COMMONWEALTH of VIRGINIA

Department of Health

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December 16, 2025

MEMORANDUM

TO: The Honorable Ghazala F. Hashmi
Chair, Senate Education and Health

The Honorable Mark D. Sickles
Chair, House Health and Human Services

FROM: Karen Shelton, MD
State Health Commissioner, Virginia Department of Health

SUBJECT: Final Report on Transition of Septic Pump-Out Program Oversight and Enforcement in Rural Coastal Virginia

This report is submitted in compliance with Chapter 486 of the 2022 Virginia Acts of Assembly – Section 2, which states:

That the Department of Health (the Department) shall provide outreach and education to homeowners to ensure compliance with onsite sewage treatment system pump-out requirements adopted pursuant to the Chesapeake Bay Preservation Act (§ 62.1-44.15:67 et seq. of the Code of Virginia). The Department shall provide to the Chairmen of the House Committee on Health, Welfare and Institutions and the Senate Committee on Education and Health an interim report by December 1, 2024, and a final report by December 1, 2025, on compliance with such onsite sewage treatment system pump-out requirements in the localities specified in subsection L of § 32.1-164 of the Code of Virginia, as amended by this act, and subsection H of § 62.1-44.15:72 of the Code of Virginia, as amended by this act, and the incorporated towns within such localities. Such reports shall also include recommendations to improve compliance with onsite sewage treatment system pump-out requirements adopted pursuant to the Chesapeake Bay Preservation Act.

Should you have any questions or need additional information, please feel free to contact me at (804) 864-7006 or HealthCommissioner@vdh.virginia.gov.

KS/KB
Enclosure

Pc: The Honorable Janet V. Kelly, Secretary of Health and Human Resources

FINAL REPORT ON TRANSITION OF SEPTIC PUMP-OUT OVERSIGHT AND ENFORCEMENT IN RURAL COASTAL VIRGINIA

REPORT TO THE GOVERNOR AND THE GENERAL ASSEMBLY

DECEMBER 1, 2025

VIRGINIA DEPARTMENT OF HEALTH

PREFACE

Chapter 486 of the 2022 Virginia Acts of Assembly required the Virginia Department of Health (VDH) to submit a final report on compliance with onsite sewage system pump-out requirements in the localities specified in subsection L of § 32.1-164 of the Code of Virginia. The final report is required to be sent to the Chairs of the House Committee on Health and Human Services and the Senate Committee on Education and Health by December 1, 2025.

FINAL REPORT CONTRIBUTORS

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EXECUTIVE SUMMARY

During the 2022 Session, the General Assembly approved Chapter 486 of the Acts of the Assembly, directing VDH to provide oversight and enforcement of onsite sewage system (OSS) pump-outs required pursuant to the Chesapeake Bay Preservation Act (CBPA). Chapter 486 of the 2022 Virginia Acts of Assembly limited the scope of the plan to the Eastern Shore, Middle Peninsula, and Northern Neck regions of the Commonwealth, with an effective date of July 1, 2023. This legislation also required licensed operators – including sewage haulers – conducting onsite sewage system (OSS) pump-outs to report the results of their visits to VDH using a web-based reporting tool. Chapter 486 of the 2022 Virginia Acts of Assembly required VDH to submit a final report on compliance with OSS pump-out requirements in the localities specified in subsection L of §32.1-164 of the Code of Virginia (the Code) by December 1, 2025. Key status updates on the transition of the program to VDH and operator compliance with OSS pump-outs are listed below.

KEY STATUS UPDATE

1. The web-based reporting tool for reporting of conventional onsite sewage system (COSS) pump-outs went live on July 1, 2023.

2. Sewage haulers have submitted over 5,980 COSS pump-out records since July 1, 2023, within the program area.

3. Program staff have created, reviewed, and approved over 20,000 OSS records and documents as part of developing a complete inventory of OSS in the program area. This includes approximately 14,000 new database records of installed OSS and adjacent private water supplies, as many historic hard copy records on file with local health departments have not yet been entered into VDH's database.

4. Most sewage disposal facilities that receive OSS sewage from haulers who serve the Eastern Shore, Middle Peninsula, and Northern Neck regions are located outside of the areas they serve, and sometimes outside of the Commonwealth. The lack of local sewage disposal facilities impacts the cost of pump-outs and may impact the long-term success of the program and compliance with pump out requirements.

5. High staff turnover rates within Environmental Health at VDH have impacted the program, with three out of the seven program positions becoming vacant within the last year.

INTRODUCTION

FINAL REPORT ON TRANSITION OF SEPTIC PUMP-OUT OVERSIGHT AND ENFORCEMENT MANDATE

Chapter 486 of the 2022 Virginia Acts of Assembly requires VDH to submit a final report on compliance with onsite sewage system pump-out requirements in the localities specified in subsection L of § 32.1-164 of the Code of Virginia. The final report is required to be sent to the Chairmen of the House Committee on Health and Human Services and the Senate Committee on Education and Health by December 1, 2025. The full text of Chapter 486 of the 2022 Virginia Acts of Assembly is included in Appendix A.

REPORT OUTLINE

This report includes a brief background on development of Chapter 486 of the 2022 Virginia Acts of Assembly, pump-out requirements in Virginia, and steps taken to implement Chapter 486 of the 2022 Virginia Acts of Assembly. Discussion on implementation includes budget and staffing, the web-based reporting tool, the inventory of OSS systems, data entry, data clean up, interaction with sewage handlers, sewage disposal facilities, public outreach, enforcement, additional benefits of the program to the Commonwealth, and challenges faced thus far.

BACKGROUND

During the 2019 Session, the General Assembly approved Chapter 429 of the Acts of the Assembly (HB 2322), directing VDH to develop a plan for the oversight and enforcement of OSS pump-out requirements pursuant to the CBPA. The plan was limited to counties eligible for participation in the Rural Coastal Virginia Community Enhancement Authority (RCVCEA) pursuant to Chapter 76 (§ 15.2-7600 et seq.) of Title 15.2 of the Code of Virginia (the Code). The RCVCEA covers the 12 counties within the Eastern Shore, Middle Peninsula, and Northern Neck regions of Virginia: Accomack, Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, Northampton, Northumberland, Richmond, and Westmoreland. Participation by localities in the RCVCEA is voluntary.

In December 2019, VDH provided an interim progress report on the development of the plan. In August 2021, VDH provided a final plan based on feedback from VDH staff, local government, the Virginia Department of Environmental Quality (DEQ), and onsite sewage services providers. During the 2022 Session the General Assembly approved Chapter 486 of the 2022 Virginia Acts of Assembly directed VDH to provide oversight and enforcement of OSS pump-outs as outlined in HB 2322 final plan.

Pursuant to Chapter 486 of the 2022 Virginia Acts of Assembly, VDH is now responsible for management and enforcement of OSS pump-outs required by the CBPA within the following localities effective July 1, 2023: Accomack, Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, Northampton, Northumberland, Richmond, and Westmoreland counties and the incorporated towns within those counties are included. Licensed operators conducting OSS pump-outs in these localities are required to report the results of their site visit using a web-based reporting tool developed by VDH. Chapter 486 of the 2022 Virginia Acts of Assembly also established that anyone violating the OSS pump-out requirements managed by VDH is guilty of a Class 3 misdemeanor.

Chapter 486 of the 2022 Virginia Acts of Assembly required VDH to provide outreach and education to homeowners to ensure compliance with OSS pump-out requirements. The legislation required VDH to submit an interim report to the Chairmen of the House Committee on Health, Welfare and Institutions by December 1, 2024.[1] The legislation also required VDH to submit this final report by December 1, 2025. The reports are to detail compliance with OSS pump-out requirements within the localities outlined in Chapter 486 of the 2022 Virginia Acts of Assembly and include recommendations to improve compliance.

In 1988, the General Assembly enacted the CBPA, followed in 1989 by the Chesapeake Bay Preservation Area Designation and Management Regulations (CBPADM Regulations). The CBPADM Regulations require the 84 local governments defined as "Tidewater, Virginia" to amend existing ordinances, regulations, and enforcement mechanisms to meet certain performance criteria for the protection of water quality, including a requirement that OSS located within designated Chesapeake Bay Preservation Areas be either pumped out or inspected at least once

[1] https://rga.lis.virginia.gov/Published/2025/RD217/PDF

every five years. The specific requirements for each locality are established and enforced through local government ordinances.

The ability of local governments to implement and enforce the OSS pump-out or inspection requirements varies greatly due to the diversity of Tidewater localities. In addition, some local governments have designated jurisdiction-wide Chesapeake Bay Preservation Areas, whereas others have designated areas that are more limited. VDH now has authority to manage and require reporting of pump-outs in the Eastern Shore, Middle Peninsula, and Northern Neck regions of Virginia.

The CBPADM Regulations require each of the local governments in the Eastern Shore, Middle Peninsula, and Northern Neck regions to amend existing ordinances to include a requirement that OSS located within locally designated Chesapeake Bay Preservation Areas be either pumped out or inspected at least once every five years. Local ordinances for three localities – King and Queen County, Mathews County, and Middlesex County - do not require pump-outs locality-wide. In the Eastern Shore region, there is also the unique aspect that not all properties are located within the Chesapeake Bay watershed. Only those properties that are within the watershed are required to conduct pump-outs. VDH is implementing the pump-out program based on the established requirements in local ordinances.

Under the Chesapeake Bay Total Maximum Daily Load (TMDL), OSS pump-outs are one of three septic Best Management Practices (BMP) used to attain required nitrogen reductions. Phase I of the Watershed Implementation Plan (WIP) states OSS are assumed to load 8.92 pounds of nitrogen per person per year at the edge of the drainfield. Each pump-out provides a credit of 5 percent reduction of nitrogen. A successful pump-out program will reduce nitrogen inputs from OSS and help Virginia meet its TMDL goals.

