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Clean Vessel Act Plan for Proper Sewage Disposal for Virginia

Agency Award No. 1300201-101G

Submitted to:

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**VIMS Marine Resource Report No. 2014-3
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The Clean Vessel Act Program in Virginia¹

Raw and improperly treated sewage discharged into Virginia's waterways is a threat to public health and the environment. The Clean Vessel Act (CVA) allows Virginia to install and maintain vessel sewage pump-out and dump stations as well as educate boaters about the proper disposal of vessel sewage. The CVA is managed by the Virginia Department of Health (VDH) Marina Program.

The VDH Marina Program visits each marina at least once during the boating season to inspect the pump-out and dump stations and inform the marina owners about the availability of funds through the CVA to repair or replace pump-out and dump stations that are not working.

A portion of the funds in Virginia are used to educate boaters through two outreach programs and participation in boat shows and in other events that attract the boating public. The coastal outreach program, managed by the Hampton Roads Sanitation District, reaches thousands of boaters annually. Participation in boat shows and other boating events allows VDH staff to interact with boaters from other coastal regions of the state and provide them with educational materials about the proper disposal of sewage.

The Boater Survey

In two separate mailings, a 23 question survey was sent to just over 1200 Virginia boaters (boat lengths 26' or greater) in the coastal region. Survey participants had the option of returning the paper copy of the survey or entering a link to the survey on Survey Monkey.

Of the approximately 1200 surveys that were mailed, we received responses from 70 boaters. It is important to note that one boater returned the survey indicating that she no longer owns a boat. The responses represented 29 coastal counties and cities, with 68 respondents noting their geographic region and two skipping the question. The responses represented an area from Northern Virginia through Virginia Beach, Virginia.

Approximately 90% of the boaters (61 boaters) returning the survey primarily use a boat that is 26 to 40 feet in length. Another four boaters responded that their primary use boat is 41 to 50 feet in length. One boater responded that their primary use boat is greater than 50 feet, while three of the boaters responded that their primary boat is less than 26 feet. (Table 1)

¹ The population of boats >26' is 9,336 and a total of just over 1200 surveys were sent to boaters in the coastal region. The sample size of 70 yields estimates statistically significant at the 90% confidence level 10% confidence interval.

Table 1

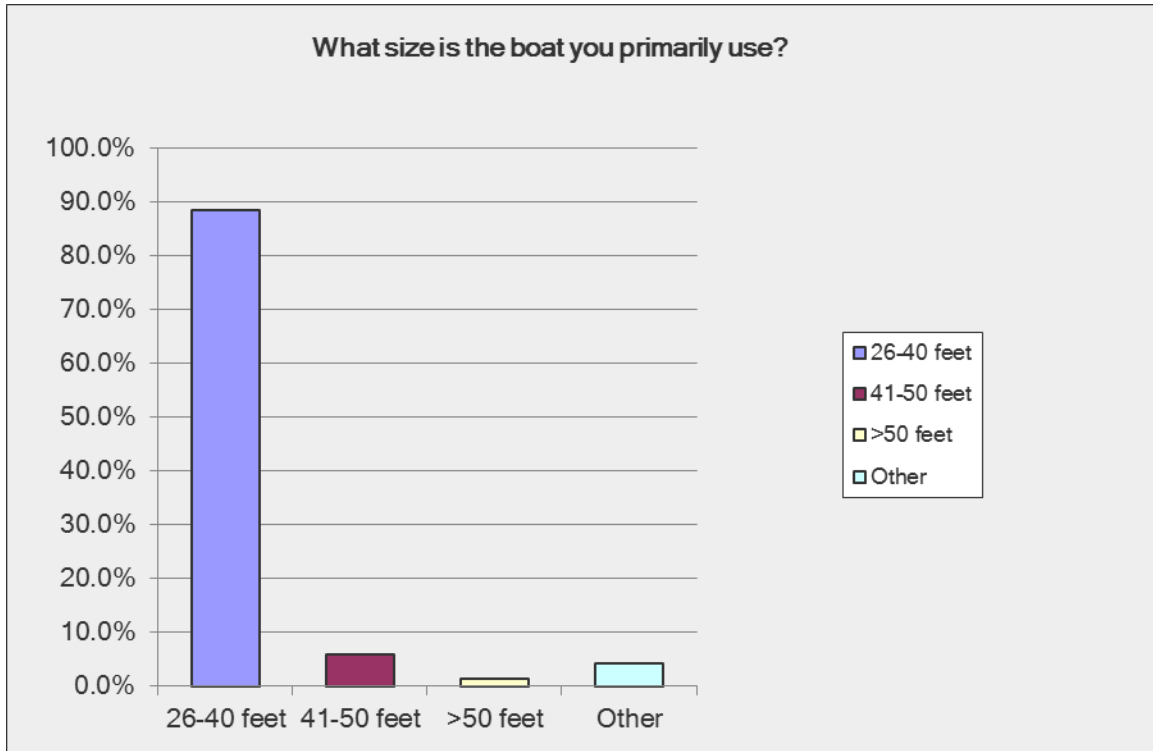


Table 2

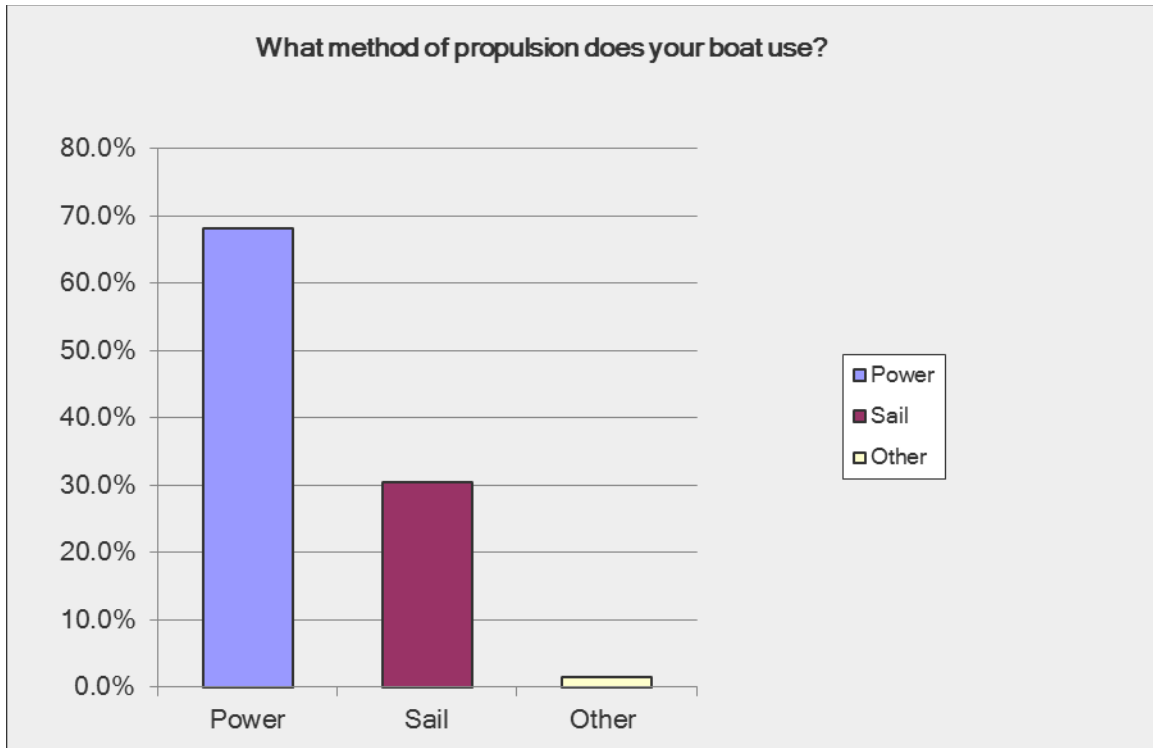
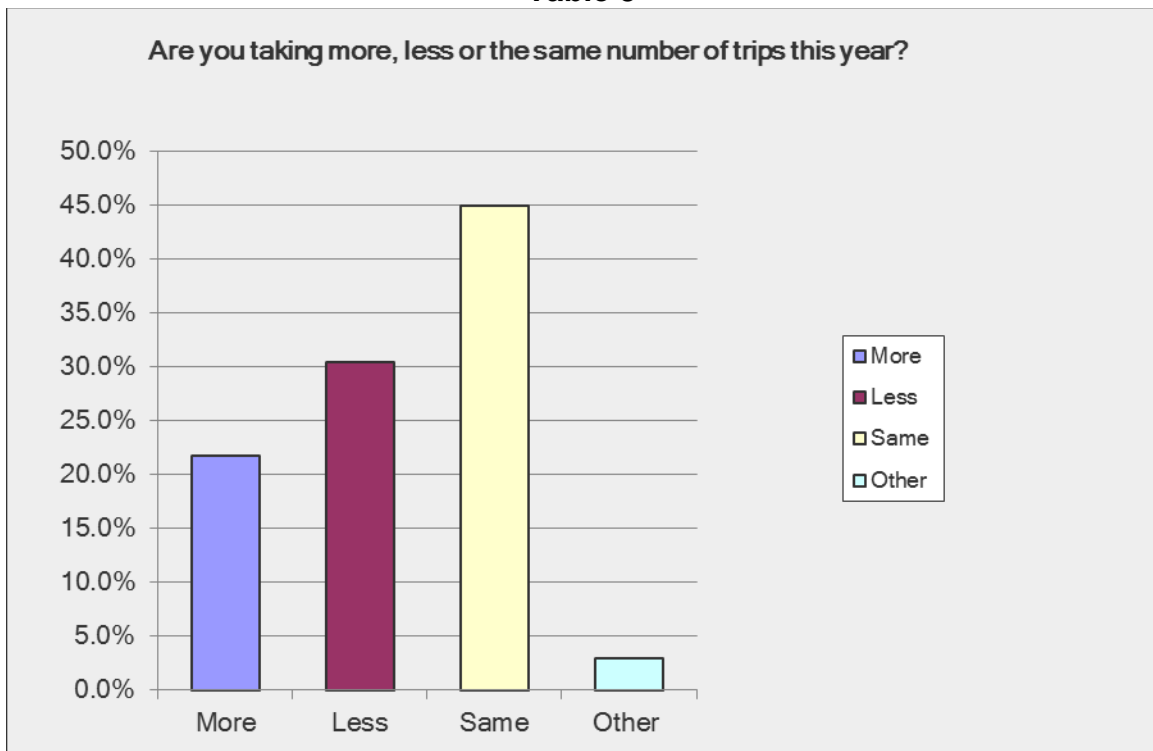


