

WASTEWATER INFRASTRUCTURE WORKING GROUP REPORT

December 2024

Wastewater Infrastructure Working Group

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EXECUTIVE SUMMARY

This report from the Wastewater Infrastructure Working Group (Working Group) is submitted pursuant to § 62.1-223.2 D.8 of the Code of Virginia (the Code). The report summarizes the Working Group’s two meetings during 2024 as well as activities by the Department of Environmental Quality (DEQ) and the Virginia Department of Health (VDH) to increase and improve access to wastewater infrastructure in the Commonwealth.

BACKGROUND

While the majority of Virginia residents have access to adequate wastewater treatment, in 2024 a number of individuals and communities throughout the Commonwealth continue to lack access to affordable wastewater solutions that are protective of their health and the environment; some even live without access to any indoor plumbing. Inadequate and failing wastewater treatment, whether onsite sewage (septic) or sewerage systems, threatens human health, water quality, and economic development in the Commonwealth.

Despite significant efforts by multiple state agencies, local government organizations, the federal government and nongovernmental organizations, the existence of pockets of failing wastewater infrastructure remains a statewide issue of grave concern.

In July of 2019, the Secretary of Natural and Historic Resources, the Secretary of Health and Human Resources, and the Secretary of Commerce and Trade signed a joint letter of agreement establishing an interagency Wastewater Infrastructure Work Group to assess wastewater infrastructure needs in the Commonwealth and to develop policy recommendations. The Wastewater Infrastructure Work Group explored the prevalence of failing septic systems, particularly in Tidewater and Southwest Virginia, learned about a pilot program to assess and resolve problems with small municipal sewer systems, and discussed existing barriers to adequate waste treatment. The Wastewater Infrastructure Work Group recommended establishing a policy that prioritizes the Commonwealth's commitment to providing all Virginians access to affordable waste treatment that supports their health, local economies, and clean water. To position the Commonwealth to seek and prioritize limited funding, the Wastewater Infrastructure Work Group identified research and data needs to more comprehensively and effectively assess wastewater infrastructure problems. Several recommendations from the Wastewater Infrastructure Work Group centered on educating students and the public about wastewater treatment and to prevent infrastructure failures through adequate oversight and proper maintenance. Finally, the Wastewater Infrastructure Work Group identified opportunities to maximize use of existing funding sources for wastewater treatment and recommended increased funding.

In 2021, the General Assembly approved Chapter 382 of the Acts of Assembly (SB 1396), which codified certain recommendations from the Wastewater Infrastructure Work Group. SB 1396 amended the Code to strengthen the Commonwealth's wastewater infrastructure by adding § 62.1-223.1 to the Code establishing a policy for the Commonwealth to prioritize universal access to wastewater treatment that is protective of public health and the environment and supports local economic growth and stability. Section 62.1-223.1 of the Code also endorses education,

collaboration among government entities, coordination and innovative use of available wastewater infrastructure funding, the consideration of climate change impacts in wastewater regulations, and a preference for community-based solutions. SB 1396 also added § 62.1-223.2 to the Code to codify the Wastewater Infrastructure Working Group (the Working Group) to consist of appropriate government entities and stakeholders to support and advise the Administration and General Assembly regarding the Commonwealth's wastewater policy. The legislation also added § 62.1-223.3 to the Code to direct DEQ in partnership with VDH to estimate the amount of wastewater infrastructure funding necessary to implement the Commonwealth's wastewater policy every four years. The legislation amended § 32.1-164 of the Code to authorize VDH to include considerations for the impacts of climate change in the regulations for design and permitting of onsite sewage systems. Lastly, the legislation amended § 32.1-164.1.01 of the Code to authorize VDH to use the funds collected and deposited into the Onsite Sewage Indemnification Fund for loans and grants to assist qualifying homeowners with repairing or improving onsite sewage systems.