Section H.2.2.1.3 of Appendix H: Tracking Best Management Practice Nutrient Reductions in the Chesapeake Bay Program provides the justification for this BMP, estimating that pump-outs reduce nitrogen loads by five percent (Palace et. al. 1998). In 2014, the Onsite Wastewater Treatment Systems Nitrogen Reduction Technology Expert Review Panel conducted a verification analysis of the BMP. They found the BMP to be justified for 5 percent reduction (or 1.1 lbs.) based on: i) average occupancy of 2.5 person/household for the year that the pump-out occurs, and ii) a pump-out frequency of once every five years.

In addition to providing environmental benefits of nitrogen reduction, septic tank pump-outs also provide public health benefits by reducing OSS failures. If septic tanks are not regularly pumped, solids and fats, oils, and greases (FOG) will accumulate, reducing the detention time of waste in the tank leading to suspended solids and FOG reaching the absorption area. These suspended solids and FOG can cause the absorption area to fail.

An important aspect of understanding the transition of oversight of local pump-out programs to VDH is understanding the total number of systems in those localities. As part of the HB 2322 report, VDH reviewed information from VDH databases, information from DEQ, and United States Census (U.S. Census) data to determine the estimated number of total systems within each locality. VDH then used the most conservative of the three data points to develop the estimated total number of systems. The breakdown of these three data sets and the estimated totals are shown

in Table 1 below. VDH estimated a total of 104,399 systems across all 12 applicable localities, understanding this estimate is likely greater than the actual total number of existing systems. Public sewer expansion projects, such as the Hampton Roads Sanitation Districts sewer connection project on the Eastern Shore, will reduce the total number of OSS within the program area.

Table 1 - Estimated Number of Onsite Sewage Systems

Locality	VDH Data	As Reported by Localities to DEQ	85% of U.S. Census Household[1]	Estimated Total
Accomack	7,106	n/a	***18,097***	18,097
Essex	2,117	3,600	***4,989***	4,989
Gloucester	5,082	***16,000***	11,058 [3]	16,000
King and Queen	1,620	n/a	***2,985***	2,985
King William	2,422	***6,625***	6,082	6,625
Lancaster	***7,178*** [2]	225	6,506	7,178
Mathews	3,015	3,700	***4,893***	4,893
Middlesex	2,456	***14,182***	6,257	14,182
Northampton	2,164	5,650	***6,312***	6,312
Northumberland	***9,610*** [1]	7,040	7,943	9,610
Richmond	1,916 [1]	***4,180***	3,370	4,180
Westmoreland	5,815 [1]	4,500	***9,348***	9,348
Total for Column	50,501	65,702	87,840	104,399

[1] VDH used 85% of the total number of households for this estimate given the rural nature of the regions and the heavy reliance on OSS with the exception of one locality.

[2] Includes data from both EHD and pre-VENIS Access database.

[3] Used 66% of U.S. Census reported households.

IMPLEMENTATION OF CHAPTER 486 OF THE 2022 VIRGINIA ACTS OF ASSEMBLY

BUDGET AND STAFFING

A key component of implementing a successful transition of the OSS pump-out program in the Three Rivers Health District (TRHD) and the Eastern Shore Health District (ESHD) is to ensure that adequate staffing resources are available. One of the key benefits identified during the HB 2322 report was a transition to VDH which could allow for staff dedicated solely to the pump-out program and trained specifically to deal with OSS questions and issues. The 2022 General Assembly provided VDH with $1,038,611 in fiscal year (FY) 2023 and $1,013,720 in FY 2024 and thereafter to establish, operate, and develop necessary databases and oversight for the pump-out program.

VDH budgets approximately $110,900 out of each year's total appropriation to pay for mass mailings and other public outreach efforts across both districts. These efforts can include providing promotional materials at public events, targeted social media campaigns, and sending reminder letters or postcards to property owners. The TRHD receives approximately $474,404 each year to cover the costs for four full time employees (FTEs) to implement the program in the 10 localities in the Middle Peninsula and Northern Neck regions. This budget includes staff salaries, fringe benefits, overhead (e.g. office space), travel, and training cost. All four positions were initially

filled in 2023. TRHD has experienced a 25% turnover in those positions, which is consistent with the high turnover rate VDH is experiencing in environmental health positions across the Commonwealth.

The Environmental Health Specialist (EHS) in TRHD are responsible for day-to-day implementation of the program, providing education and outreach to the public and service providers regarding the pump-out program. These staff also handle inspection, permitting, and enforcement activities related to sewage haulers, operators, and sewage lagoons in TRHD. The EHS performs OSS data entry and data clean-up in VDH's Environmental Health Database (EHD), responds to Freedom of Information Act (FOIA) requests for OSS records, and reviews and approves routing of Operation and Maintenance (O&M) records in EHD. All EHS staff are required to complete VDH's OSS training program. Lastly, the EHS staff are tasked with sending notices to property owners regarding pump-out requirements and other duties necessary to implement the program.

The ESHD receives approximately $248,957 each year to cover the costs for two FTEs to implement the program in Accomack and Northampton Counties. This budget includes staff salaries, fringe benefits, overhead (e.g. office space), travel, and training cost. ESHD filled one position in 2023, and the other in 2024. EHS entry level pay was a factor in the delay in filling both positions and is a factor in the high turnover rate of environmental health positions across the Commonwealth. These positions are now vacant, creating a 100% turnover rate for ESHD. EHS positions are critically hard to fill positions. VDH is taking action to update the Environmental Health Career Plan; however, further actions, such as increased pay for entry level positions, are necessary to address turnover rates throughout Environmental Health.

OEHS receives approximately $140,677 each year to cover the costs for one FTE to serve as a Data Analyst to assist with development and maintenance of the pump-out reporting tool. This budget includes staff salary, fringe benefits, overhead (e.g. office space), travel, and training cost. The Data Analyst position was filled in August 2023. The Data Analyst is responsible for management of the web-based reporting tool for OSS pump-outs, data analysis, and data visualizations for the OSS pump-out program.

OEHS also received approximately $63,673 in FY 2023 to provide VDH's EHD vendor funding for development costs to add the reporting tool. OEHS receives approximately $38,782 each year for payments to VDH's vendor for maintenance costs associated with the reporting tool and other pump out program related improvements to EHD.

OEHS staff report on the funding provided for the program and staff is adequate for database development staffing and vendor contracting. TRHD has received additional funds from VDH's Reduce the Burden of Water-Related Adverse Health Outcomes Grant (Reduce the Burden Grant) from the Centers for Disease Control and Prevention (CDC) to hire additional contract staff to assist with developing a complete inventory of OSS systems in EHD. Reduce the Burden Grant funding will end in 2026, at which point additional funds may be necessary to assist with completion of system inventory data entry into EHD. ESHD is working with the University of Virginia to create sewer service area maps that could potentially be used to identify properties with OSS, assisting in completing an inventory of systems.

Additional staff may also be necessary within the Middle Peninsula region in the future as the number of OSS in the program grows with new OSS installations. The 2024 Middle Peninsula Comprehensive Economic Development Strategy report estimates population growth of 11.6% by 2055 across the region.[2] The Weldon Cooper Center for Public Service estimated a slight reduction – 0.76% - of the population in the Northern Neck by 2040, which is similar to recent trends for the Eastern Shore's relatively flat population growth.

Another important factor for funding that must be considered moving forward is increased funding assistance for homeowners to complete pump outs. Property owners have reported fees as high as $875 for a single pump out due to limited sewage disposal facility options discussed below. The use of civil penalties or other enforcement mechanisms may have limited effect on property owners that simply cannot afford increased pump out cost. All three Planning District Commissions in the region have a history of administering grant programs to assist with pump out costs; further discussion is needed with the Planning District Commissions to calculate the increased need and their capacity to take on additional grant projects.

WEB-BASED REPORTING TOOL

One of the first tasks for VDH following passage of Chapter 486 of the 2022 Virginia Acts of Assembly was to develop a web-based reporting tool for OSS pump out. Prior to Chapter 486 of the 2022 Virginia Acts of Assembly, VDH already had a web-based reporting tool, called the Operation and Maintenance (O&M) Portal, for alternative onsite sewage systems (AOSS). The O&M Portal was accessible only to licensed Master Alternative Onsite Sewage System Operators to submit required maintenance reports for AOSS statewide. Reports submitted through the web-based reporting tool are directed to EHD, where local health district (LHD) staff review and approve each report. The AOSS reporting tool includes an option to enter pump-out information but also includes other required fields not applicable to COSS. A new tool was necessary to meet the requirements of Chapter 486 of the 2022 Virginia Acts of Assembly for reporting of all OSS pump-outs in the TRHD and ESHD.

In early 2023, the Division of Data Management and Process Improvement (DMPI) worked with VDH's vendor, LHD staff, and other stakeholders to develop the framework for a COSS O&M reporting system. The AOSS O&M tool was used to help develop the framework. When an operator or sewage hauler logs into the VDH MyHD portal they have an option to submit either a COSS or AOSS report; either option includes the ability to document an OSS pump-out. The operator or sewage hauler is required to also report the locality where the OSS is located, the date of the site visit, and certify the status of the system upon completion of the visit. There is no fee for submission of COSS reports, unlike AOSS reports which require a $1 fee per the Code of Virginia. LHD staff then view and approve the report by attaching the record to the applicable property. The new COSS O&M reporting tool went live on July 1, 2023.

The COSS O&M reporting tool has received 5,980 COSS pump-out reports associated with TRHD and ESHD since going live, and over 73,000 COSS pump-out reports from other districts, which represent historical pump-out data imported through the COSS O&M reporting tool. Table

[2] https://www.mppdc.com/articles/reports/MPPDC%20CEDS%20update%20-%20FINAL%20APPROVED_Sep2024.pdf

2 shows the number of COSS pump-out reports submitted by region from July 1, 2023, to September 17, 2025.