Table 2 indicates the type of propulsion that the survey respondents have on their boats. Forty-seven of the boaters are power boaters and 21 of the boaters rely primarily on sail as the method of propulsion. One answer of other indicated that they have a gas outboard.

To gauge boating activity this year as compared to last year, survey respondents were asked about the frequency of their boating trips last year (2012). The responses ranged in frequency from zero trips (13 people) to 50-100 trips (one person), with just over 10 being the average number of trips taken per person. Sixty-eight people answered this question and two people skipped the question.

When asked if they were taking more, less or the same number of trips this year, 69 people answered the question and one person skipped the question. One person indicated that their boat was being restored in dry storage and one person indicated that they had not boated yet this season. Fifteen people indicated they took more trips this year, 21 people took less trips this year and 31 people took the same number of trips this year. (Table 3)

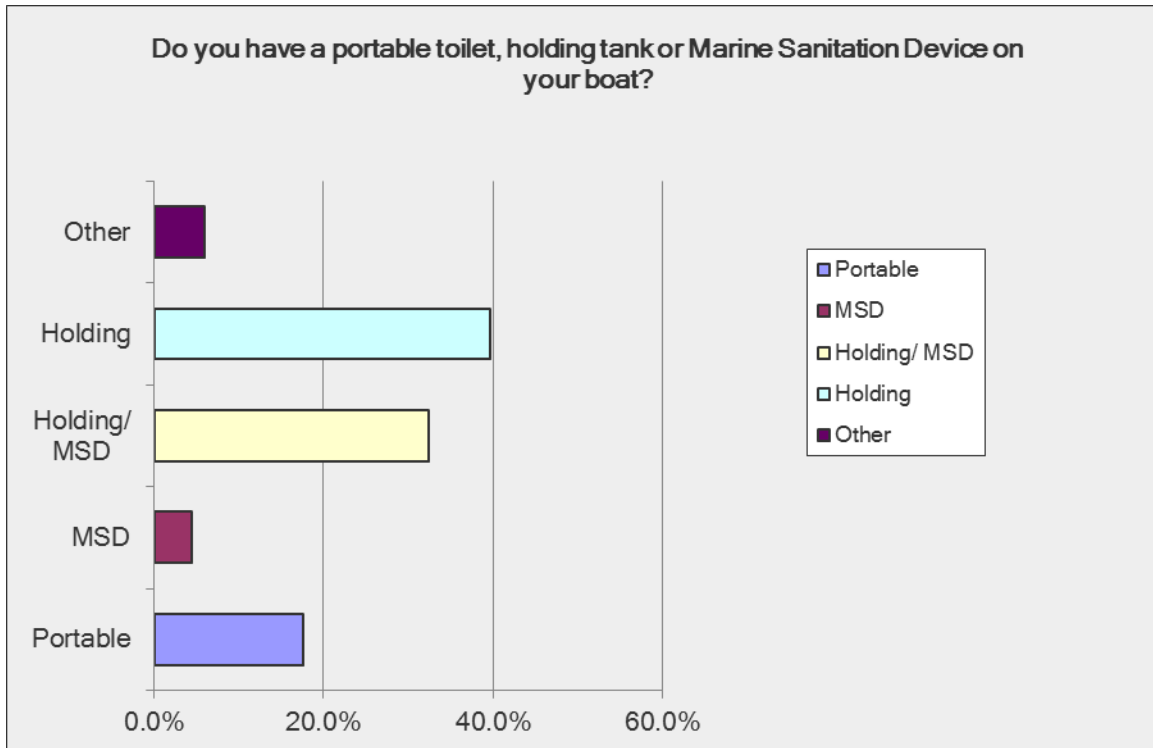
Table 3



The next question determined the type of sewage management the survey respondents have on their boats. Sixty-eight people answered this question and two people skipped the question. Twelve people use a portable toilet, three people indicate that they just use a Marine Sanitation Device (MSD), 22 people

use a combination of a holding tank and a MSD, 27 have just a holding tank and four people answered other. Of the other responses, one said no, one indicated N/A, one has removed their MSD and plans to install a composting toilet and the fourth already has a composting toilet. (Table 4)

Table 4



The next several questions ask about survey respondents sewage disposal habits. Of the 12 people who use a portable toilet, three of them use a portable toilet dump station at a marina and nine do not. Of the nine that do not use a portable toilet dump station, seven people take the portable toilet home to dump and the remaining two do not use the portable toilet. When asked to identify the top three areas that could use additional, upgraded portable toilet dump stations only one person answered this question and their answer was a question mark (?). (Table 5)

Fifty-two people indicate that they have a MSD, holding tank or combination of the two. Of those 52 people, 50 answered the question about pump-out station use. Forty-five boaters use pump-out stations and five do not. When asked why they do not use pump-out stations, seven people responded. Of those seven, one uses an onboard treatment system; one has used them in the past but has not boated for more than six years; one uses the facilities at the marina and not the boat head; one has not used their boat yet; one does not have a holding tank and one has not used the toilet on the boat since purchasing the boat. (Table 6)