The goal of the Working Group is to better understand the scope and extent of the problem, to provide specific and actionable recommendations for improving coordination and alignment of programs, and to identify means to target limited state and federal resources to deliver the greatest results for individuals and communities in need.

WORKING GROUP 2024 ACTION SUMMARY

Summary of the July 29, 2024 Working Group Meeting

DEQ staff provided an update on their wastewater funding, noting that the clean water revolving loan fund solicitation period ended the previous week. As of the end of July 2024, DEQ has executed 55 American Rescue Plan Act (ARPA) grants, dispersing \$111 million. VDH staff

provided an update on funding for septic repairs through the Septic and Well Assistance Program (SWAP). VDH had installed over 100 septic systems and over 80 private wells through SWAP at that time.

Department of Housing and Community Development (DHCD) staff commented on the establishment of a workgroup looking at residential infrastructure funding, which could include water and wastewater infrastructure. DHCD has been soliciting interest for the workgroup.

VDH staff then discussed an assessment completed by a professor in Alabama looking at the affordability of conventional onsite sewage systems and alternative onsite sewage systems. VDH is seeking to conduct a similar assessment to determine where there may be affordability issues in Virginia. VDH staff also noted the agency is in the process of revising the Sewage Handling and Disposal Regulations and encouraged Working Group members to engage in the workgroups that are a part of the revision process.

Lastly VDH provided a quick update on HB 1431 from the 2024 General Assembly Session. The bill requires VDH to recognize systems with National Sanitation Foundation (NSF) 350 approval as Treatment Level 3 approved, as well as other units that have demonstrated meeting Treatment Level 3 standards through NSF 245 testing. This resulted in several dozen systems being approved for use for Treatment Level 3 on July 1st.

Summary of the December 10, 2024 Working Group Meeting

The Working Group focused on the review of the draft report to the General Assembly. DEQ staff provided updates on funding disbursed through the ARPA, Water Quality Improvement Fund (WQIF), and the Virginia Clean Water Revolving Loan Fund (CWRLF) outlined in this report. VDH provided updates on ARPA funding outlined in this report. DHCD provided an updated on the Residential Infrastructure Work Group meetings outlined in this report.

RESEARCH DATA NEEDS TO FULLY ASSESS WASTEWATER INFRASTRUCTURE PROBLEMS

2023 Wastewater Infrastructure Needs Assessment

The 2023 Commonwealth Wastewater Infrastructure Needs Assessment (the Assessment) is an estimate of the amount of wastewater infrastructure funding that is necessary to implement the Commonwealth's Wastewater Infrastructure Policy established in § 62.1-223.1 of the Code. Authored by DEQ, in partnership with the VDH and other stakeholders, the Assessment reports that the total wastewater infrastructure need over a 20-year period (2022-2042) in Virginia is approximately \$15.8 billion and excludes projects that have already commenced.

A detailed review of the Assessment was provided in the 2023 Wastewater Infrastructure Working Group Report. DEQ posted the report to its website and has shared the availability of the report to various water and wastewater associations, including but not limited to the Virginia Association of Municipal Wastewater Agencies and Virginia Water Environment Association. VDH shared the results of the Assessment at the 2024 Virginia Onsite Wastewater Recycling Association Conference.

State Onsite Regulators Association

VDH staff have engaged with other members of the State Onsite Regulators Association (SORA) to establish an ad hoc funding committee. The purpose of the committee is to share information on the various funding sources currently available in SORA member jurisdictions (e.g., the source of funding, and how the program operates) and lessons learned through administration of those funding programs. The committee also serves to help distribute information on new funding sources that become available to SORA members and appropriate partners. Lastly, the committee seeks to help quantify the onsite wastewater funding needs nationwide.

