again, DEQ thanks you and CBF for your support of the Lancaster NDZ document. We hope you and your colleagues will be available for the upcoming Northumberland and Westmorland public meetings (there will be comment periods for each). If you have any questions, please contact me at (804)527-5124.

Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

Cc: David Lazarus, DEQ
Mark Alling, DEQ
Elizabeth McKercher, DEQ
Charlene Ihrig, CBF
Liz Ronston, CBF

Public Comment: Letters from the following: Mr. Richard Moncure, Jr.; Mr. Donald Thrift; Mr. Derek Thrift; Mr. Marty Hinson; Mr. James Messick & Mr. Eldridge Messick; Mr. Julian Powell, Mr. Michael Hinson; each dated 4/11/11 and DEQ responses follow.



See 4/11/11

Friends of the Rappahannock
Advocacy • Restoration • Education

3219 Fall Hill Ave
Fredericksburg, VA 22401
Ph (540) 373-3448
Fax (540) 373-8111
Web: www.riverfriends.org

Dear Mrs. Smigo,

My name is Richard Moncure, JR., and I work with the Friends of the Rappahannock as The Tidal River Steward. I'm writing to tell you that my family and I strongly support the proposed *No Discharge Zone* for the listed creeks in Lancaster and Northumberland Counties.

For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

There is a time and a place for everything, and our backyard, *our picnic table*, is no place for anyone's dumping. Our children ski these creeks, and many families hang oyster gardens from their docks along these shores...of course everyone knows, "you don't *discharge* where you eat." There are better places to discharge; in this stretch of river there are at least four pump out stations. It seems a small inconvenience to compensate with the health of our waters. We urge you to move forward with the *No Discharge Zone* as soon as possible, our food and family depend on it.

Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation. richard.moncure@riverfriends.org or 804-214-0447

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Coordinator*

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PRO

Sincerely,
Richard C.L. Moncure, JR.
Tidal Rappahannock River Steward



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PIEDMONT REGIONAL OFFICE

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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

May 20, 2011

Mr. Richard Moncure, Jr.
Friends of the Rappahannock – Tidal
River Steward
3219 Fall Hill Ave.
Fredricksburg, VA 22401

Dear Mr. Moncure,

DEQ greatly appreciates your public comment of support for the Lancaster County NDZ draft application you submitted during the public comment period.

We would also thank all the Friends of the Rappahannock's 1800 members, which include local residents, recreational bathers and watersports enthusiasts, fisherman, and career watermen for their support of the proposed NDZ and for their commitment to promoting watershed stewardship and protection of our natural resources.

Your comments will be sent to EPA along with the draft application for review. We hope to see you and your fellow members at our upcoming meetings for Northumberland and Westmoreland Counties.

If you have any questions, please don't hesitate to contact me at (804)527-5124.

Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

rec 4/10/11

Dear Mrs. Smigo,

I'm writing to tell you that my family and I strongly support the proposed *No Discharge Zone* for the listed creeks in Lancaster and Northumberland Counties.

For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

There is a time and a place for everything, and our backyard, *our picnic table*, is no place for anyone's dumping. Our children ski these creeks, and many families hang oyster gardens from their docks along these shores...of course everyone knows, "you don't *discharge* where you eat." There are better places to discharge; in this stretch of river there are at least four pump out stations. It seems a small inconvenience to compensate with the health of our waters. We urge you to move forward with the *No Discharge Zone* as soon as possible, our food and family depend on it.

Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation.

Sincerely,

Donald Thrift

Rappahannock River Waterman

Mr. Donald Thrift

2351 Rich Neck Road

Warsaw, VA

22572



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Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

May 20, 2011

Mr. Donald Thrift
Rappahannock River Waterman
2351 Rich Neck Road
Warsaw, VA 22572

Dear Mr. Thrift,

DEQ greatly appreciates your public comment of support for the Lancaster County NDZ draft application you submitted during the public comment period.

As a local resident and as one whose livelihood depends on these tidal tributaries for crabs, fish, and oysters, there are few who can appreciate water quality as much as you and your family. We believe the NDZs will benefit local water quality and will promote watershed stewardship and the protection of our natural resources.