Table 5

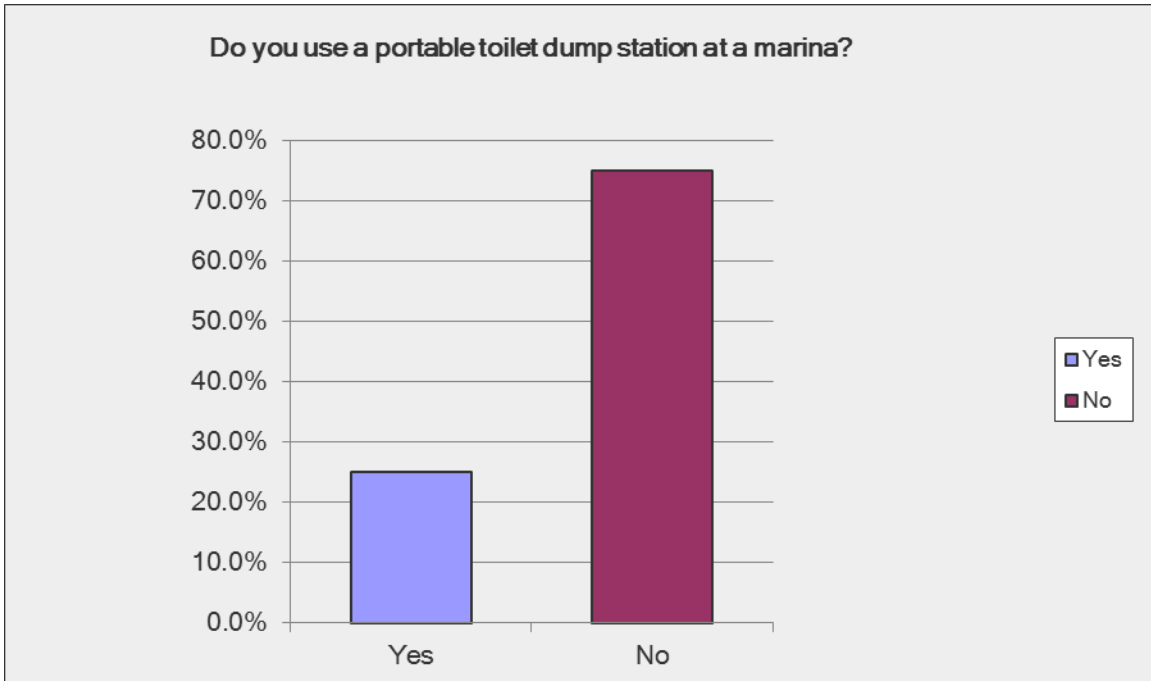
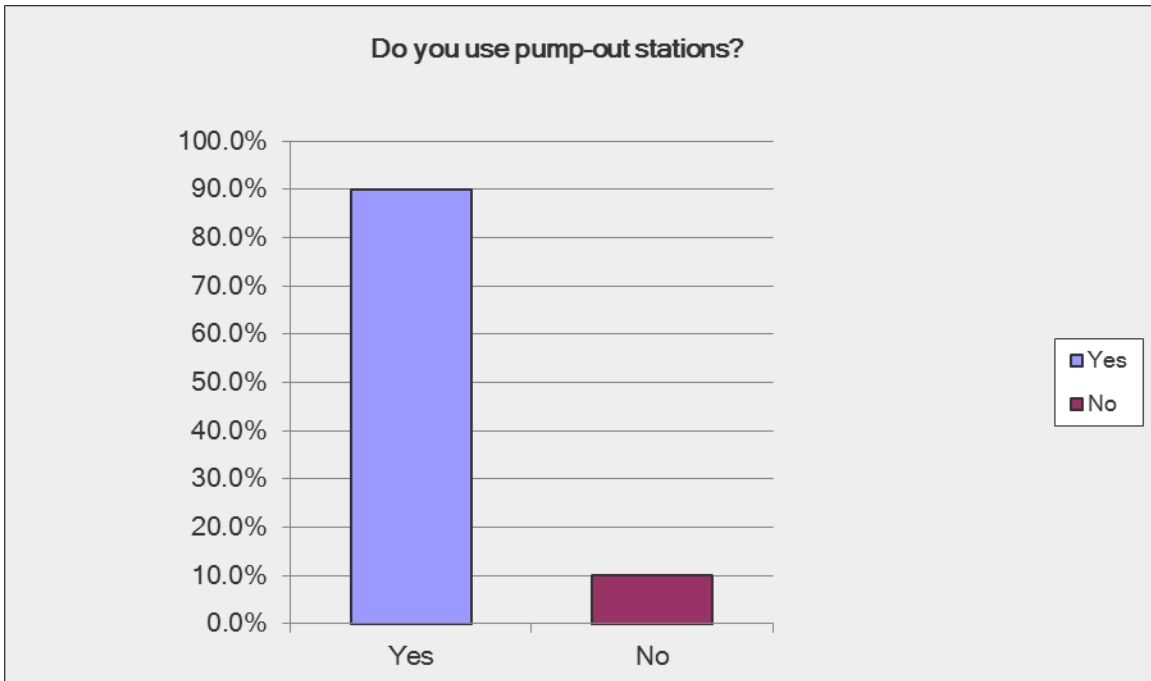


Table 6



Fifteen people responded to the question, “What, if anything, would convince you to use pump-out stations?” The majority of the answers indicate that people are using pump-out stations whenever possible, with availability and location being the primary reason that a boater might not use a pump-out station. The responses are summarized in Table 7.

Table 7

What, if anything, would convince you to use pump-out stations?
Availability, access, no fee.
If we use the boat we will use a pump-out.
We take short cruises and my holding tank is large enough to return .
Service at the marina should be year round, not just Memorial Day to Labor Day.
Easier
I use them but they are not always easy to find.
We need a cleaner bay.
I use them when needed.
If head was used (wife would have to change her mind).
Not used the boat yet.
I do use them.
If I needed to use the toilet.
We always use pump-out stations when they are available. Cost is usually reasonable, between \$5 and \$20.
I use them all the time.
Need more locations.

The boaters indicate they pump-out at a variety of marinas in the coastal region. When asked where they typically use pump-out stations, 45 people responded to the question with one person indicating N/A and one person noting that they pump-out somewhere on the James River. Table 8 summarizes the location of the pump-out stations.

Table 8

Marina	Waterbody
Yankee Point Marina (2 people)	Myer Creek
Hampton Yacht Club	Hampton River
Queens Lake Marina	Queens Creek
Cape Charles Harbor	Chesapeake Bay
Smith Point Marina	Slough Creek
Reedville Marina (2 people)	Cockrell's Creek
Tide's Inn (5 people)	Carter's Creek
York River Yacht Haven	Sarah Creek
Jordan Marine Service	Sarah Creek
Marina Shores (2 people)	Lynnhaven Inlet
(marina not indicated)	James River
Urbanna Town Marina (2 people)	Urbanna Creek
Chesapeake Boat Basin	Indian Creek
Queens Creek Marina	Queens Creek
Old Point Comfort Marina	Mill Creek
Lewisetta Marina (2 people)	Coan River
Gwynn's Island Boatel	Milford Haven
Buzzard Point Marina (2 people)	Cockrell's Creek
Seaford Yacht Club	Back Creek
Jennings Boat Yard (2 people)	Cockrell's Creek
Vining's Landing	Little Creek
Norview Marina	Broad Creek
Olverson's Marina	Lodge Creek
Scotts Creek Marina	Scotts Creek
Anchor Point Marina	Appomattox River
Leeward Municipal Marina (2 people)	James River
Kingsmill Marina	James River
Colombia Island Marina	Potomac River
Hope Springs Marina	Aquia Creek
Ingram Bay Marina	Towles Creek
Colonial Harbor (condominiums)	Rudee Inlet
Norton's Marina	Broad Creek