Table 2 - Conventional System Pump-Outs Reported by Region

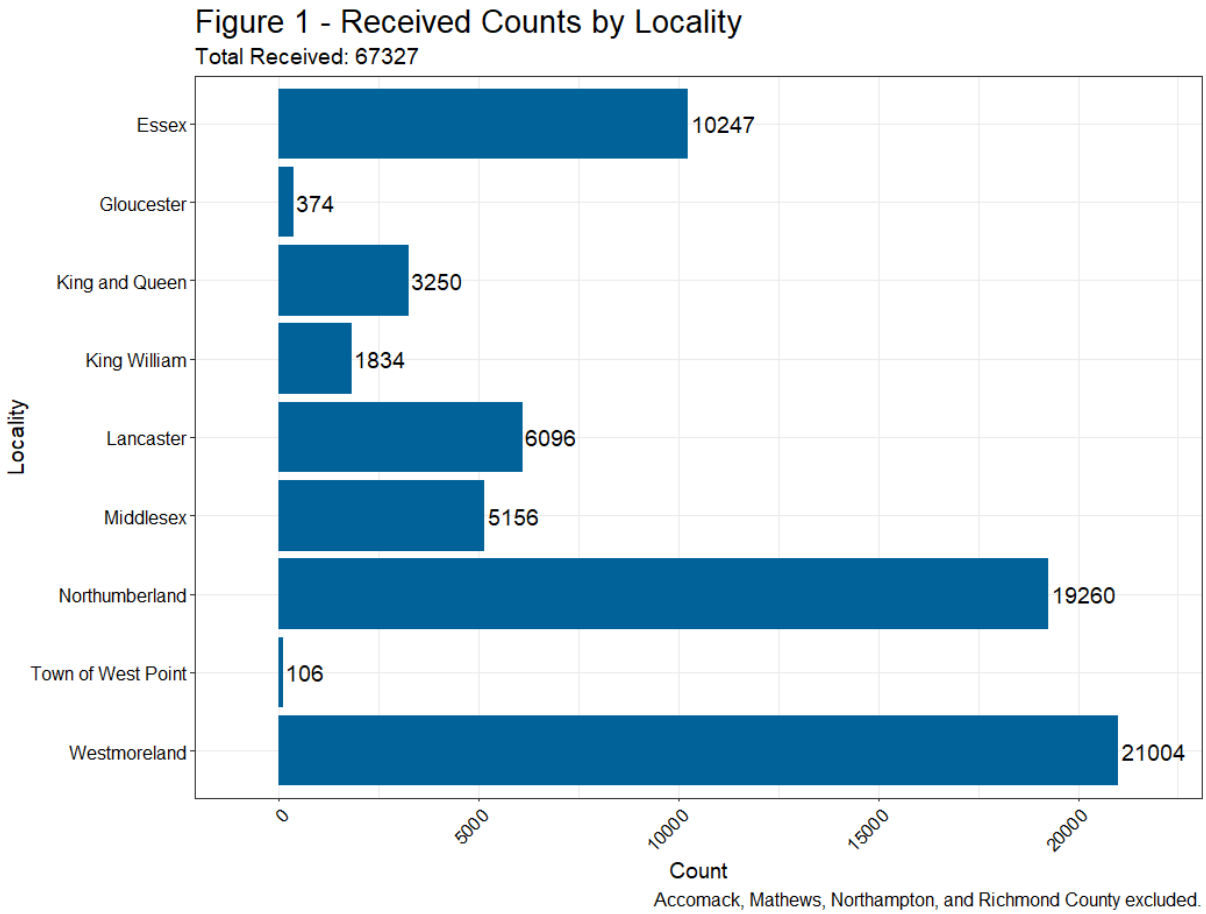
Region	Number of Reports
Eastern Shore	436
Middle Peninsula	3,256
Northern Neck	2,288

Throughout 2025, DMPI has worked with VDH's vendor and TRSD staff to enhance the O&M Portal for clarity and usability, specifically the option to bulk add maintenance report submissions. With the addition of the COSS O&M reporting tool, several fields applicable to COSS were added to the O&M Portal. However, several fields had similar or duplicative field labels to the existing AOSS fields, making the fields within the bulk add interface ambiguous. Furthermore, it was found that if operators attempted to bulk add both COSS and AOSS submissions, the bulk add interface would halt submission as it was unable to correctly map the fields. DMPI has since updated duplicate or ambiguous field labels so that it is clearer which fields are intended for COSS or AOSS. To further enhance the bulk add interface, DMPI is working with VDH's vendor to add downloadable import templates directly within the O&M Portal. Currently, the bulk add interface allows operators to enter each report separately within the interface or upload data from a file. Without a premade import template, operators and TRHD made their own templates. With the assistance of TRHD, DMPI created three import templates to be added to the bulk add interface: one for all O&M Portal fields (both COSS and AOSS), COSS-only fields, and AOSS-only fields.

INVENTORY OF SYSTEMS

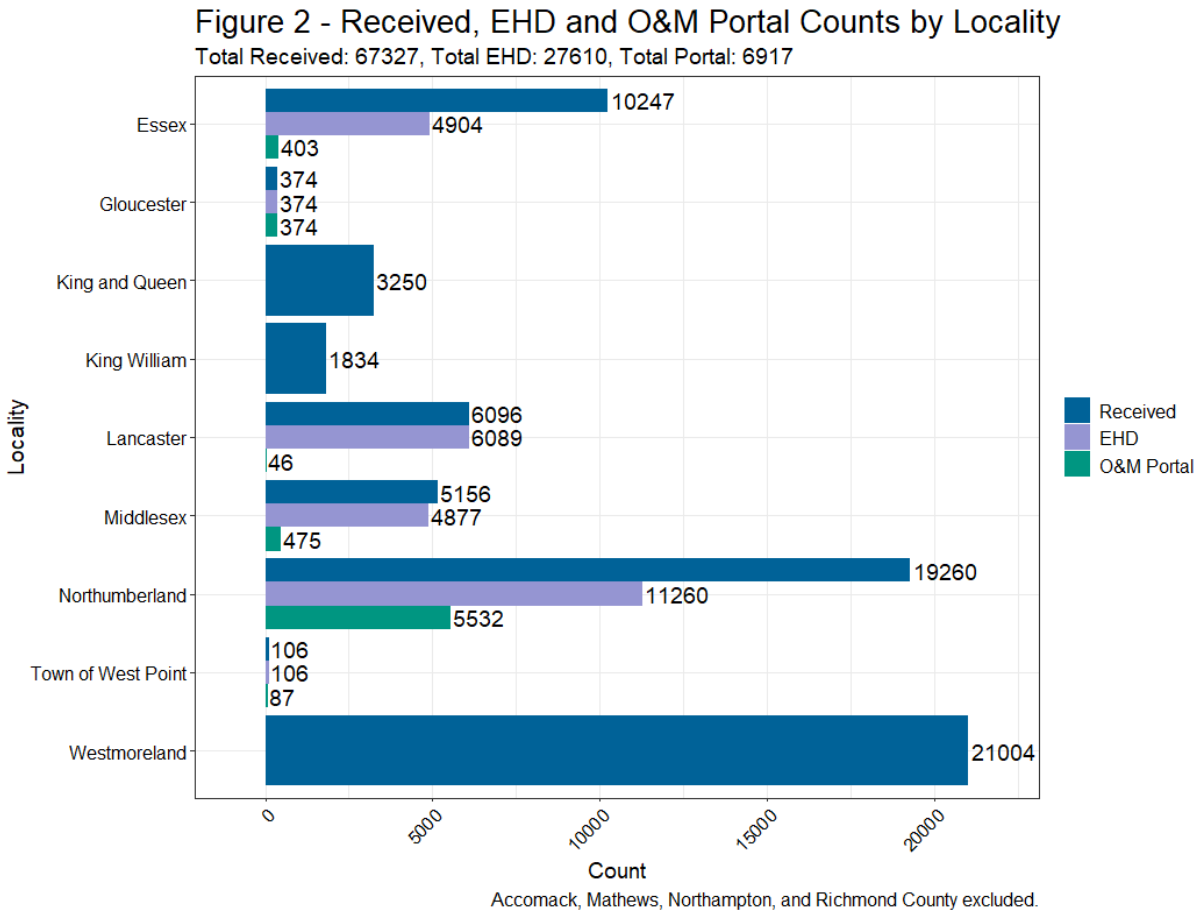
VDH began using an electronic database to track OSS permits and inspections in 2003. Over 492,000 OSS records have been created in the electronic database since 2003; however, VDH estimates there are more than 1.1 million OSS serving properties in Virginia. Most OSS records are only available in hard copy format at LHDs. VDH sought existing electronic pump-out records (legacy data) from localities in the program area with the goal of using this data to create electronic records for OSS not currently found in EHD. VDH received legacy data from Accomack, Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, Northampton, Northumberland, and Westmoreland Counties.

All legacy data was reviewed by DMPI for quality and completeness. Data was deemed complete only when it included a system location and previous pump-out data necessary to transfer information into EHD. Legacy data from Accomack, Mathews, and Northampton was deemed incomplete for transfer into EHD as it did not contain all the required data points. Figure 1 shows the number of legacy records received per locality.



Some localities provided several thousand legacy records, which would take thousands of hours to manually input into EHD. A Bulk Import Utility was developed within EHD to transfer legacy data from localities in a timely and streamlined manner. DMPI identified issues during the initial test of the Bulk Import Utility with duplicate record validation. Duplicate record validation was intended to prevent new records from being created through the import when there is already an existing record in EHD matching the imported information. If left uncorrected, the Bulk Import Utility tool would create data quality issues within EHD. DMPI worked with VDH's vendor to correct the duplicate record validation issue, which took over a year to complete and is still pending final testing. DMPI staff prepared locality data for bulk import into EHD while the Bulk Import Utility functionality was being corrected.

DMPI created crosswalks between legacy data and the import templates to match data fields, identify data cleanup needs, and split or concatenate necessary fields to fit the import templates. An import template was required for both EHD and the O&M Portal due to the structure of EHD; all system location and design information are imported in EHD while all pump-out information is imported into the O&M Portal. After this, DMPI staff processed and converted the legacy data to fit the import templates using RStudio. Figure 2 shows the number of records able to be imported into EHD and the O&M Portal in comparison to the number of legacy records received per locality. Legacy data was retained for EHD import if a valid system location was included and retained for O&M Portal import if a valid system location and a valid pump-out date were included. Final EHD and O&M Portal counts are still pending for King and Queen, King William, and Westmoreland.