Your comments will be sent to EPA along with the draft application for review. We hope to see you and your fellow watermen at our upcoming meetings for Northumberland and Westmoreland Counties.

If you have any questions, please don't hesitate to contact me at (804)527-5124.

Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

Rec 4/11/11

Dear Mrs. Smigo,

I'm writing to tell you that my family and I strongly support the proposed *No Discharge Zone* for the listed creeks in Lancaster and Northumberland Counties.

For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

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Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation.

Sincerely,



Rappahannock River Waterman

Derek Thrift
958 Fallin town Rd
Warsaw, VT 22572



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Michael P. Murphy
Regional Director

May 20, 2011

Mr. Donald Thrift
Rappahannock River Waterman
2351 Rich Neck Road
Warsaw, VA 22572

Dear Mr. Thrift,

DEQ greatly appreciates your public comment of support for the Lancaster County NDZ draft application you submitted during the public comment period.

As a local resident and as one whose livelihood depends on these tidal tributaries for crabs, fish, and oysters, there are few who can appreciate water quality as much as you and your family. We believe the NDZs will benefit local water quality and will promote watershed stewardship and the protection of our natural resources.

Your comments will be sent to EPA along with the draft application for review. We hope to see you and your fellow watermen at our upcoming meetings for Northumberland and Westmoreland Counties.

If you have any questions, please don't hesitate to contact me at (804)527-5124.

Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

Rec 4/11/11

Dear Mrs. Smigo,

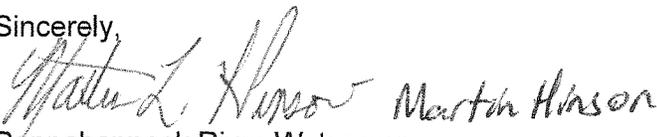
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For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

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Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation.

Sincerely,


Martin Hinson

Rappahannock River Waterman

2883 Sherson Rd
Parham, VA
22462

Rec 4/1/11

Dear Mrs. Smigo,

I'm writing to tell you that my family and I strongly support the proposed *No Discharge Zone* for the listed creeks in Lancaster and Northumberland Counties.

For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

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Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation.

Sincerely,

Marty Hinson

Rappahannock River Waterman

Marty L. Hinson

2883 Simonsen Rd

Farmham, VA

22460



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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

May 20, 2011

Mr. Marty Hinson
Rappahannock River Waterman
2883 Simonson Road
Farnham, VA 22460

Dear Mr. Hinson,

DEQ greatly appreciates your public comment of support for the Lancaster County NDZ draft application you submitted during the public comment period.

As a local resident and as one whose livelihood depends on these tidal tributaries for crabs, fish, and oysters, there are few who can appreciate water quality as much as you and your family. We believe the NDZs will benefit local water quality and will promote watershed stewardship and the protection of our natural resources.

Your comments will be sent to EPA along with the draft application for review. We hope to see you and your fellow watermen at our upcoming meetings for Northumberland and Westmoreland Counties.

If you have any questions, please don't hesitate to contact me at (804)527-5124.

Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

Rec 4/14/14

Dear Mrs. Smigo,

I'm writing to tell you that my family and I strongly support the proposed *No Discharge Zone* for the listed creeks in Lancaster and Northumberland Counties.

For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

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Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation.

Sincerely,

Rappahannock River Waterman

| | | | |
|--------------------|--------|----------------|------------|
| James R. Messick | - 2871 | HARRY HOGAN Rd | CALLAO, VA |
| Eldredge T Messick | " | " | " " |



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Director

Michael P. Murphy
Regional Director

May 20, 2011

Mr. James R. Messick and
Mr. Eldridge T. Messick
Rappahannock River Waterman
2871 Harry Hogan Road
Callao, Va

Dear Mr. James and Mr. Eldridge Messick,

DEQ greatly appreciates your public comment of support for the Lancaster County NDZ draft application you submitted during the public comment period.

As a local resident and as one whose livelihood depends on these tidal tributaries for crabs, fish, and oysters, there are few who can appreciate water quality as much as you and your family. We believe the NDZs will benefit local water quality and will promote watershed stewardship and the protection of our natural resources.

Your comments will be sent to EPA along with the draft application for review. We hope to see you and your fellow watermen at our upcoming meetings for Northumberland and Westmoreland Counties.