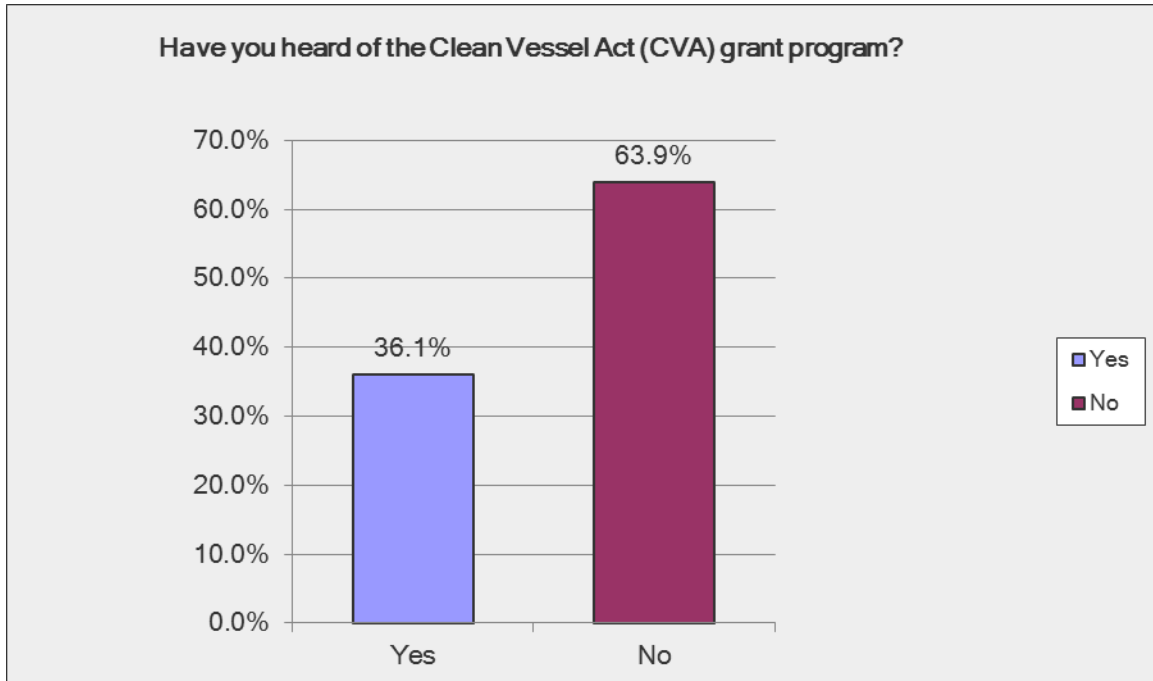
The survey participants were then asked to identify the top three areas that could use additional or upgraded pump-out stations. Fifteen people answered the question providing 23 locations. Four people indicated that they were not sure or that the question was not applicable; and one person indicated that they will continue to use Olverson's because it is close to where they keep their boat. The areas that the boaters felt could use additional or upgraded pump-out stations are listed in Table 9.

Table 9

Marina Name	Location	Reason
	Chickahominy River	There is only one available at River's Rest.
	Chickahominy River	
	James River	There are limited facilities with pump-out stations.
	James River	Upper James towards the city.
Waterside Marina	Norfolk, Elizabeth River	
Chesapeake Boat Basin	Lancaster, Indian Creek	
Windmill Point Marina	Lancaster, Rappahannock River	
	Windmill Point	
	Urbanna	
Hampton Yacht Club	Hampton, Hampton River	
Cape Charles Harbor	Cape Charles, Chesapeake Bay	
Blue Water Marina	Hampton, Hampton River	
Lewisetta Marina	Lewisetta, Coan River	
Buzzard Point Marina	Reedville, Cockrell's Creek	
	Great Wicomico River	
Appomattox Small Boat Harbor	Prince George, Appomattox River	
	Carter's Creek	
Horn Harbor Marina	Burgess, Great Wicomico River	
	Lake Anna	
	Mobjack Bay	
	Mattaponi	
	Rappahannock River	West from the Bay.

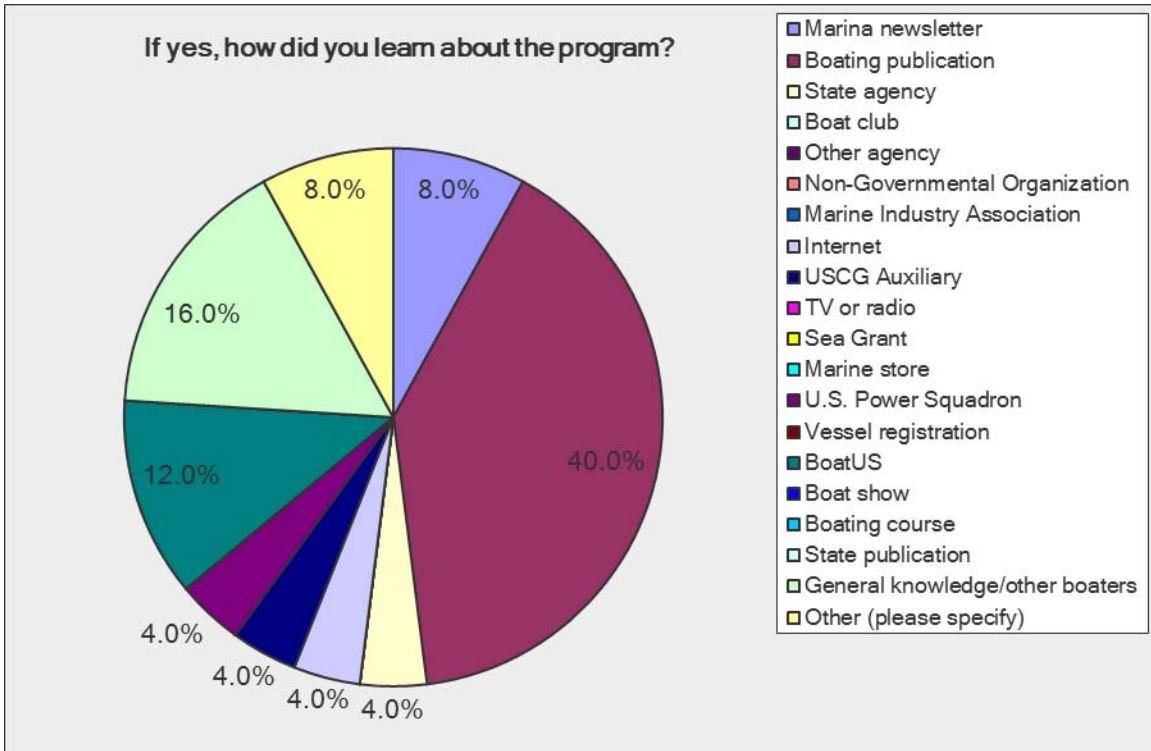
The next question asked survey participants about their knowledge of the CVA. Sixty-one people answered the question and nine skipped the question. Twenty-two people had heard of the CVA. (Table 10)

Table 10



The boaters who had heard of the CVA were then asked how they learned about the program. Twenty-five people answered the question and 45 skipped the question. One person indicated that the question was not applicable and one answered that they learned about the CVA through the Hampton Roads Boater Education and Pump-out Program. Ten people heard of the program through a boating publication; four through general knowledge or other boaters; three learned about the CVA through BoatUS; two from a marina newsletter; and one each through the U.S. Power Squadron, a state agency, the internet and the USCG Auxiliary. The results are summarized in Table 11.

Table 11



The next question asked participants about their knowledge of Hampton Roads Sanitation District/Virginia Department of Health Boater Education Program. This is a CVA funded boater outreach program that reaches thousands of boaters each boating season. The program reaches boaters in the Hampton Roads region of Virginia and is very well received. Beginning in 2014, the program will expand to include Saturdays during the winter and spring months. Five of the survey participants (8.1%) were familiar with the program with one commenting that the staff is pleasant and the handout information is nice.

Twenty-two boaters responded when asked how to better educate the boating public on the importance of proper sewage disposal. Of those 22, five indicated that they don't know or that they need information. Table 12 summarizes the suggestions.