Residential Infrastructure Work Group

Pursuant to 2024 legislation (SB 489) passed by the General Assembly and signed by the Governor, DHCD convened a stakeholder group to study the feasibility of a residential infrastructure fund. The Residential Infrastructure Fund Work Group was composed of representatives from local government and individuals with expertise in single-family and multifamily land development and construction, real estate finance, infrastructure development, and other areas of expertise. The Residential Infrastructure Work Group discussed the various elements of a potential residential infrastructure fund, such as its purpose and primary objective, the allocation of funds, eligible applicants, eligible costs, prioritization of projects, and local regulatory barriers. DHCD will submit a report of the Residential Infrastructure Work Group's assessment prior to the start of the 2025 Regular Session of the General Assembly.

PREVENT THE HUMAN HEALTH, WATER QUALITY, AND ECONOMIC IMPACTS THROUGH PUBLIC EDUCATION AND PROPER MAINTENANCE

Conventional onsite sewage system operation and maintenance reporting.

Proper operation and maintenance of an onsite sewage system, such as septic tank pump outs, is vital to avoid premature system failures. In 2022, the General Assembly approved Chapter 486 of the Acts of Assembly (HB 769) which directed VDH to take on oversight of the Chesapeake Bay Preservation Act septic tank pump out requirements within the Eastern Shore, Middle Peninsula, and Northern Neck regions of Virginia.¹ The effective date of the transition was set for July 1, 2023. The legislation also requires licensed operators conducting septic tank pump outs within the localities managed by VDH to report the results using a web-based reporting system.

¹ HB 769 specifically names the following localities: Accomack, Essex, Gloucester, King and Queen, King William, Lancaster, Matthews, Middlesex, Northampton, Northumberland, Richmond, and Westmoreland Counties, and the incorporated towns within those counties.

On July 1, 2023, VDH went live with the web-based reporting system for conventional operation and maintenance.

Although the reporting system is required for pump outs within the Chesapeake Bay Preservation Act localities managed by VDH, the reporting system is open for voluntary submission throughout the Commonwealth. The voluntary submission of conventional onsite sewage system maintenance reports will improve Chesapeake Bay best management practice reporting throughout the watershed and assist current and future property owners with creating maintenance record history for properties served by onsite sewage systems. As of December 10, 2024, a total of 74,550 conventional onsite sewage system reports have been submitted, with 72,276 of those reports being submitted voluntarily.

SepticSmart Week

SepticSmart Week is annual event promoted by the U.S. Environmental Protection Agency (EPA) to bring attention to the important of caring for and maintaining septic systems. SepticSmart Week 2024 ran from September 16th to September 20th. VDH released messages through its social media platforms to support SepticSmart Week, with a focus on encouraging proper operation and maintenance of alternative onsite sewage systems.

Clean Water Day

On October 18, 2024, the nation marked the 52nd anniversary of the Clean Water Act, which aimed to prevent, reduce, and eliminate pollution in the nation's waters to "restore and maintain the chemical, physical and biological integrity of the Nations's waters". Governor Younkin recognized October 18, 2024 as Clean Water Day in the Commonwealth of Virginia. This recognition was shared by DEQ to the regulated community and citizens.

ELIMINATE BARRIERS TO FULLY UTILIZE EXISTING RESOURCES AND INCREASE FUNDING

VDH Wastewater Funding Programs 2024 Update

In August 2021, the General Assembly allocated \$11.5 million from the Commonwealth's ARPA funding for VDH to help low-income homeowners repair failing onsite sewage systems and private wells. This is the first time that VDH has received this level of funding, and the first time the agency has received funding that can be used statewide to assist homeowners with water and wastewater needs. VDH named this program the SWAP.

VDH developed SWAP to allow for the repair of failing onsite sewage systems, straight pipes, and pit privies with fully regulatory compliant conventional onsite sewage systems, alternative onsite sewage systems, alternative discharging sewage systems, or sewer connections as appropriate. The program also covers the replacement of inadequate private wells, springs, and cisterns with fully regulatory compliant private wells or public water supply connections.