If you have any questions, please don't hesitate to contact me at (804)527-5124.

Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

Rec 4/11/11

Dear Mrs. Smigo,

I'm writing to tell you that my family and I strongly support the proposed *No Discharge Zone* for the listed creeks in Lancaster and Northumberland Counties.

For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

There is a time and a place for everything, and our backyard, *our picnic table*, is no place for anyone's dumping. Our children ski these creeks, and many families hang oyster gardens from their docks along these shores...of course everyone knows, "you don't *discharge* where you eat." There are better places to discharge; in this stretch of river there are at least four pump out stations. It seems a small inconvenience to compensate with the health of our waters. We urge you to move forward with the *No Discharge Zone* as soon as possible, our food and family depend on it.

Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation.

Sincerely,

Julian C Powell

Rappahannock River Waterman

Julian C. Powell

King George, VA



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

4949-A Cox Road, Glen Allen, Virginia 23060

(804) 527-5020 Fax (804) 527-5106

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

May 20, 2011

Mr. Julian C. Powell
Rappahannock River Waterman
King George, VA

Dear Mr. Powell,

DEQ greatly appreciates your public comment of support for the Lancaster County NDZ draft application you submitted during the public comment period.

As a local resident and as one whose livelihood depends on these tidal tributaries for crabs, fish, and oysters, there are few who can appreciate water quality as much as you and your family. We believe the NDZs will benefit local water quality and will promote watershed stewardship and the protection of our natural resources.

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Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

Rec 4/11/11

Dear Mrs. Smigo,

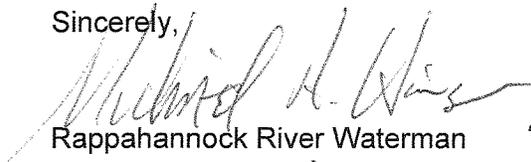
I'm writing to tell you that my family and I strongly support the proposed *No Discharge Zone* for the listed creeks in Lancaster and Northumberland Counties.

For generations, my family has earned its' living from the bounty of these waters. In early spring the creeks are valuable spawning grounds for Perch and Rockfish, and throughout the summer they are shedding grounds for Blue Crabs. As a family that depends on a healthy river, we recognize that these creeks are already under significant pollution pressure. And it is no surprise that they have been or currently are listed on the EPA's 303d list of impaired waters. Our declining harvests from these creeks show further evidence of their poor health.

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Thank you for hearing our comment, and please feel free to contact me at any time regarding this urgent situation.

Sincerely,


Rappahannock River Waterman

Michael Hinson

Montross, VA



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Michael P. Murphy
Regional Director

May 20, 2011

Mr. Michael Hinson
Rappahannock River Waterman
Montross, VA

Dear Mr. Hinson,

DEQ greatly appreciates your public comment of support for the Lancaster County NDZ draft application you submitted during the public comment period.

As a local resident and as one whose livelihood depends on these tidal tributaries for crabs, fish, and oysters, there are few who can appreciate water quality as much as you and your family. We believe the NDZs will benefit local water quality and will promote watershed stewardship and the protection of our natural resources.

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If you have any questions, please don't hesitate to contact me at (804)527-5124.

Best Regards,

Margaret Smigo
VDEQ Piedmont Regional TMDL Coordinator

Public Comment: Letter from Harold E. Starke Jr. dated 4/11/11 follows.

1001 HAXALL POINT
P. O. BOX 1122
RICHMOND, VIRGINIA 23218-1122

HAROLD E. STARKE, JR.

April 11, 2011

Ms. Margaret Smigo
Piedmont Regional TMDL Coordinator
4949-A Cox Road
Glen Allen, VA 23060

Re: Lancaster County NDZ Public Comment

Dear Ms. Smigo:

I am writing in opposition to the draft NDZ application for waterbodies in Lancaster County.

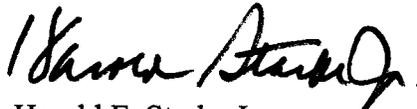
I have a home in Lancaster County and own three boats there. Clean water in the creeks and rivers of Lancaster County is a vital concern to me.

I am particularly concerned, however, that the analyses of boat traffic, pump-out accessibility and other findings by VADEQ and other agencies are inaccurate, incomplete and misleading.