Table 12

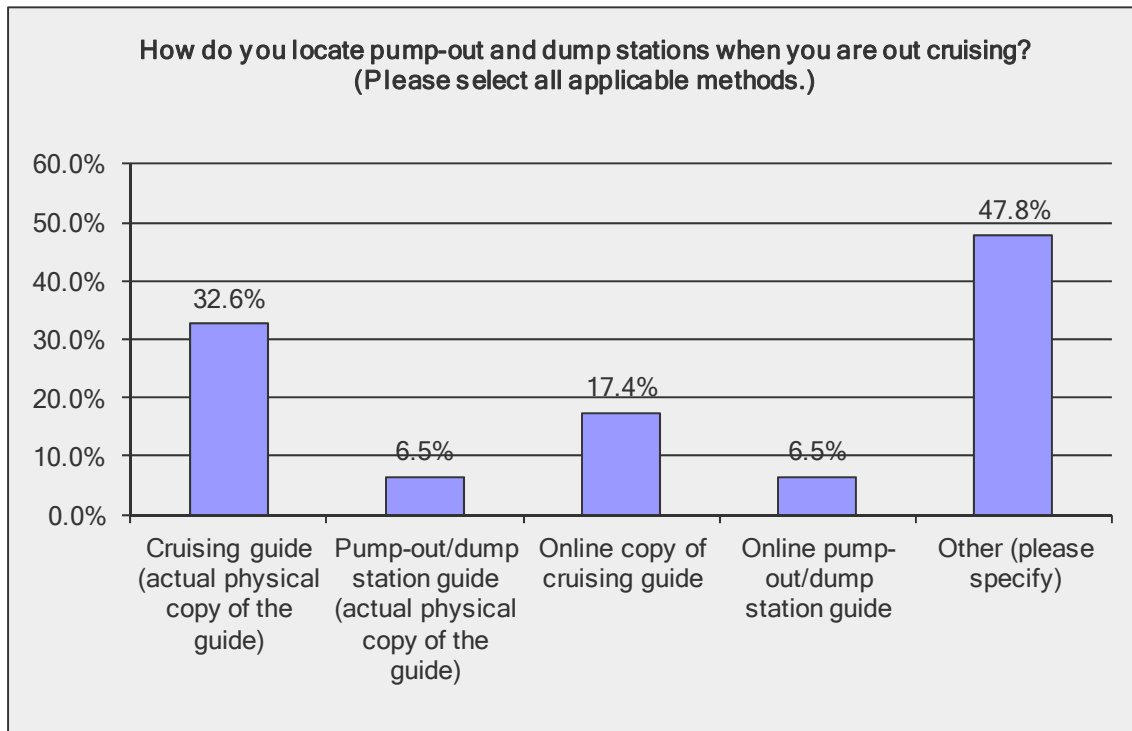
How could the CVA grant be used to better educate the boating public on the importance of proper sewage disposal?
Hold meetings at clubs.
Make speakers available for boating organization meetings, such as the US Power Squadron, Colonial Squadron.
Direct mail.
Send out information to every registered boat owner; set up information booths at boat shows; extend season of service at marinas where people live on boats.
Provide information at each marina.
Education will not solve the problem. Need to make it easy to do the right thing like in Annapolis where a golf cart with a portable pump comes to your dock.
Start with a free pump-out.
Get the message out through boat club members.
Send hand outs through the mail and through emails.
Create an email list.
Install information booths or signs at local marina establishments to increase awareness.
The program is working well as is.
Not sure if it applies since I do not go to the Hampton area.
Make it mandatory for marinas that service boats with holding tanks to offer pump-out service and post signs at boat ramps to remind boaters to operate in an environmentally safe manner.
Send mail to registered boat owners; send email to registered boat owners; ensure on boat registration/tax that owners enter a mandatory email address and email the information.
Send out newsletters to the boaters.
Provide clear instructions, information stickers and placards for boaters.

Next, survey participants were asked how they locate pump-out and dump stations when they are out cruising. Forty-six people answered this question and were told to select all that apply. Fifteen people indicated that they use a physical copy of a cruising guide; three use a physical copy of a pump-out/dump station guide; eight use an online copy of a cruising guide; three use an online pump-out/dump station guide and 22 answered other. Tables 13 and 14 summarize the results of this question.

Table 13

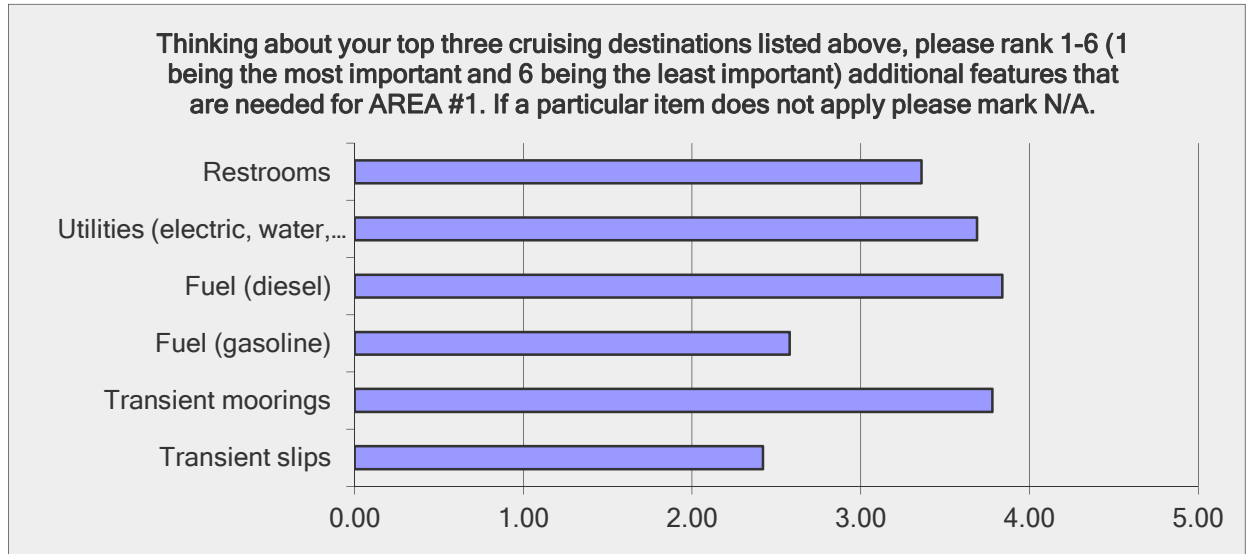
How do you locate pump-out and dump stations when you are out cruising? Please select all that apply.
N/A (4 boaters.)
I expect the marina to have a pump-out station.
Word of mouth (3 boaters.)
I ask other boaters.
Look for the sign at the marina.
I call and ask the marina (2 boaters.)
I use a local marina.
I use the GPS on my phone.
I pump-out at my home port.
Not concerned.
We purchase fuel and pump-out at the same places each year.
I ask when checking in at marinas (2 boaters).
I ask my neighbor.
I use Activecaptain.com.

Table 14



Survey participants were then asked to rank the infrastructure needs at their top three cruising destinations. The infrastructure needs are summarized in Tables 15, 16 and 17.

Table 15



Utilities include electric, water, phone, internet access.