The SWAP program splits funding into two mechanisms; direct funded projects and local partner projects. VDH has allocated \$7.2 million to direct funded project where property owners in need come directly to VDH to apply for assistance. The local health department conducts an assessment of the property owner's income to verify they are at or below 200 percent of the Federal Poverty Guidelines. VDH then posts qualifying owners' projects on the state procurement system, eVA, for bidding by properly licensed contractors following the issuance of a permit.

VDH opened the application process for direct funded projects in January 2022. By September 2, 2022, VDH had received 373 applications for 359 SWAP projects (567 including septic tank pump outs). VDH stopped accepting applications for direct funded projects on September 2, 2022, to ensure that all applications can be fully funded. VDH has installed 467

projects (including pump outs) with 9 more projects under contract for installation, 5 in the procurement process, and 68 currently under contract with local partners to assist with completion.

In addition to direct funded projects, VDH posted three rounds of request for applications for local partner funding with a maximum possible funding of \$300,000 per partner. Eligible local partners are local governments, soil and water conservation districts, planning district commissions, Tribes, regional commissions, and nonprofits. VDH received six applications for local partner projects totaling just under \$1.8 million in funding. These local partners will provide funding to qualifying property owners with failing onsite sewage systems and private wells in the local partner's area. Local partner agreements have been issued to the Middle Peninsula Planning District Commission, the Northern Neck Planning District Commission, the Accomack Northampton Planning District Commission, the Southeastern Rural Community Assistance Project, the Louisa Fluvanna Housing Foundation, and Rockbridge Conservation. These six partner programs will result in an estimated 60 to 80 projects installed. At this time a little over one-third of these have been completed.

Early on VDH determined that additional assistance was needed to complete the 567 projects. VDH posted direct projects for procurement bids multiple times without receiving any qualified bids. Several local partners who work in the well and septic space offered their assistance in implementation of these hard to fill projects; a process VDH calls Direct to Partner Initiatives (D2PI). D2PI bundles direct homeowner applications that have been vetted by VDH and are ready to go out for bids. VDH has transitioned 70 direct projects to partners to administrated locally. Approximately half of these projects have already been installed and the rest will be completed by the end of 2025.

The SWAP program has filled a critical need for additional funding, as evidenced by the hundreds of applications received within only a few months. However, it also highlights the need for additional funding. The program does include funding for the first two years of maintenance for alternative system; however, longer-term solutions for maintenance assistance is needed.

In 2022, VDH received two subrecipient awards from DEQ, one through the Chesapeake Bay Implementation Grant (CBIG) and the other through the Infrastructure Investment and Jobs Act (IIJA). These funds were targeted to specific areas of the Chesapeake Bay Watershed that EPA had designated as Most Effective Basins (MEB). VDH is administering \$660,000 of IIJA MEB and \$1,328,586 of CBIG in these MEB. These funds are available to help homeowners who are at or below 80 percent of area median income to address failing onsite septic systems.

In early 2024 VDH's Office of Drinking Water informed the Division of Onsite Water and Wastewater Services (DOWWS) about an opportunity to apply for Virginia's 2023 and 2024 supplemental funding from EPA for the Water Infrastructure Improvements for the Nation (WIIN) Small, Underserved and Disadvantaged Communities Grant (SUDC). EPA made private well improvements an eligible activity for the first time in 2024. DOWWS applied and was successful in receiving \$842,000 to be dispersed over the next three years, with \$469,000 to fix or replace inadequate private drinking water wells. The remainder is to disconnect eligible properties from inadequate private drinking water sources and connect them to public water supplies.

DEQ Wastewater Funding Programs 2024 update

DEQ currently has 19 full-time and 2 part-time employees within the Clean Water Financing and Assistance Program (CWFAP) with primary responsibility for the development of implementation plans and administration of water quality loans and grants for the Commonwealth. Two additional positions, one full-time position and one part-time, are currently being filled. In

December 2024, funding was approved to fill a third position in CWFAP and two positions in the Office of Financial Management supporting CWFAP work. Funding was also approved to support development of a new grant management tool which will streamline the funding administration process. This grant management tool will be selected and implemented in the upcoming calendar year. In addition to developing, implementing, and administering the DEQ ARPA Wastewater fund appropriations, the program administers the WQIF – point source portion, the Stormwater Local Assistance Fund, and the VCWRLF.