DMPI staff then used the processed data to create import files for both EHD and the O&M Portal for each locality. DMPI worked closely with TRHD to ensure data integrity was maintained throughout this process. Once all corrections to the Bulk Import Utility are complete, these files will be imported into EHD and the O&M Portal respectively.

ESHD is using the data submitted by Accomack and Northampton Counties that could not be uploaded through the Bulk Import Utility to assess focus areas for pump-out reminder letters. Both localities provided excellent parcel data, which is a critical component of updating EHD records. Additionally, ESHD staff manually created a spreadsheet for homes for several townships on the bayside where parcel data was incomplete.

DATA ENTRY

TRHD staff, including contractors supported through the CDC Reduce the Burden Grant, are entering data into EHD to build an inventory of existing OSS permits issued prior to about 2003. They are building the inventory using geographic information systems, property records, tax map books, and Adobe software to review physical files, scan hard copy records, and then enter them into EHD. TRHD's goal for this work is to create as complete an inventory of existing systems in EHD as possible. TRHD data entry is focused on installed systems to ensure there is a specific facility in EHD for every maintenance report received.

The TRHD Environmental Health Pump-Out Supervisor created a staff job aid to ensure consistency in workflow. The Pump-Out User Guide walks database users through the legacy records creation process. The Pump-Out User Guide includes detailed descriptions of which scanned digital data needs to be collected and a step-by-step tutorial on how to create the EHD record, as well as useful job aids from DMPI. Additionally, there are examples of every type of permit encountered since the 1950's, what constitutes a complete record, and how each of these permits should be entered into EHD.

The process begins by using the established workflow to scan existing hard copy permit records. TRHD saves scanned records with a naming convention identifying the county of origin, the tax map number, and whether the record is an OSS, private well, or both. Once the scanning project is completed, TRHD will have an inventory containing the digital files for all installed systems and wells in the district. The digital record will be in addition to the EHD records created with these files.

The next step for THRD staff in the data entry process is creating or modifying EHD records, then attaching digitized permits to the EHD facility record. A specific workflow is followed for these records to ensure consistency in data entry and to make sure adequate data is included to describe the system. The digital permit file is uploaded to EHD once the record is created. When staff encounter properties that do not have existing physical permit files, permit records are created in EHD using information from available property records. TRHD staff also encounter situations where hard copy permit records do not provide adequate information to trace the record back to a respective 911 address or tax map number. Scans of these records are maintained in a separate file folder for further property research at a later time. Overall, this is a time-consuming process and staff and contractors are met with various challenges, which are further discussed in this report.

ESHD is uploading OSS records from hard copy permits as pump-out records are received. Chapter 486 of the 2022 Virginia Acts of Assembly requires submission of pump-out reports through VDH's web-based reporting tool; however, some sewage haulers and homeowners are still sending reports directly to ESHD. ESHD staff are entering data from those reports manually into EHD. As noted previously, the majority of OSS do not include records in EHD. This means that ESHD staff are also creating system records in EHD using existing hard copy records so that pump-out reports can be connected to the system. An internal VDH job aid on legacy data entry was provided in March 2025 to assist in the uniformity of data entry for these hard copy records.

DATA CLEAN UP

EHD data cleanup is perhaps the most time-consuming part of the data collection and inventory creation process. The numerous revisions and additions to EHD over the 22 years VDH has used the data system resulted in existing records requiring clean up to meet new data entry standards. Pump-out program staff encounter a broad range of data clean up issues in EHD that must be resolved up front before new data entry can occur. These issues include removal of duplicate records, previous data entry mistakes, and 911 address or tax map number corrections.

External factors also impact the need for data clean up in EHD. The Hampton Roads Sanitation District (HRSD) is expanding public sewer access on the Eastern Shore which also impacts OSS data records. ESHD is modifying EHD records to show OSS as being connected to public sewer

as they learn of a property connecting to sewer. Similarly, EHD records are updated to note an OSS as abandoned when a home is demolished or abandoned. This ensures that owners of properties with abandoned OSS do not receive erroneous letters regarding pump out requirements. EHSD staff are also actively conducting data entry clean up as property owners respond to pump out letters sent by the district. Amendments to the Sewage Collection and Treatment Regulations (9VAC25-790) took effect on July 30, 2025, requiring permitted sewage treatment works within the Chesapeake Bay Watershed to report to the DEQ the number of OSS taken off-line and connected to the sewerage system the previous calendar year. Access to those records would streamline VDH's process to update abandoned OSS records in EHD.

VDH has also undertaken statewide data cleanup efforts that will provide benefits for the pump-out program. In 2024, LHDs were asked to conduct data clean up on three specific data issues that require the review of individual records to be completed. The first was to review all EHD records where the system was shown as a COSS but there was also a treatment device included in the record; a treatment device would make the system an AOSS. The second was to review all EHD records where the system was shown as a COSS, but the site was permitted for treatment level 2, or treatment level 3 indicating the system is an AOSS. The third was to review all EHD records where the data did not indicate whether the system was a COSS or AOSS.

Significant data cleanup progress has been made for all three data issues noted above. For items 1 and 2, affected records needing data cleanup have decreased from 955 to 267 and from 1,097 to 376, respectively. In the third data cleanup area, DMPI discovered several thousand partial records within EHD for sewage treatment systems. These partial records were created during data import into the new database platform in 2019 but did not contain sufficient information to properly identify a sewage system location or additional information. These partial records were deleted in bulk, removing 18,834 invalid records from the third data cleanup category of records with missing or incomplete data to identify a system as COSS or AOSS.

SEWAGE HAULERS

The OSS pump-out program cannot succeed without an adequate number of properly permitted sewage haulers to transport the sewage to approved disposal facilities. Any person who removes or contracts to remove and transport the contents of a septic tank by vehicle must have a written sewage handling permit issued by VDH. The permitting process includes an inspection of the truck, and review of the proposed or existing disposal facilities. Sewage handling permits must be renewed each year.

TRHD has issued sewage handling permits to 17 different businesses and ESHD has issued sewage handling permits to eight different businesses. Four of the sewage handlers permitted by ESHD are located in Maryland. It is important to note that sewage haulers permitted in other Health Districts are permitted to operate their business in TRHD and ESHD. Sewage haulers typically have their trucks permitted in the locality where their business is located.

Over the last two years TRHD has continued to use the sewage handling permitting process as an opportunity to educate operators on the new laws and requirements to submit pump-out records via the web-based reporting tool. The TRHD was successful in their advocacy for proper Virginia Department of Profession and Occupational Regulation licensing and assisted several haulers with

obtaining their Master Conventional Onsite Sewage System Operator Licenses. Additionally, TRHD implemented sewage handling permit decals for every permitted vehicle to aid in tracking current inspections and sewage handling permits. These decals are renewed each year and feature different colors, similar to Virginia's state vehicle inspection stickers. TRHD issued a 5-year Renewable Operation Permit for an upgraded sewage lagoon with supernatant disposal via an AOSS and land application through DEQ's Virginia Pollution Abatement permitting. The permit required close coordination with the owner to satisfy completion requirements for the facility. There is an ongoing effort by TRHD, with the assistance of DEQ, to pursue proper permitting of the remaining two anaerobic lagoons that both rely solely on land application to manage their septage.

TRHD staff created a sewage handling vehicle inspection form to more efficiently perform inspections and communicate issues of non-compliance with the operators. TRHD staff noted that outreach needs to extend beyond their local sewage haulers to ensure that all sewage haulers potentially serving jurisdictions under the pump-out program submit the required report. To date, nearly two dozen operators in adjacent health districts have been notified through email or mailed correspondence of these updated laws and requirements for pump outs and electronic reporting. TRHD suggested that VDH develop a publicly available tool showing the permit and inspection status of all sewage handling permits statewide. A link to the tool could be shared with property owners in pump-out reminder letters and other outreach efforts.

ESHD issues a single permit to the sewage hauler. The permit lists the vehicle license plate. Attached to the VDH permit is the application the hauler is required to fill out every year, and includes a list of trucks with their make and model, license plate, vehicle number (if applicable) and tank liquid holding size. Reminders are sent annually to the permitted haulers in November to have all trucks inspected onsite at the Accomack office before January 1. The last two rounds of reminders ESHD sent have included information on direct reporting of pump outs and instructions on how to access the reporting portal. Several haulers reported that if the online reporting requirement were strictly enforced, they would simply stop providing service to areas where reporting is required. Sewage haulers in ESHD are currently only submitting reports when an owner receives a letter seeking an update on the status of their five-year pump out.

In discussions between THRD, ESHD, and OEHS on sewage hauler permitting, it was brought to light that there are inconsistencies across the Commonwealth in how LHD's permit haulers. Some LHD's issue a single permit to the hauler which covers all the trucks covered by their operation, while others issue an individual permit for each truck. The correct process is to issue a single permit to the sewage hauler for all trucks included in their operation. OEHS will be recommending revisions to the Sewage Handling and Disposal Regulations to clarify this point and to require that each truck provide a unique identifier visible to the public to be included on the application for the overall sewage handling permit.

SEWAGE DISPOSAL

There are more than 50 sewage facilities operated by localities or regional sanitation districts in the Eastern Shore, Middle Peninsula, Northern Neck, and surrounding Health Districts that have a Virginia Pollution Discharge Elimination System Permit (VPDES) from DEQ. There are also several privately owned sewage facilities within these three regions. Unfortunately, many of these

facilities do not accept septage from septic tank pump-outs. Even for facilities capable of receiving septage from sewage haulers, some will not accept the waste if it was generated outside of the locality.