Table 16

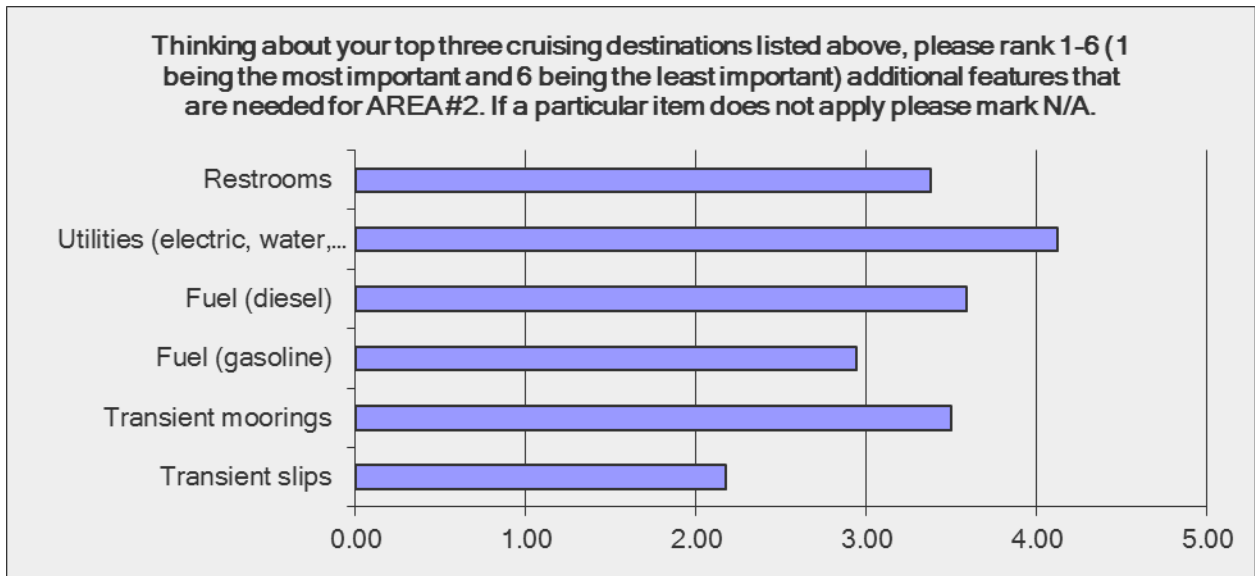


Table 17

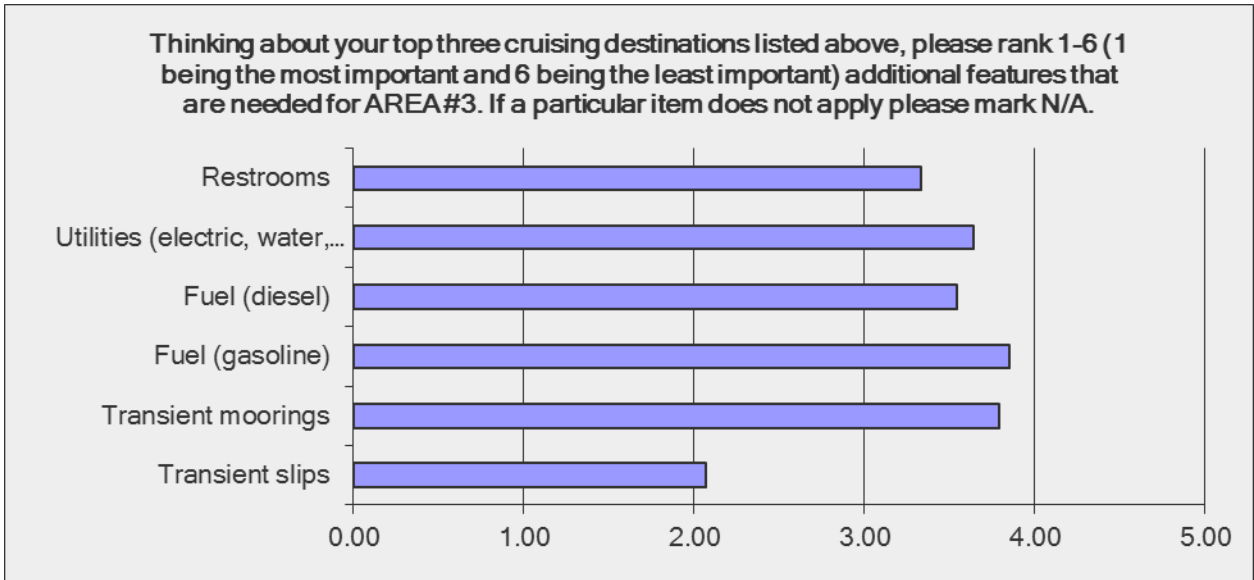


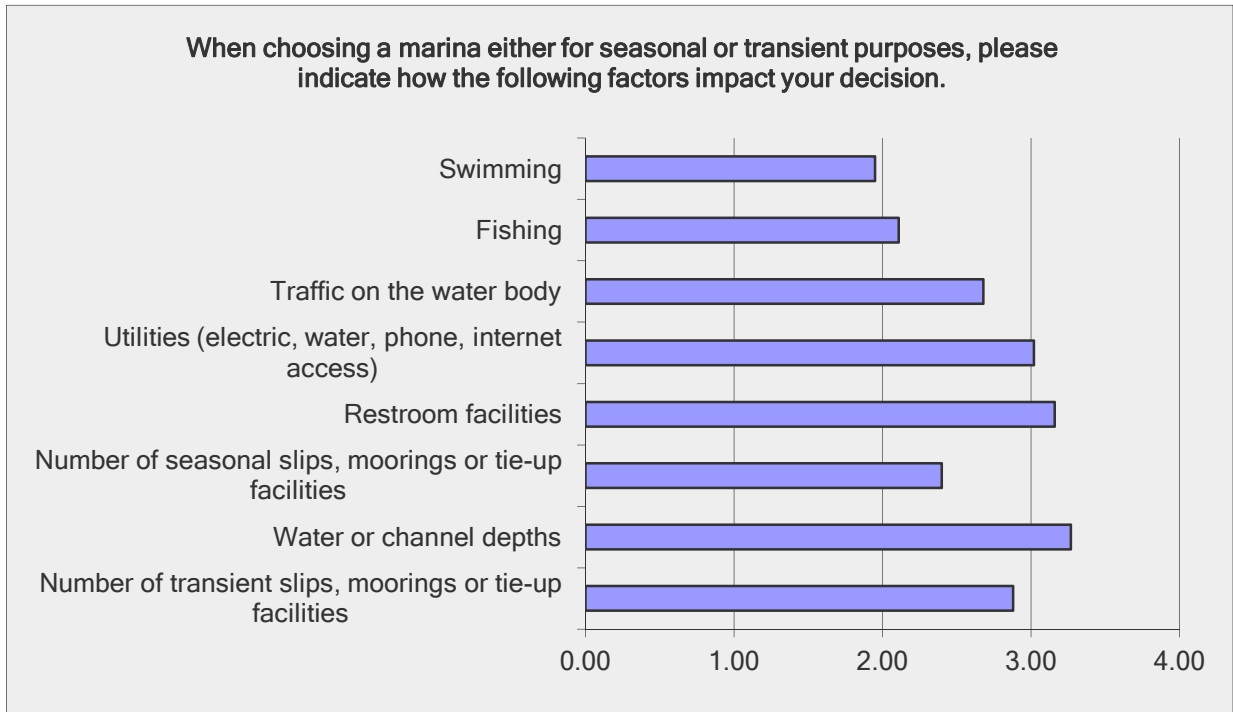
Table 18 summarizes additional comments from boaters about their cruising destinations.

Table 18

Please let us know about any additional important features for your cruising destinations.
Additional pump-outs are needed; some existing are old and somewhat unusable; need additional restaurants.
We enjoy regional seafood; dumping does not help the seafood.
I do not think I am qualified to answer this because I only take short cruises.
I take mostly day trips.
I always anchor out.
I just got my boat so I do not know.
Might think about communicating the message with fishing clubs.
Safe anchoring; slips are not always available on short notice, hence moorings would be a great feature.
Restaurants or food options on the water.
I only do day sailing.

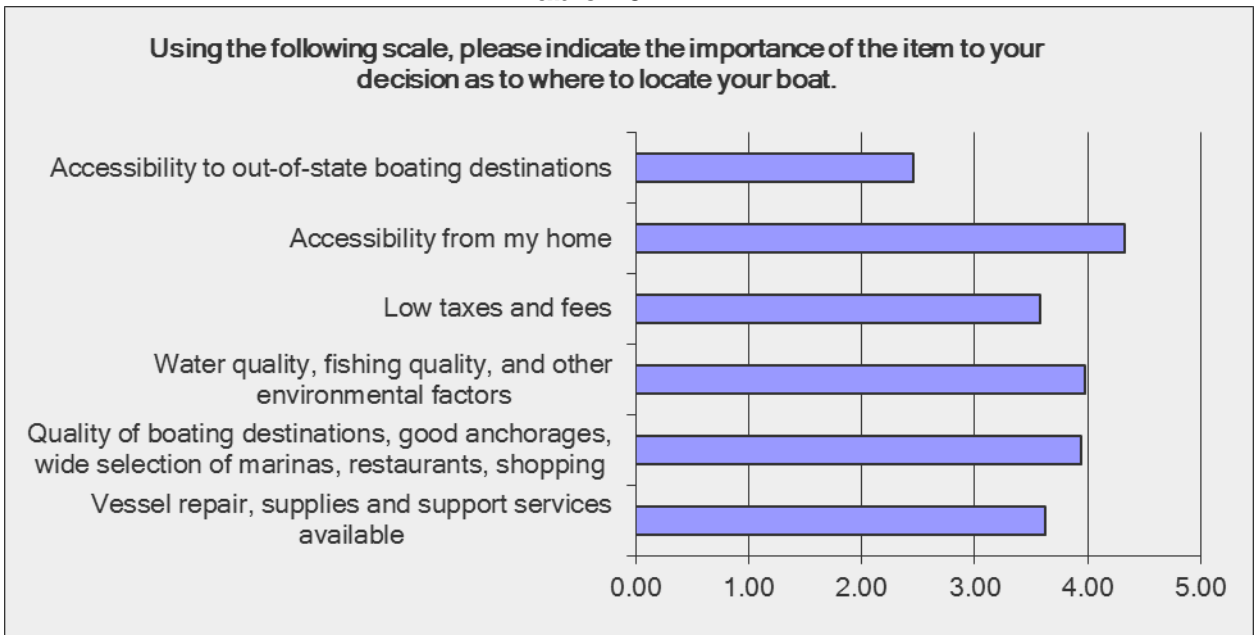
The next question asks boaters how different factors impact their decision when choosing a marina for either transient or seasonal purposes. Fifty people answered this question with two indicating N/A; one listing pump-outs, food and supplies; one stating convenience was a top priority; two stating that they normally do not use marinas; and one stating the area activities are important. (Table 19)