I hope you will consider carefully the comments of those opposed to the application and insure that all sides of this issue are heard and their concerns considered seriously. It is paramount that the work and findings of governmental agencies be fair and impartial and supported by the applicable facts, and that due process be afforded all interested parties.

As has been said, "science, not ideology, should play the key role in saving our waters." In my view, there is simply inadequate scientific or other factual evidence at this point to support the creation of an NDZ in Lancaster County.

Very truly yours,



Harold E. Starke Jr.

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Thursday, April 14, 2011 3:07 PM
To: 'Starke Jr., Harold E.'
Subject: RE: Lancaster County NDZ Public Comment

Good Afternoon Mr. Starke,

DEQ received your public comment regarding the draft NDZ application for waterbodies in Lancaster County on 4/11/11. It will be attached to the document sent to EPA for review.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator

Public Comment:

From: The Neira's [<mailto:laurcov@nnwifi.com>]
Sent: Monday, April 11, 2011 12:07 PM
To: Smigo, Margaret (DEQ)
Cc: Alling, Mark (DEQ); Lazarus, David (DEQ); Stuart McKenzie; jdavis@nnpdc17.state.va.us;
aeguiguren@nnpdc17.state.va.us
Subject: Re: **REMINDER** Lancaster Creek NDZ application - comment period ends Monday - April 11th !!!

Please add our names to those who approve expanding the ban on sewage treated by on board marine sanitation devices. We are aware that Greenvale Creek is indeed in great need for enhanced protection for cleaner water in this Chesapeake Bay tributary. The closing of the opening of the Creek by the shifting sand that was not properly placed by the Corps of Engineers recent dredging simply adds to the need for better protection policies.

The oysters we have placed to assist in clean up are having a most difficult job!! We need all the help we can get.

Art and Lyn Neira
225 Greenvale Creek Rd
Lancaster 22503

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Thursday, April 14, 2011 2:35 PM
To: 'The Neira's'
Cc: Alling, Mark (DEQ); Lazarus, David (DEQ); Stuart McKenzie;
jdavis@nnpdc17.state.va.us; aeguiguren@nnpdc17.state.va.us; Pfeifle,
William (DEQ)
Subject: RE: ****REMINDER**** Lancaster Creek NDZ application - comment period
ends Monday - April 11th !!!

Good Afternoon Mr and Mrs. Neira,

On behalf of the NN PDC and DEQ, thank you for your support of the draft No Discharge Zone application for waterbodies in Lancaster County. DEQ will include your comment with the application which will be reviewed by EPA for approval.

Thank you again for your time and support.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator
4949-A Cox Road
Glen Allen, VA 23060
Office (804)527-5124
Fax (804)527-5106

Public Comment: Letter from Mr. S. Wallace Dawson, Jr. dated 4/11/11 follows.

April 11, 2011

To: Margaret Smigo
Subject : Lancaster County, Virginia NDZ Public Comment
From: S. Wallace Dawson, Jr.

Thank you for the opportunity to comment regarding the February 22, 2011 Stakeholder Meeting held in Lancaster, VA. I live on the Corrotoman River in Lancaster County and am an avid boater. I am a member of Boaters for Clean Water, an organization whose members are interested in fostering clean water for everyone to enjoy. With this letter, I reference all comments made by other members of Boaters for Clean Water and ask that you incorporate them as part of my comments.

I would like to voice my strong objection to the proposed designation of the waters in Lancaster County as NDZ's. The primary reasons for my objection are as follows:

1. The proposed designation of NDZ's does not attack the primary sources of pollution in the waters that DEQ targets. The designation of NDZ's that make the use of Type I and II MSD's illegal have, at best, a very small effect and may well actually make the targeted waters worse. It is difficult to understand why DEQ insists on taking ineffective measures while simultaneously not enforcing current law to reduce or eliminate various land based sources of pollution.
2. The waters targeted by DEQ exceed the scope of Virginia legislation. Specifically, the waters targeted go well beyond "tidal creeks". At the very least, DEQ should stay within the legislation.
3. There are numerous technical deficiencies enumerated in comments made by other members of Boaters for Clean Water that are very disturbing. I hope that you will make every effort to ensure that any application that you will submit will be based on facts and scientific principles.
4. Even if certain waters are designated as NDZ's, DEQ does not offer a scientific methodology to determine if there is any measureable improvement that can be directly attributable to the NDZ designation.