In 2021, VDH found there to be adequate capacity for disposal of septage from the Eastern Shore, Middle Peninsula and Northern Neck; however, that capacity is primarily located in adjacent regions (e.g. Maryland for Eastern Shore). On October 15, 2024, the Stafford County Department of Utilities informed sewage haulers that Stafford County would no longer accept sewage generated outside of the county starting January 1, 2025. Stafford County implemented this restriction as both of their Wastewater Treatment Plants (WWTP) are undergoing major construction to upgrade their facilities and this restriction will apply at least until the completion of that multi-year construction project. Stafford County served as a primary disposal facility for many sewage haulers collecting waste in the Northern Neck region. As a result, sewage haulers and homeowners are reporting increased costs for pump outs as haulers have to drive farther to dispose of their septage.

The notice from Stafford County is part of a trend both statewide and nationally of WWTP restricting or limiting access to sewage haulers. The National Association of Wastewater Technicians recently released a white paper on the National Septage and Portable Sanitation Crisis.[3] There are disposal facility options for those conducting pump-outs in the Northern Neck, but they require additional driving distances and increased tipping fees. The Middle Peninsula has nearly a dozen sewage hauling companies servicing the area, but only two disposal facilities are within reasonable driving distances. One of these facilities is a sewage lagoon that is at or near its permit capacity and is unable to provide any additional sewage haulers dumping privileges. The other facility is the HRSD York River Treatment Plant, which has a more expansive permit capacity but higher tipping fees.

TRHD has one sewage lagoon in Essex County that was never completed and is therefore unpermitted. This facility is in the westernmost part of the district and would be more accessible for the Northern Neck and some Middle Peninsula sewage haulers. Additionally, there are two sewage lagoons in Richmond County. It is worth mentioning that the use of these lagoons is exclusive to the owners, who also own the sewage hauling company that are using these facilities. They do not allow other haulers to use the facility. Lastly, a sewage lagoon with supernatant disposal in Kilmarnock currently has limited use by one large septic company with only one other known hauler permitted access to the facility. These limitations on access to disposal facilities within a short diving distance increase the cost of OSS pump-outs throughout the region.

In response to this ongoing trend of WWTPs or other approved discharge facilities restricting or limiting access to sewage haulers, there was initially a renewed interest in obtaining permits for new sewage lagoons in the region. There are two different types of lagooning processes. The first involves anaerobic lagooning, wherein the septage, which includes all the waste in the lagoon, is "nondischarging" and is land applied through special permitting through DEQ. In this instance, DEQ is solely responsible for the oversight of these facilities. The second process involves supernatant - the wastewater layer between the sludge at the bottom of the lagoon and the scum on the surface - disposal by OSS with land application of the remaining sludge. These facilities share

[3] https://www.nawt.org/docs/NSDCA_-_White_Paper_Final.pdf

oversight, with VDH being responsible for permitting the overall facility and DEQ responsible for permitting the land application. The process to permit and construct a new lagoon is lengthy, and the cost of constructing a new lagoon is a significant barrier to development. Lagoons also have a potential impact on the environment and land application of sewage is not without risk.

Long-term solutions to improve access to sewage disposal facilities in the TRHD and ESHD are needed. Increased pump-out costs can be a burden for some homeowners to comply with pump-out requirements. TRHD has received complaints from homeowners expressing concern that pump out costs are reaching unmanageable levels, with some reports of pump outs costing up to $875 for a 1,000-gallon tank serving a three-bedroom home. As previously mentioned, haulers are forced to drive further distances and are subject to higher tipping fees at a limited number of WWTPs. Several septic companies use tanker trucks to haul the sewage to facilities such as Hopewell and HRSD. This then allows them to pump more tanks in a workday because they can offload their pump out vehicles into the tankers and continue onto the next job. One sewage hauler mentions he drives between one and a half to two hours out of his way to tip at facilities with lower fees. Providing more disposal facility options with shorter driving distances for sewage haulers could decrease those costs.

PUBLIC OUTREACH

TRHD has developed informational postcards to educate homeowners about OSS, how pump-outs help the OSS, and the requirements for pumping. An initial 2,000 postcards (1,000 in the Middle Peninsula; 1,000 in the Northern Neck) were mailed out to households in March 2025. As a result of the mailing total, O&M reports increased remarkably in April, May, and June, with some localities seeing approximately 13% increases in reporting the first month following the mailing. The mailing also assisted in developing a reproducible workflow and helped gauge homeowners' responses to mailings. This information was used to plan for the most recent and larger-scale outreach strategy: printing and mass mailing 10,000 postcards through a specialized state vendor-approved company in August 2025. Targeted counties for this mass mailing were Middlesex and Northumberland.

Using county property data, filtering duplicates, properties with no improvements, and households on sewer, 5,000 addresses per county were selected. In addition, TRHD developed new eye-catching postcards featuring native wildlife commonly observed in and around the district's rivers and the Chesapeake Bay with the following heading: "PUMP, INSPECT, PROTECT – A Healthy Septic System = A Health Ecosystem". Examples are provided in Appendix C. The postcards further urged homeowners to "Protect the Bay the Three Rivers Way" and created a relatable element for homeowners by making the connection between pumping their OSS and helping to protect the environment. VDH's Office of Communications Senior Graphic Designer was instrumental in reviewing and revising the initial prototypes to ensure agency branding guidelines were followed, delivering a final quality product prior to printing and distribution.

TRHD also overhauled their existing public outreach materials which hadn't been refreshed since the 1990's, creating new flyers and brochures with both striking river themed scenery and compelling catchphrases to capture the reader's attention. These deliverables were handed out at planned public outreach events. Several additional public outreach tools are currently planned,

including social media posts, additional postcards, flyers, and brochures. TRHD participated in a four-day fair in Richmond County, as well as a weekend community event in the town of Urbanna. A booth is reserved for another two-day festival in Urbanna for November 2025. There will be at least one more upcoming community events that TRHD will attend in the fall for the Northern Neck region to support community outreach efforts.

TRHD staff have worked side by side with local sewage haulers, educating them on the process of entering pump-out records into the O&M portal and encouraging them to follow these reporting requirements. TRHD Environmental Health Pump-Out Supervisor attended and presented at the Chesapeake Bay and Rivers Association of Realtors (CBRAR) membership meeting in June of 2025, educating the local realtor association about the new pump out requirements and VDH's Freedom of Information Act request tool, NextRequest. Staff also provided a VDH perspective on new real estate inspection requirements. CBRAR is the local REALTOR® association for Gloucester, Mathews, Middlesex, the portion of King and Queen County known as the Buena Vista District and the portion of King William County known as West Point. This presentation was further featured in the Gloucester-Mathews Gazette Journal in July. To date, TRHD staff have been working with local county officials to ensure that homeowners calling these local offices to inquire about pump out questions and to report pump outs, who are unaware of the oversight changeover, can directly reach TRHD pump out staff.

ESHD began sending letters to homeowners in Northampton County in April 2024 and began sending letters in Accomack County in July 2024. ESHD reported a response rate of approximately 25% for the roughly 2,000 letters sent in April 2024. The letters notify homeowners of the transition of the regulatory authority for pump-outs from the localities to VDH. The letters remind the homeowner of their responsibility to have their tanks pumped out every five years and provides a list of licensed sewage haulers in the area and ESHD contact information for any questions or additional information to update VDH records. In addition to sending letters to homeowners, ESHD staff are volunteering at community events to provide outreach and education on pump-out requirements and a list of local sewage haulers.

ESHD staff has provided information to local sewage haulers requesting pump-out records to be uploaded to the O&M portal. ESHD staff have also reached out to stakeholders, such as realtors, sewage contractors, builders, building officials, and local organizations to spread the word about pump-out requirements. Information regarding pump-out requirements is also being sent with OSS operation permits. Staff reviewing safe, adequate, and proper reviews pursuant to §32.1-165 of the Virginia Code are also requesting pump-out documentation as part of the review process. VDH must find that safe, adequate, and proper sewage treatment is or will be made available to a building for human occupancy before a building permit can be issued.

VDH staff will be presenting to operators at the 2025 Virginia Onsite Wastewater Recycling Association conference on how to use a cell phone to submit pump out reports.

ENFORCEMENT

Chapter 486 of the 2022 Virginia Acts of Assembly requires VDH to make recommendations to improve compliance with OSS pump out requirements. Currently, external factors are having significant impacts on the cost of pump outs within THRD and ESHD. Prior to taking any steps to

enhance enforcement against owners failing to report their pump outs, VDH recommends that a study be conducted to assess improvements to disposal facility access. Funding may be needed to encourage construction of new disposal facilities and to assist existing facilities with needed upgrades, expansions, and repairs. VDH recommends that a further study be conducted by all interested parties to evaluate the feasibility to provide additional funding to expand access at existing disposal facilities, add new disposal facilities at existing WWTPs or new lagoons, and study the potential to construct regional offloading facilities for sewage haulers.

ADDITIONAL BENEFITS

The transition of oversight of the OSS pump-out program to the TRHD and ESHD has resulted in many additional side benefits. First, the web-based reporting tool is accessible to licensed operators and sewage haulers statewide. VDH has received nearly 79,000 COSS reports statewide since going live on July 1, 2023, from 70 different localities. Most reports were submitted from localities within the Chesapeake Bay Watershed. This is critical because every OSS pump-out reported to VDH counts towards Virginia meeting its WIP III goals, even in localities outside of the CBPA.

The additional staffing for TRHD and ESHD is also having a significant positive impact on oversight of AOSS O&M requirements. Licensed operators can report pump-outs through the AOSS reporting tool; therefore, pump-out program staff must also assist in review and oversight of those reports. In July 2023, TRHD had only 29% of their AOSS operation and maintenance reports reviewed. By May 2024 – less than one year later - TRHD had improved that to 93% of their AOSS operation and maintenance reports being reviewed and approved. Likewise, the ESHD improved from 69% of AOSS reports reviewed in July 2023, to 99% in December 2023. Review and approval of AOSS operation and maintenance reports is critical for Virginia to continue to receive nitrogen reduction credits for each system in the WIP III. TRHD and ESHD receive more than 1,700 AOSS reports per year, and this significant improvement is a benefit of the OSS pump-out program oversight.