Table 19



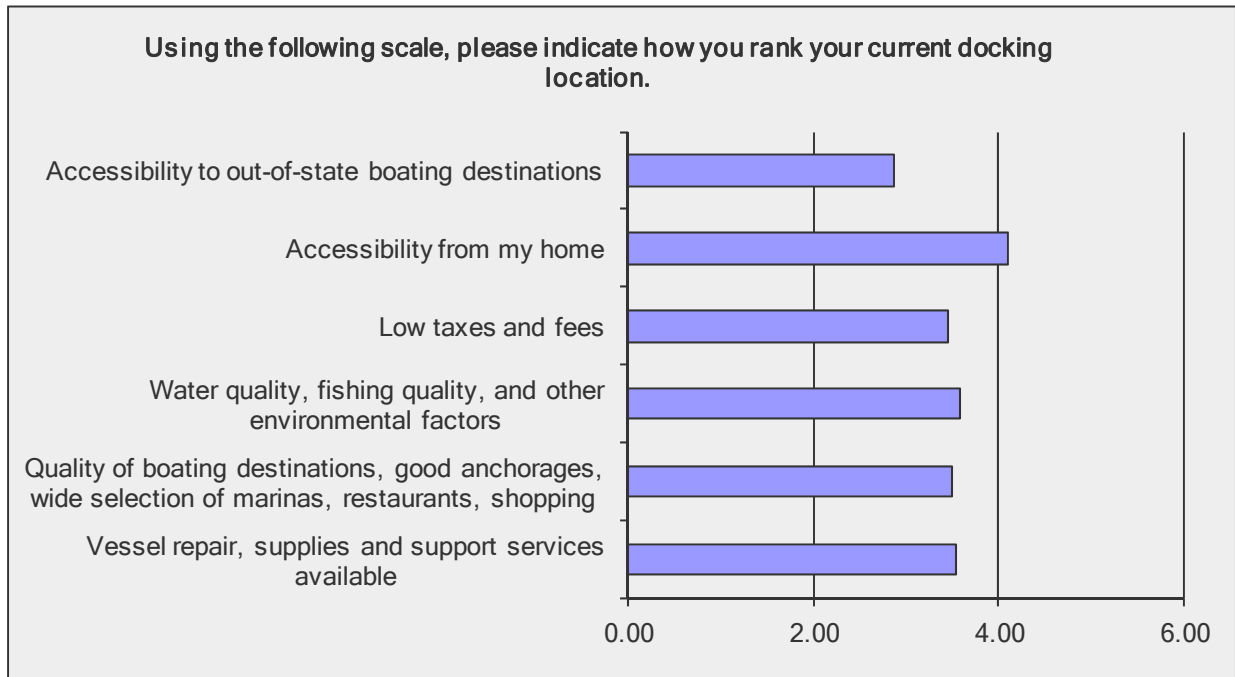
The boaters were then asked to indicate the importance of several factors on their decision as to where to locate their boat. Fifty-five people answered the question with no one providing comments for other items. (Table 20)

Table 20



The boaters were then asked to rank their current docking location. Fifty people answered the question with seven providing additional comments. Five indicate that their boat is docked at their home; one states that nice, helpful owners/operators are important; and one notes that accessibility from home is N/A. (Table 21)

Table 21



Twenty-three boaters provided additional comments on recreational boating in Virginia. These comments are summarized in Table 22.

Table 22

Please provide us with additional comments on recreational boating in Virginia.
We mainly sail out of Cape Charles recreationally. Clean water is very important and increases joy on the water drastically.
I would like to know how to go down the bay and into the Intracoastal Waterway without upsetting the Navy.
I do not take long voyages as I once did because the price of fuel is prohibitive. I just cruise close to my home. I do think that small boats pollute the water with sewage much more than larger craft and I see no solution to that because it is impossible to police.
I boat mostly on the Chickahominy River.
Everyone should be required to take a safe boating course and have a license to drive a boat. There are many uninformed boaters on the water causing a lot of accidents.
Boating in Virginia is pretty good for the most part. The information about pump-out stations does not apply because I have an onboard MSD.

**Please provide us with additional comments on recreational boating in Virginia.
(Table 22 continued)**

I would like to see more designated mooring areas with mooring balls.

Our largest drawback is the lack of channel dredging and marking of channels. I am on the Eastern Shore of Virginia and we have lost access areas because of shoaling both on the Seaside and the Bayside.

We use the boat only for short fishing trips. We use the pump-out at Ingram Bay Marina.

We are restoring an older vessel that maybe one day will have a flush toilet with a holding tank to be dumped. Unsure at this time.

No wake zone enforcement is needed. The no damaging wake sign was cut down twice on Queens Creek and never replaced in 2011.

We need more destinations to access by boat.

We have not been on the water for five years or more.

We are first time big boat sailors and really like it but would like to see the health of the Bay restored.

We need more patrols on speeding and Jet Ski restrictions.

We only go to marinas to get gas. We take ½ day fishing trips.

I do not do much boating, but most that I observe seem to be environmentally sensitive.

Setting crab pot buoys in channels is a risk/challenge to cruising. Bay men are generally friendly and helpful to recreational boaters under duress. We add sanitizer with each flush of the head and use the portable toilet dump station when docked.

I dock my boat at my house on Harris Creek and do not know much about the area because I just bought the boat.

Our boat is currently in a 2 year revamp but it does stay at a private pier. We do not cruise to marinas, but to unimproved areas, when we do travel.

It would be helpful to see fish traps (pound nets) marked on marine charts. They are permanent or semi-permanent features. For example it is dangerous trying to get into the anchorage at Kiptopeke State Park in the dark, coming from the south if you do not know where the pound nets are.

I keep my boat on a boat lift at my dock in Gougher Creek off the Great Wicomico River.

Overall, the number of boat ramps, accessibility of marinas and water quality is good in Virginia. However, our last boating experience at Lake Anna gave us reason to pause. Only one marina on the entire public side of Lake Anna offers pump-out services which have to be scheduled in advance and cost anywhere between \$45 & \$95 per pump-out. That makes it incredibly hard for visiting boaters to take care of their sanitation needs. With the number of boats with heads that we saw we have to wonder what everyone is doing when they have to empty their holding tank. I hate to admit it but since we were not able to get a pump-out during our last visit since “the schedule was full” at the marina, we went to a quiet, uninhabited cove and dumped half of our holding tank. It felt gross, but the tank was completely full and we were to have 10 guests on the boat for the day and there are no easily accessible restrooms on the lake.

Regulatory and No Discharge Zone Information

Section 180 of the *Commonwealth of Virginia Sanitary Regulations for Marinas and Boat Moorings* (Regulations; 12VAC5-570 et sec) requires that all other places where boats are moored that allow overnight docking or mooring of boats and all marinas, regardless of size, provide pump-out facilities for pumping or removing sewage from boats. Section 190 of the Regulations requires that all marinas and other places where boats are moored; regardless of size shall provide an acceptable receiving station for the sewage from portable toilets. Section 10 of the regulations defines other places where boats are moored as “any installation operating under public or private ownership, which provides dockage, moorage or mooring for boats (exclusive of paddle or rowboats) either on a free, rental or fee basis for the convenience of the public.” Section 10 also defines a marina as “any installation, operating under public or private ownership, which provides dockage or moorage for boats (exclusive of paddle or rowboats) and provides, through sale, rental or fee basis, any equipment, supply or service (fuel, electricity or water) for the convenience of the public or its lease, renters or users of its facilities.”