Again, thank you for the opportunity to comment.



S. Wallace Dawson, Jr.
1343 Eagles Trace
Lancaster, VA 22503

DEQ Response:

From: Smigo, Margaret (DEQ)
Sent: Friday, May 20, 2011 10:22 AM
To: 'S Wallace Dawson Jr.'
Cc: Alling, Mark (DEQ); Lazarus, David (DEQ); McKercher, Elizabeth (DEQ)
Subject: RE: Lancaster Co NDZ Public Comment

Good Morning Mr. Dawson,

DEQ thanks you for your comment on the Lancaster NDZ draft received April 11, 2011. At the close of the comment period, DEQ identified several primary issues concerning the proposed NDZs. In an effort to answer those comments, DEQ developed the following comment/responses. You may not have raised all of the issues in this list, however, since many of the comments were related, we believe that you would be interested in seeing these other comments/responses as well.

1. There are not enough pumpouts in the area, and there is too much distance between pumpouts. Pumpout availability is determined by an outdated EPA formula. US Code 1322 requires pumpout availability for "all" vessels".

DEQ Response: EPA guidance is used along with best professional judgment to make the determination on adequate availability of pumpout and dump stations. The low mean depth of waters around pumpout/dump stations will determine whether or not exclusions are necessary for boats with greater draught requirements. Draught exclusions for larger craft will allow MSD discharge within NDZs for those craft. DEQ acknowledges that pumpout availability can require additional planning and can be limiting during certain seasons. Also, DEQ acknowledges pump outs may be less available in certain areas despite being generally available across Lancaster County. Nationwide data suggest that the EPA formula to determine adequate pumpout availability does establish adequate pumpouts in NDZs. Source: Final No Discharge Zone Evaluation, 2004. See, <http://water.epa.gov/polwaste/vwd/ndzdocument.cfm>

2. There is strong public opposition to the application.

DEQ Response: There is also strong support (19 positive comments) in favor of the application, and the NDZ will provide additional, necessary protection of impaired shellfish growing waters.

3. Only impaired tidal creeks can be nominated for NDZs.

DEQ Response: DEQ adheres to the historical interpretation of tidal creeks as a generic term for tidal waterbodies where protection of shellfish growing waters is needed.

4. DEQ says Type I MSDs discharge chemicals like formaldehyde into water. These chemicals harm septic tanks and waters into which they leach.

DEQ Response: It is common for users to supplement types I, II, and III MSDs with ammonia or formaldehyde based deodorizers/disinfectants as additional holding tank /system treatment. While these chemicals are not ideal for onsite systems, they can be even more detrimental to local water quality when discharged via an MSD system.

5. MSDs release very clean effluent. Type I MSD Electro Scan effluent is cleaner than ambient water, removing 99.99% of pathogen indicators and reduce BOD according to EPA test. MSDs contribute minimal nitrogen and phosphorus, MSD reductions of which are not even required by EPA. MSDs also do not discharge protozoa, viruses, deodorants or formaldehyde contrary to DEQ statements.

DEQ Response: DEQ acknowledges that some MSDs may emit low levels of bacteria; design, operation, maintenance and salinity affect performance and all MSDs are not equal in performance. Direct depositions of bacteria and nutrients have a greater impact on water quality in sensitive shellfish resource areas. DEQ also acknowledges that MSDs do not discharge formaldehyde when operated consistent with the design of the MSD. However, formaldehyde is known to be used by some boaters as an additional deodorizer.

6. DEQ supplies evasive and erroneous miss-information. One example is using old regulatory bacteria limits for MSDs to represent what MSDs discharge.

DEQ Response: DEQ responds in a consistently professional manner and has provided the scientific information requested. Bacteria emissions of MSDs were determined by EPA. While there may be boaters who choose to install advanced treatment systems, such as Electro Scan, NDZs do provide additional protection for shellfish growing waters.