CHALLENGES

A significant challenge in the import of legacy data is the time needed to correct the Bulk Import Utility in EHD. This correction is needed to avoid duplicate data entry and ensure data integrity is maintained. DMPI has gone through six rounds of user acceptance testing of the upgraded functionality with the database vendor, and the final update is pending a round of testing in the production environment. Delays from the vendor and the utility failing several rounds of user acceptance testing have pushed this tool beyond the expected completion date.

One of the first challenges was hiring staff for the program. As noted previously it took until July 2024 for all pump-out program positions to be filled. There are many factors that impact the hiring process, including an overall high rate of turnover in Environmental Health positions statewide. This meant that OEHS, TRHD, and ESHD were trying to fill vacant positions for existing programs at the same time positions for this new program needed to be filled. The high turnover rate for Environmental Health positions is impacting these program positions and has resulted in an overall 42% turnover rate.

The pump-out program is also new, and there was a period of learning and developing the program as staff were onboarded. This included the need to set up new workspaces and coordinate the logistics of having staff spread across multiple localities. These new staff also had to learn to navigate the nuanced differences across multiple localities. For example, local property records platforms are vastly different across the program area. With high turnover rates, this means as positions are refilled the THRD and ESHD leadership teams will have to repeat the previous training for new employees.

As previously mentioned in the data entry section of this report, a written procedure was created to ensure staff are consistently entering the same information and establishing similar workflows. Scanning and uploading records continues to be time and labor intensive, even with clear procedures for processing. It is also extremely difficult to create a written procedure that covers every possible scenario with tens of thousands of records, meaning there are one-off data entry situations that require significant time to complete. Often, before staff and contractors can even begin scanning, they must clean up the physical hard copy file. Other roadblocks that have had to be overcome during the scanning process include properties that are unidentifiable without further intensive research.

Network latency issues in the Gloucester and Northumberland County Health Departments, where pump-out staff are based, create additional challenges to the data entry process. EHD is a cloud-based platform, meaning network latency extends the time frames for each record entry.

As noted earlier, the lack of data on existing hard copy OSS permits creates a challenge in completing the inventory of all OSS in TRHD and ESHD. Records lacking property identification or other required fields consume valuable resource time to research alternative data sources to complete EHD data entry. The variability of applicability of pump out requirements across the program area also creates a challenge, with pump out requirements applying statewide in some localities and only within designated areas in others.

The backbone of the program is reliant on several small businesses completing hundreds of online reports. VDH is aware that there are still a significant number of pump-outs occurring that are not reported through the web-based reporting tool. While doing annual inspections of sewage handling vehicles, staff reminded haulers of the Code requirements and in subsequent follow-up discussions provided a brief overview of the process. This initial outreach had a limited impact on TRHD; therefore, staff conducted longer one-on-one sessions with each sewage hauling company. The one-on-one approach enhances the connection between VDH and the service provider; while highlighting the challenges these companies face in their good-faith efforts to implement these changes. VDH will need to devote more time and effort to this process to ensure its key partner – the sewage haulers – have the training they need to submit required reports.

The need for increased financial assistance for low-income homeowners and increased accessibility of disposal facilities is also a critical challenge for the pump-out program. The three planning district commissions serving the program area have a history of providing a variety of programs to assist homeowners in need, but with enhanced enforcement of pump-out requirements will come increased demands for assistance. ESHD has received significant feedback from homeowners' reporting difficulty in funding the pump-out. As noted, funding may also be necessary to expand existing and add new disposal facility options within the program area.

CONCLUSION

There are a number of significant challenges to fully implement the pump-out program and meet WIP III pump-out goals. VDH has made significant strides with initial implementation; however, high turnover rates of Environmental Health staff significantly hinder that progress. VDH has continued to assess challenges with program stakeholders, and this report presents several specific recommendations to address those challenges. TRHD and ESHD have established the framework for successful programs within their districts, and VDH is seeing the benefit. Over 5,980 COSS pump-outs were reported in the first few years of the online reporting tool being live thanks to sewage haulers across the Commonwealth. Additionally, TRHD and ESHD have entered tens of thousands of new OSS records into EHD and conducted data cleanup of thousands of existing OSS records in EHD. VDH will continue to assess homeowner response to pump out notification letters, including the observed increase in compliance with pump out requirements following notification letters. VDH will use that to inform internal enforcement and education strategies to improve compliance with the five-year pump out requirement; however, VDH recommends that a study be conducted first to evaluate options to increase disposal facility access in hopes of reducing pump out cost prior to taking significant enforcement actions.

APPENDIX A – CHAPTER 486 OF THE 2022 ACTS OF ASSEMBLY

Be it enacted by the General Assembly of Virginia:

1. That §§ **32.1-164** and **62.1-44.15:72** of the Code of Virginia are amended and reenacted as follows:

§ **32.1-164**. Powers and duties of Board; regulations; fees; onsite soil evaluators; letters in lieu of permits; inspections; civil penalties.

A. The Board shall have supervision and control over the safe and sanitary collection, conveyance, transportation, treatment, and disposal of sewage by onsite sewage systems and alternative discharging sewage systems, and treatment works as they affect the public health and welfare. The Board shall also have supervision and control over the maintenance, inspection, and reuse of alternative onsite sewage systems as they affect the public health and welfare. In discharging the responsibility to supervise and control the safe and sanitary treatment and disposal of sewage as they affect the public health and welfare, the Board shall exercise due diligence to protect the quality of both surface water and ground water. Upon the final adoption of a general Virginia Pollutant Discharge Elimination permit by the State Water Control Board, the Board of Health shall assume the responsibility for permitting alternative discharging sewage systems as defined in § **32.1-163**. All such permits shall comply with the applicable regulations of the State Water Control Board and be registered with the State Water Control Board.

In the exercise of its duty to supervise and control the treatment and disposal of sewage, the Board shall require and the Department shall conduct regular inspections of alternative discharging sewage systems. The Board shall also establish requirements for maintenance contracts for alternative discharging sewage systems. The Board may require, as a condition for issuing a permit to operate an alternative discharging sewage system, that the applicant present an executed maintenance contract. Such contract shall be maintained for the life of any general Virginia Pollutant Discharge Elimination System permit issued by the State Water Control Board.

B. The regulations of the Board shall govern the collection, conveyance, transportation, treatment and disposal of sewage by onsite sewage systems and alternative discharging sewage systems and the maintenance, inspection, and reuse of alternative onsite sewage systems. Such regulations shall be designed to protect the public health and promote the public welfare and may include, without limitation:

1. A requirement that the owner obtain a permit from the Commissioner prior to the construction, installation, modification or operation of a sewerage system or treatment works except in those instances where a permit is required pursuant to Chapter 3.1 (§ **62.1-44.2** et seq.) of Title 62.1.

2. Criteria for the granting or denial of such permits.

3. Standards for the design, construction, installation, modification and operation of sewerage systems and treatment works for permits issued by the Commissioner.

4. Standards governing disposal of sewage on or in soils.

5. Standards specifying the minimum distance between sewerage systems or treatment works and:

a. Public and private wells supplying water for human consumption,

b. Lakes and other impounded waters,

c. Streams and rivers,

d. Shellfish waters,

e. Ground waters,

f. Areas and places of human habitation,

g. Property lines.

6. Standards as to the adequacy of an approved water supply.

7. Standards governing the transportation of sewage.

8. A prohibition against the discharge of untreated sewage onto land or into waters of the Commonwealth.

9. A requirement that such residences, buildings, structures and other places designed for human occupancy as the Board may prescribe be provided with a sewerage system or treatment works.

10. Criteria for determining the demonstrated ability of alternative onsite systems, which are not permitted through the then current sewage handling and disposal regulations, to treat and dispose of sewage as effectively as approved methods.

11. Standards for inspections of and requirements for maintenance contracts for alternative discharging sewage systems.

12. Notwithstanding the provisions of subdivision 1 above and Chapter 3.1 of Title 62.1, a requirement that the owner obtain a permit from the Commissioner prior to the construction, installation, modification, or operation of an alternative discharging sewage system as defined in § **32.1-163**.

13. Criteria for granting, denying, and revoking of permits for alternative discharging sewage systems.

14. Procedures for issuing letters recognizing onsite sewage sites in lieu of issuing onsite sewage system permits.

15. Performance requirements for nitrogen discharged from alternative onsite sewage systems that protect public health and ground and surface water quality.

16. Consideration of the impacts of climate change on proposed treatment works based on research and analysis from the Center for Coastal Resources Management at the Virginia Institute of Marine Science at The College of William and Mary in Virginia.

C. A fee of $75 shall be charged for filing an application for an onsite sewage system or an alternative discharging sewage system permit with the Department. Funds received in payment of such charges shall be transmitted to the Comptroller for deposit. The funds from the fees shall be credited to a special fund to be appropriated by the General Assembly, as it deems necessary, to the Department for the purpose of carrying out the provisions of this title. However, $10 of each fee shall be credited to the Onsite Sewage Indemnification Fund established pursuant to § **32.1-164.1:01**.

The Board, in its regulations, shall establish a procedure for the waiver of fees for persons whose incomes are below the federal poverty guidelines established by the United States Department of Health and Human Services or when the application is for a pit privy or the repair of a failing onsite sewage system. If the Department denies the permit for land on which the applicant seeks to construct his principal place of residence, then such fee shall be refunded to the applicant.

From such funds as are appropriated to the Department from the special fund, the Board shall apportion a share to local or district health departments to be allocated in the same ratios as provided for the operation of such health departments pursuant to § **32.1-31**. Such funds shall be transmitted to the local or district health departments on a quarterly basis.

D. In addition to factors related to the Board's responsibilities for the safe and sanitary treatment and disposal of sewage as they affect the public health and welfare, the Board shall, in establishing standards, give due consideration to economic costs of such standards in accordance with the applicable provisions of the Administrative Process Act (§ **2.2-4000** et seq.).