In addition to the regulatory requirement for sewage pump-out and dump stations, the Virginia General Assembly passed House Bill 1774 in February, 2009. The bill resolves to seek No Discharge Zone (NDZ) designation for Virginia’s tidal creeks from the United States Environmental Protection Agency. To further clarify, in 2011, the Virginia General Assembly passed House Bill 1943 to focus the NDZ designation process on impaired tidal creeks.

One city and one county in the coastal region of Virginia currently have approved NDZ legislation in place. The Lynnhaven River in the City of Virginia Beach was designated a NDZ in 2007. Fishing Bay Harbor, Broad Creek and Jackson Creek in Middlesex County received the NDZ designation in 2009.

There are currently four counties in Virginia with pending NDZ applications. Westmoreland County, Northumberland County, Lancaster County and Richmond County all ended public comment period on their applications in 2011 with final application drafts updated in 2013. Table 23² lists the bodies of water affected for each county.

² Westmoreland County (August 10, 2011), Northumberland County (August 10, 2011), Lancaster County (September 20, 2013) and Richmond County (March 18, 2011), Virginia; Application(s) for Federal No Discharge Zone Designation; Prepared for the Virginia Department of Environmental Quality by the Northern Neck Planning District Commission. Virginia Department of Environmental Quality, Virginia’s No Discharge Zone Program.
<http://www.deq.virginia.gov/Programs/Water/WaterQualityInformationTMDLs/TMDL/NoDischargeZoneDesignations.aspx>.

Table 23

County	Body of Water
Westmoreland	Bonum Creek
	Jackson Creek
	Gardner Creek
	Ragged Point
	Branson Cove
	Lower Machodoc Creek
	Glebe Point
	Cabin Point Creek
	Poor Jack Creek
	Currioman Creek
	Cold Harbor Creek
	Mattox Creek
	Nomini Creek
	Monroe Bay
	Rosier Creek
	Northumberland
Prentice Creek	
Dividing Creek	
Cloverdale Creek	
Great Wicomico River	
Ingram Bay	
Little Wicomico River	
Cod Creek	
Coan River	
Glebe	
Judith Sound	
Yeocomico River	
Lancaster	Mulberry Creek
	Deep Creek
	Greenvale Creek
	Paynes Creek
	Beach Creek
	Whitehouse Creek
	Town Creek
	Myer Creek
	Moran Creek
	Taylor Creek
	Carter Creek
	Mosquito Creek
	Oyster Creek
	Windmill Point Resort Boat Basin
Antipoison Creek	
Davenport Creek	

	Tabbs Creek
	Dymer Creek
	Indian Creek
	Corrotoman River
Richmond	Farnham Creek
	Lancaster/Morattico Creek

The August 10, 2011, application for NDZ designation indicates that there are six sewage pump-out stations and five dump stations in Westmoreland County. Of the total number of pump-out and dump stations in the affected bodies of water, two sewage pump-out stations and three dump stations are located on Monroe Bay; one sewage pump-out station is located in the vicinity of the Potomac River; two sewage pump-out stations and one sewage dump station are located on the Yeocomico River; and one additional sewage pump-out and dump station are located on Mattox Creek.

The August 10, 2011, NDZ application for Northumberland County indicates that there are 11 sewage pump-out stations and eight dump stations available for the affected bodies of water. One sewage pump-out station and one dump station are located on Lodge Creek; two sewage pump-out stations and one dump station are located on the Coan River; three sewage pump-out stations and two dump stations are located on the Little Wicomico River; two sewage pump-out stations and two sewage dump stations are located on Cockrell Creek; one sewage pump-out station and one dump station are located on the Great Wicomico River; there is one sewage pump-out station on the Yeocomico River; and one sewage pump-out station and one dump station are located on Indian Creek.

The September 20, 2013, NDZ application for Lancaster County lists four sewage pump-out stations and four sewage dump stations in the affected bodies of water. There is one sewage pump-out station and one dump station each on Indian Creek, Carter Creek, Myers Creek and the Windmill Point Boat Basin (a man-made inlet adjacent to the Rappahannock River.)

The March 18, 2011, NDZ application for Richmond County indicates that there is one sewage pump-out station and one sewage dump station on Morattico Creek and one sewage pump-out station on the Rappahannock River.

There are two localities in Virginia that are in the preliminary stages of preparing NDZ applications; Owl Creek / Rudee Inlet in Virginia Beach and Sarah Creek in Gloucester County. The Elizabeth River Project is currently holding very preliminary public meetings to gauge citizen input about declaring the Lafayette River a NDZ in furtherance of the goal to have the Lafayette River Fishable/ Swimmable by 2014.

Recommendations

Table 8 summarizes the current locations that survey respondents use pump-out stations. Thirty-one of the 32 locations are eligible to receive Virginia's CVA funds. ***Allocate funds through Virginia's maintenance program and notify the facilities listed in Table 8 of the availability of funding.***

Table 9 summarizes locations and marinas that survey respondents felt could use additional or upgraded pump-out stations. Twenty-one of the 22 locations are eligible for coastal Virginia CVA funds. ***Notify the marinas listed about the availability of funds to upgrade their existing systems.*** Of special note is the mention of Lake Anna (eligible for inland CVA funding.) ***This location was mentioned as both an area that could use additional/upgraded pump-out station and was mentioned in the additional comments section as a location that is severely lacking in available pump-out stations.***

The Chickahominy River, western Rappahannock River, Upper James River and West Point area are all locations mentioned that have too few if any locations for pumping out the contents of sewage holding tanks. ***The VDH Marina Program should notify the municipalities about the availability of CVA funding for these locations and work with them in determining suitable locations for sewage pump-out and dump stations.***

There are designated NDZs in the City of Virginia Beach (Lynnhaven Watershed) and Middlesex County. The VDH Marina Program has a very strong presence in the Virginia Beach area through its partnerships with the city and the Hampton Roads Sanitation District Boater Education Program. ***Funding for the boater education program should continue and increase as the program continues to expand.***

Fishing Bay Harbor, Broad Creek and Jackson Creek are the designated NDZs in Middlesex County. ***Provide the marinas on those creeks information about the availability of funds through the CVA program to maintain or upgrade their sewage holding tank pump-out stations. Provide boater education materials to the marinas in the NDZs that highlight available pump-out stations and the CVA program.***

There are four counties, Westmoreland, Northumberland, Lancaster and Richmond that have pending NDZ legislation. ***The VDH Marina Program should work with the county governments to install a conveniently located sewage pump-out and dump station in each locality. Ideally, localities would own and maintain the sewage pump-out and dump stations.***

There are two localities, Gloucester County and the City of Virginia Beach (Owl Creek/ Rudee Inlet), that are in the preliminary stages of developing NDZ applications. ***Allocate maintenance funds for the existing pump-out and***

dump stations in those areas and provide the marinas with boater education information that highlights existing sewage pump-out stations, dump stations and the CVA program.

The Elizabeth River project is in the preliminary stages of possibly starting the process to have the Lafayette River declared a NDZ. There is a lack of available and accessible sewage pump-out stations on the Lafayette. ***Work with the City of Norfolk to determine a suitable location for an additional sewage pump-out station.***

Boater education is an important portion of the CVA. Table 12 summarizes the responses from boaters about how to better use the CVA to educate boaters about proper sewage disposal. The VDH Marina Program already does many of the suggestions and should continue to budget for these items. ***VDH should also consider increasing the education budget to provide speakers at Power Squadron and boat club meetings; and to send out newsletters.***

The CVA program in Virginia is very strong and provides both marinas and boaters with many benefits. The annual VDH marina inspection program provides the benefit of identifying non-working sewage holding tank pump-out stations and dump stations. The boater education and outreach programs are very successful and reach literally thousands of boaters each year.