7. NDZs are not needed. The NDZ is a failed solution because very old NDZs in New England now have posted shellfish warnings. It's already illegal to discharge sewage to waters, so why are NDZs needed? Enforce existing laws for boat and land runoff pollution instead.

DEQ Response: NDZs are designated as one tool to protect shellfish growing waters from treated and untreated boat waste. While it is illegal to discharge raw waste per the Clean Water Act, NDZs elevate the message to the public that dumping is illegal and that because the waters are sensitive to pollution, it is necessary to prohibit discharges from MSDs to achieve reductions in sensitive water bodies. It is a watershed stewardship tool that can be effective for improving water quality and given the extent of impairments for bacteria, SAV and DO, the DEQ has determined that they are necessary and beneficial.

NDZs in Virginia have proven to be an effective means of reducing bacteria levels in tidal waters, for example in the Lynnhaven River where historically closed shellfish waters are now open for the first time in decades. Additionally, MSDs are designed and certified to technology based limits that

meet recreational use Water Quality Standards but are inconsistent with the more restrictive shellfish Water Quality Standards.

8. NDZs are based on weak science. DEQ offers no evidence that pollution in waters comes from boaters, and does not address pollution from shore, including failed septic tanks. What percentage of human vs non-human bacteria exists in NDZ proposed waters in Richmond and Lancaster Cos.? DEQ offers no science to show that water quality improvements are or will be due to NDZs.

DEQ Response: NDZs are targeted at reducing sewage pollution from boats, not land-based runoff sources. The successful re-opening of shellfish beds in the Lynnhaven River are in part due to the NDZ which was designated. Land-based bacteria reductions are necessary (as stated in completed TMDL reports) which are achieved through education and best management practices in the watershed. Bacteria entering the waterway via illicit boat discharge or via MSD Type I or II, is direct and proximal to shellfish growing areas and therefore has an immediate effect on water quality. Human bacteria source percentages in Lancaster County waterbodies were determined in EPA and SWCB approved TMDL reports as follows: Indian Creek 65%, Dymmer Creek 26%, Tabbs Creek 18%, Antipoison Creek 66%, W.Br. Carter reek 37%, Central Br. Carter Creek 18%, E. Br. Carter Creek 20%, W. Br. Corrotoman River 33%, Senior Creek 29%, Hills Creek 25%, Bells Creek 26%, E. Br. Corrotoman River 32%, Taylor Creek 3%, Myer Creek 16%, Ewells Point 24%, Millenbeck Creek 27%, Greenvale Creek 20%, Beach Creek 14%, Lancaster Creek 16%, Mulberry Creek 18%, Deep Creek 13%, Oyster Creek 54%, and Mosquito Creek 62%. %. (See, <https://www.deq.virginia.gov/TMDLDataSearch/ReportSearch.aspx;jsessionid=7229234241667049428D76698E83F4EE> and search by water body name to review the TMDLs for these locations, which thoroughly identify pollution from shore, including failed septic tanks).

9. NDZs cause economic harm: By promoting NDZs DEQ discourages public purchase of MSDs by reducing opportunities to dump compared with cost of the MSD, and discourages industry technological development of MSDs, reducing installation of MSDs, may reduce those recreating by boat, and harming the commercial producer of MSDS. Pumping out a holding tank is a difficult physical task to do, discouraging women from boating.

DEQ Response: NDZs can provide an economic boost to local economy by improving water quality (which can result in the re-opening of shellfish beds for commercial harvest), increasing the number of stops at local marinas for pumpout/dumpout (NDZs have been show to double the number of pumpouts at marinas) which can also increase the sale of fuel and other merchandise. Because NDZs are only applicable to certain water bodies, there is no detrimental effect to the technological development of MSDs and DEQ supports the use of certified MSDs outside of NDZ areas.

10. An NDZ deprives boaters of using most effective technology (MSD) to discharge waste. NDZs cause more pollution because they cause boaters to illegally dump sewage when they cannot get to a pumpout.

DEQ Response: Because NDZs are only applicable in limited areas the usage of MSD technology is

supported by DEQ and may be used in all non-NDZ waters.

Again thank you for your patience and we hope to have answered these comments to your satisfaction. If you have any questions, please feel free to contact me.

Best Regards,

Margaret Smigo
VA DEQ Piedmont Regional
TMDL Coordinator