E. Further a fee of $75 shall be charged for such installation and monitoring inspections of alternative discharging sewage systems as may be required by the Board. The funds received in payment of such fees shall be credited to a special fund to be appropriated by the General Assembly, as it deems necessary, to the Department for the purpose of carrying out the provisions of this section. However, $10 of each fee shall be credited to the Onsite Sewage Indemnification Fund established pursuant to § **32.1-164.1:01**.

The Board, in its regulations, shall establish a procedure for the waiver of fees for persons whose incomes are below the federal poverty guidelines established by the United States Department of Health and Human Services.

F. Any owner who violates any provision of this section or any regulation of the Board of Health or the State Water Control Board relating to alternative discharging sewage systems or who fails to comply with any order of the Board of Health or any special final order of the State Water Control Board shall be subject to the penalties provided in §§ **32.1-27** and **62.1-44.32**.

In the event that a county, city, or town, or its agent, is the owner, the county, city, or town, or its agent may initiate a civil action against any user or users of an alternative discharging sewage system to recover that portion of any civil penalty imposed against the owner which directly resulted from violations by the user or users of any applicable federal, state, or local laws, regulations, or ordinances.

G. The Board shall establish and implement procedures for issuance of letters recognizing the appropriateness of onsite sewage site conditions in lieu of issuing onsite sewage system permits. The Board may require that a survey plat be included with an application for such letter. Such letters shall state, in language determined by the Office of the Attorney General and approved by the Board, the appropriateness of the soil for an onsite sewage system; no system design shall be required for issuance of such letter. The letter may be recorded in the land records of the clerk of the circuit court in the jurisdiction where all or part of the site or proposed site of the onsite sewage system is to be located so as to be a binding notice to the public, including subsequent purchases of the land in question. Upon the sale or transfer of the land which is the subject of any letter, the letter shall be transferred with the title to the property. A permit shall be issued on the basis of such letter unless, from the date of the letter's issuance, there has been a substantial, intervening change in the soil or site conditions where the onsite sewage system is to be located. The Board, Commissioner, and the Department shall accept evaluations from licensed onsite soil evaluators for the issuance of such letters, if they are produced in accordance with the Board's established procedures for issuance of letters. The Department shall issue such letters within 20 working days of the application filing date when evaluations produced by licensed onsite soil evaluators are submitted as supporting documentation. The Department shall not be required to do a field check of the evaluation prior to issuing such a letter or a permit based on such letter; however, the Department may conduct such field analyses as deemed necessary to protect the integrity of the Commonwealth's environment. Applicants for such letters in lieu of

onsite sewage system permits shall pay the fee established by the Board for the letters' issuance and, upon application for an onsite sewage system permit, shall pay the permit application fee.

H. The Board shall establish a program for the operation and maintenance of alternative onsite systems. The program shall require:

1. The owner of an alternative onsite sewage system, as defined in § **32.1-163**, to have that system operated by a licensed operator, as defined in § **32.1-163**, and visited by the operator as specified in the operation permit;

2. The licensed operator to provide a report on the results of the site visit utilizing the web-based system required by this subsection. A fee of $1 shall be paid by the licensed operator at the time the report is filed. Such fees shall be credited to the Onsite Operation and Maintenance Fund established pursuant to § **32.1-164.8**;

3. A statewide web-based reporting system to track the operation, monitoring, and maintenance requirements of each system, including its components. The system shall have the capability for pre-notification of operation, maintenance, or monitoring to the operator or owner. Licensed operators shall be required to enter their reports onto the system. The Department of Health shall utilize the system to provide for compliance monitoring of operation and maintenance requirements throughout the state. The Commissioner shall consider readily available commercial systems currently utilized within the Commonwealth; and

4. Any additional requirements deemed necessary by the Board.

I. The Board shall promulgate regulations governing the requirements for maintaining alternative onsite sewage systems.

J. The Board shall establish a uniform schedule of civil penalties for violations of *(i)* regulations promulgated pursuant to subsection B *and (ii) onsite treatment system pump-out requirements promulgated pursuant to the Chesapeake Bay Preservation Act (§ **62.1-44.15:67** et seq.) in localities in which compliance with such onsite treatment system pump-out requirements is managed and enforced by the Department* that are not remedied within 30 days after service of notice from the Department. Civil penalties collected pursuant to this chapter shall be credited to the Environmental Health Education and Training Fund established pursuant to § **32.1-248.3**.

This schedule of civil penalties shall be uniform for each type of specified violation, and the penalty for any one violation shall be not more than $100 for the initial violation and not more than $150 for each additional violation. Each day during which the violation is found to have existed shall constitute a separate offense. However, specified violations arising from the same operative set of facts shall not be charged more than once in any 10-day period, and a series of specified violations arising from the same operative set of facts shall not result in civil penalties exceeding a total of $3,000. Penalties shall not apply to unoccupied structures which do not contribute to the pollution of public or private water supplies or the contraction or spread of infectious, contagious, or dangerous diseases. The Department may pursue other remedies as provided by law; however, designation of a particular violation for a civil penalty pursuant to this section shall be in lieu of criminal penalties, except for any violation that contributes to or is likely to contribute to the pollution of public or private water supplies or the contraction or spread of infectious, contagious, or dangerous diseases.

The Department may issue a civil summons ticket as provided by law for a scheduled violation. Any person summoned or issued a ticket for a scheduled violation may make an appearance in person or in writing by mail to the Department prior to the date fixed for trial in court. Any person so appearing may enter a waiver of trial, admit liability, and pay the civil penalty established for the offense charged.

If a person charged with a scheduled violation does not elect to enter a waiver of trial and admit liability, the violation shall be tried in the general district court with jurisdiction in the same manner and with the same right of appeal as provided for by law. In any trial for a scheduled violation, the Department shall have the burden of proving by a preponderance of the evidence the liability of the alleged violator. An admission of liability or finding of liability under this section shall not be deemed an admission at a criminal proceeding.

This section shall not be interpreted to allow the imposition of civil penalties for activities related to land development.

K. The Department shall establish procedures for requiring a survey plat as part of an application for a permit or letter for any onsite sewage or alternative discharging sewage system, and for granting waivers for such requirements. In all cases, it shall be the landowner's responsibility to ensure that the system is properly located as permitted.

*L. Effective July 1, 2023, requirements promulgated under the Chesapeake Bay Preservation Act (§ **62.1-44.15:67** et seq.) directly related to compliance with onsite sewage treatment system pump-outs shall be managed and enforced by the Department in Accomack, Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, Northampton, Northumberland, Richmond, and Westmoreland Counties, and the incorporated towns within those counties. Licensed operators conducting onsite sewage treatment system pump-outs pursuant to requirements promulgated under the Chesapeake Bay Preservation Act (§ **62.1-44.15:67** et seq.) in localities managed and enforced by the Department shall provide a report on the results of the site visit using a web-based reporting system developed by the Department. Any person who violates the onsite treatment system pump-out requirements promulgated pursuant to the Chesapeake Bay Preservation Act (§ **62.1-44.15:67** et seq.) in a locality in which compliance with such onsite treatment system pump-out requirements is managed and enforced by the Department is guilty of a Class 3 misdemeanor.*

§ **62.1-44.15:72**. Board to develop criteria.

A. In order to implement the provisions of this article and to assist counties, cities, and towns in regulating the use and development of land and in protecting the quality of state waters, the Board shall promulgate regulations that establish criteria for use by local governments to determine the ecological and geographic extent of Chesapeake Bay Preservation Areas. The Board shall also promulgate regulations that establish criteria for use by local governments in granting, denying, or modifying requests to rezone, subdivide, or use and develop land in these areas.

B. In developing and amending the criteria, the Board shall consider all factors relevant to the protection of water quality from significant degradation as a result of the use and development of land. The criteria shall incorporate measures such as performance standards, best management practices, and various planning and zoning concepts to protect the quality of state waters while allowing use and development of land consistent with the provisions of this chapter. The criteria adopted by the Board, operating in conjunction with other state water quality programs, shall encourage and promote (i) protection of existing high quality state waters and restoration of all other state waters to a condition or quality that will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, that might reasonably be expected to inhabit them; (ii) safeguarding of the clean waters of the Commonwealth from pollution; (iii) prevention of any increase in pollution; (iv) reduction of existing pollution; (v) preservation of mature trees or planting of trees as a water quality protection tool and as a means of providing other natural resource benefits; (vi) coastal resilience and adaptation to sea-level rise and climate change; and (vii) promotion of water resource conservation in order to provide for the health, safety, and welfare of the present and future citizens of the Commonwealth.

C. Prior to the development or amendment of criteria, the Board shall give due consideration to, among other things, the economic and social costs and benefits that can reasonably be expected to obtain as a result of the adoption or amendment of the criteria.

D. In developing such criteria the Board may consult with and obtain the comments of any federal, state, regional, or local agency that has jurisdiction by law or special expertise with respect to the use and development of land or the protection of water. The Board shall give due consideration to the comments submitted by such federal, state, regional, or local agencies.

E. In developing such criteria, the Board shall provide that any locality in a Chesapeake Bay Preservation Area that allows the owner of an ~~on-site~~ *onsite* sewage treatment system not requiring a Virginia Pollutant Discharge Elimination System permit to submit documentation in lieu of proof of septic tank pump-out shall require such owner to have such documentation certified by an operator or ~~on-site~~ *onsite* soil evaluator licensed or certified under Chapter 23 (§ **54.1-2300** et seq.) of Title 54.1 as being qualified to operate, maintain, or design ~~on-site~~ *onsite* sewage systems.

F. In developing such criteria, the Board shall not require the designation of a Resource Protection Area (RPA) as defined according to the criteria developed by the Board, adjacent to a daylighted stream. However, a locality that elects not to designate an RPA adjacent to a daylighted stream shall use a water quality impact assessment to ensure that proposed development on properties adjacent to the daylighted stream does not result in the degradation of the stream. The water quality impact assessment shall (i) be consistent with the Board's criteria for water quality assessments in RPAs, (ii) identify the impacts of the proposed development on water quality, and (iii) determine specific measures for the mitigation of those impacts. The objective of this assessment is to ensure that practices on properties adjacent to daylighted streams are effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution. The specific content for the water quality impact assessment shall be established and implemented by any locality that chooses not to designate an RPA adjacent to a daylighted stream. Nothing in this subsection shall limit a locality's authority to include a daylighted stream within the extent of an RPA.

G. Effective July 1, 2014, requirements promulgated under this article directly related to compliance with the erosion and sediment control and stormwater management provisions of this chapter and regulated under the authority of those provisions shall cease to have effect.

H. Effective July 1, 2023, requirements promulgated under this article directly related to compliance with onsite sewage system pump-outs shall be managed and enforced by the Department of Health in Accomack, Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, Northampton, Northumberland, Richmond, and Westmoreland Counties, and the incorporated towns within those counties.

2. That the Department of Health (the Department) shall provide outreach and education to homeowners to ensure compliance with onsite sewage treatment system pump-out requirements adopted pursuant to the Chesapeake Bay Preservation Act (§ **62.1-44.15:67** et seq. of the Code of Virginia). The Department shall provide to the Chairmen of the House Committee on Health, Welfare and Institutions and the Senate Committee on Education and Health an interim report by December 1, 2024, and a final report by December 1, 2025, on compliance with such onsite sewage treatment system pump-out requirements in the localities specified in subsection L of § **32.1-164** of the Code of Virginia, as amended by this act, and subsection H of § **62.1-44.15:72** of the Code of Virginia, as amended by this act, and the incorporated towns within such localities. Such reports shall also include recommendations to improve compliance with onsite sewage treatment system pump-out requirements adopted pursuant to the Chesapeake Bay Preservation Act.

APPENDIX B – ACRONYMS AND ABBREVIATIONS

This is a listing of the acronyms and abbreviations appearing throughout the report and its appendices.

AOSS – Alternative Onsite Sewage System

BMP – Best Management Practice

CBPA – Chesapeake Bay Preservation Act

CBPADM – Chesapeake Bay Preservation Area Designation and Management Regulations

CBRAR – Chesapeake Bay and Rivers Association of Realtors

COSS – Conventional Onsite Sewage System

DEQ – Virginia Department of Environmental Quality

DMPI – Division of Data Management and Process Improvement

EHD – Environmental Health Database

EHS – Environmental Health Specialist

ESHD – Eastern Shore Health District

FOG – Fats, Oils and Greases

FTE – Full Time Employee

HRSD – Hampton Roads Sanitation District

LHD – Local Health Department

OEHS – Office of Environmental Health Services

OSS – Onsite Sewage Systems

RCVCEA – Rural Coastal Viginia Community Enhancement Authority

TRHD – Three Rivers Health District

TMDL – Total Maximum Daily Load

VDH – Virginia Department of Health

WIP – Watershed Implementation Plan

WWTP – Wastewater Treatment Plant

APPENDIX C – APPLICABLE REGULATIONS

12VAC5-610-120

"Sewage handler" means any person who removes or contracts to remove and transports by vehicle the contents of any septic tank, sewage treatment plant, privy, holding tank, portable toilet, or any sewage, septage, or sewage sludges that have been processed to meet acceptable treatment standards as defined in this chapter or the Sewage Regulations (12VAC5-580-10 et seq.).

"Sewage handling" means the vehicular conveyance of sewage (See "Transportation" in § 32.1-163 of the Code of Virginia).

12VAC5-610-240

B. Sewage handling permits. Any person who removes or contracts to remove and transport by vehicle the contents of any septic tank, sewage treatment plant, privy, holding tank, portable toilet, or any sewage septage or sewage sludges from any other device shall be deemed an owner and shall have a written sewage handling permit issued by the commissioner.

Exception. No such permit is required for the handling of sewage from (1) a holding tank on a vehicle or vessel by the owner of such vehicle or vessel or (2) the removal of screenings, sludges, grit, etc. from a sewage treatment plant by the owner or employees of such sewage treatment facilities.

12VAC5-610-380. Procedures for obtaining a sewage handling permit.

A. Sewage handling permits are issued by the commissioner. (See 12VAC5-610-240 B.) Applications for such permits shall be directed to the district or local health department. The procedure for obtaining sewage handling permits includes the following:

1. Application;

2. Conference;

3. Scheduling of equipment for initial inspection; and

4. Approval of disposal site or sites.

B. Application. An application for a sewage handling permit shall be made to the local or district health department on a form provided by the department.

C. Conference. A conference will be held with the district or local department for the purpose of discussing the methods and equipment utilized in the handling of sewage.

D. Initial equipment inspection. The owner shall make arrangements with the district or local health department at a suitable time for inspecting the sewage handling equipment.

E. Approval of disposal site or sites.

1. An approved sewerage system or treatment works is a system for which a certificate to operate has been issued jointly by the department and the Department of Environmental Quality or a system which has been issued a separate permit by the commissioner. When the applicant is not the owner of the approved sewerage system or treatment works, the applicant shall append a statement from the owner of the approved sewerage system or treatment works to the application stating that the applicant may discharge septage and/or sewage. The statement shall include the quantity per day and point of discharge as indicated on the application to the approved sewerage system or treatment works.

2. If the disposal site is not an approved sewerage system or treatment works, each disposal site shall be considered a special facility (see 12VAC5-610-590 B) and shall be inspected and approved or disapproved on a case-by-case basis by the district or local health department and the bureau in accordance with 12VAC5-610-250 C.

12VAC5-610-390. Issuance of sewage handling permit.

The commissioner shall issue a sewage handling permit upon satisfactory completion of the procedures outlined in 12VAC5-610-380 and compliance with the criteria contained in Article 2 (12VAC5-610-560 et seq.) of Part III and Articles 8 (12VAC5-610-1020 et seq.) and 9 (12VAC5-610-1080 et seq.) of Part V of this chapter.

12VAC5-610-400. Revocation of sewage handling permits.

A. Each permit shall be for a time period not to exceed 12 months.

B. Each permit may be revoked when conditions are changed from those shown in the application.

C. Each permit may be revoked when there is a potential or real health hazard associated with the sewage handling operation.

12VAC5-610-560. Sewage handling; general.

A. In accordance with 12VAC5-610-240 B, a sewage handler shall have a written sewage handling permit issued by the commissioner.

B. It is the obligation of every sewage handler to assure that the sewage, sludge or septage handled are transported and disposed of in a safe and sanitary manner in conformance with this

chapter. Treatment and management of sewage and sewage sludge are regulated by the Sewage Regulations (12VAC5-580-10 et seq.).

C. All sewage handling equipment in contact with sewage shall be washed in such a manner and location that the wastewater from washing it is conveyed to an approved sewerage system or treatment works.
D. Disposal of sewage sludges or septage into bodies of water or streams is prohibited.

Article 8. Vehicle Specifications for Sewage Handling
12VAC5-610-1020. General.

All vehicles utilized to transport sewage shall be kept in a clean and sanitary condition.

12VAC5-610-1030. Vehicle identification.

The name and address of the owner shall be displayed on each side of the vehicle in letters at least four inches high. In addition, the sewage handling permit number shall be displayed immediately beneath the owners name and address and in plain sight.

12VAC5-610-1040. Sewage containment vessel (tank).

The tank in which the sewage is to be transported shall be fully enclosed and watertight. All inlets and outlets to the tank shall be secured and made watertight during transit. The tank shall be secured to the truck.

12VAC5-610-1050. Pumps.

When a pump is utilized to transfer sewage, the pump shall be watertight and properly valved and/or capped to prevent spillage during transport.

12VAC5-610-1060. Valves.

All valves shall be watertight.

12VAC5-610-1070. Hoses.

Suction and discharge hoses shall be watertight and provisions shall be made for carrying the hose in a manner to prevent leakage.

APPENDIX D – TRHD PUBLIC OUTREACH MATERIALS

VDH VIRGINIA DEPARTMENT OF HEALTH *Three Rivers Health District*

Protect Our Rivers and Bay by Pumping Your Tank Today!

Routine inspections and pumping your septic tank are crucial for catching issues with your system before they lead to pollution. A typical septic system should be inspected and pumped every three to five years. The Chesapeake Bay Preservation Act requires all onsite sewage systems be inspected/pumped out at least once every five years.

One of the biggest environmental concerns with septic systems is potential contamination of groundwater (often a source of drinking water) and surface waters such as rivers, lakes, coastal areas, and the Chesapeake Bay. If a septic system is not treating wastewater adequately before it reaches these waters, it can introduce harmful pollutants to our environment.

Bacteria, viruses, and pathogens like E. coli and Hepatitis can spread through groundwater and surface waters. This makes drinking water and recreational activities like boating and swimming unsafe.

Household chemicals and excess nutrients like phosphorus and nitrogen can disrupt aquatic ecosystems leading to harmful algal blooms and die-offs making the areas unsuitable for fishing, oyster or crab harvesting, swimming, and other recreational uses.

Scan the QR Code to Learn More!

By taking a proactive approach to septic system maintenance, you can do your part to protect our rivers and the bay!

PROTECT THE BAY THE THREE RIVERS WAY

Effective July 1, 2023, authority and enforcement for locally operated septic system pump out programs transitioned from local government offices to the Virginia Department of Health (VDH) through revisions to the Code of Virginia. Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, Northumberland, Richmond, Westmoreland counties, and their incorporated towns will now be monitored by VDH for compliance with septic system pump outs under the Chesapeake Bay Preservation Act (§ 62.1-44.15:67 et seq.).

Have you had your septic system pumped or inspected in the last 5 years?

To find a septic system service provider:
Visit **https://www.vdh.virginia.gov/environmental-health** or **Scan the QR code** on the front.

VDH VIRGINIA DEPARTMENT OF HEALTH *Three Rivers Health District*

Have Questions? Call 804-693-1400

Three Rivers Health District
P.O. Box 415
Saluda, VA 23149

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