Over the past four years the program has seen a significant increase in demand for water quality funding, particularly in the wastewater sector. Considering the substantial increase in wastewater funding administered by the CWFAP team and demand for water quality loans and grants, additional resources may be needed in the future if this trend continues, to ensure loans and grants are administered in a timely manner and to minimize impact to project timelines.

ARPA Wastewater Funds

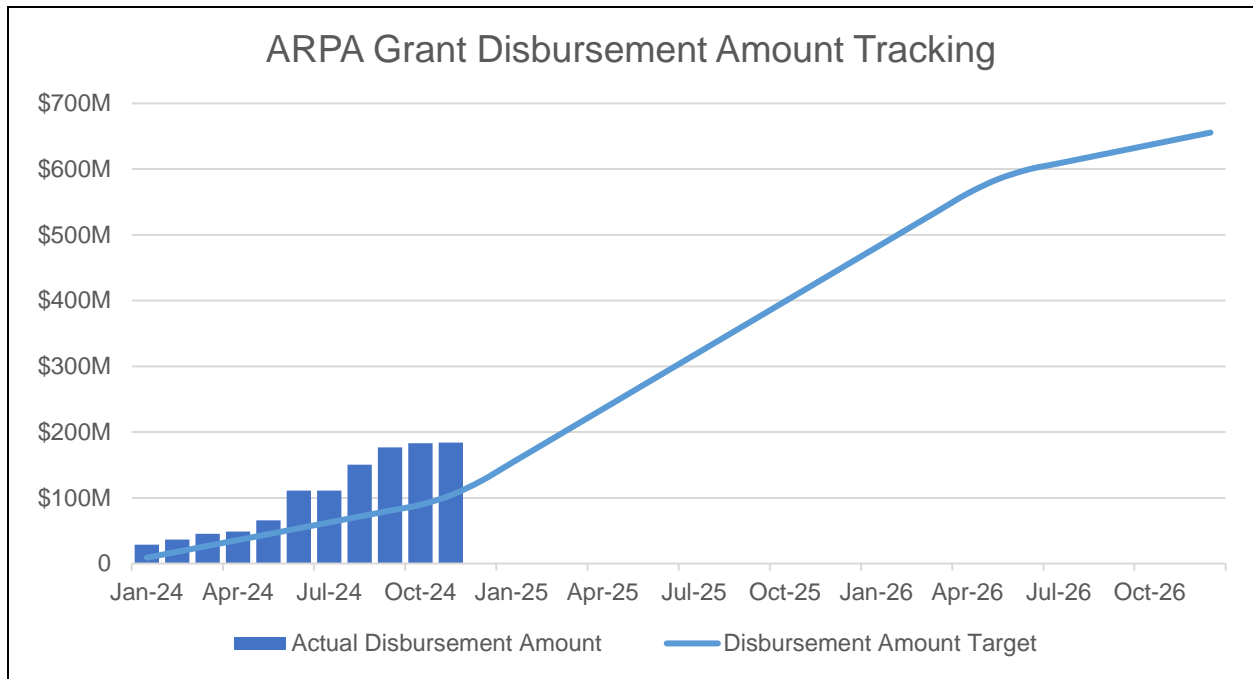
Over the past three years, \$658,531,532 in ARPA funds has been appropriated to DEQ for water quality projects. A detailed overview of the ARPA implementation strategy was provided in the 2023 Wastewater Infrastructure Working Group Report. This year's report provides an update of the status of DEQ's ARPA Wastewater Funds.

A total of 55 grant agreements have been executed for \$655,531,532 in ARPA funds, see Attachment 1 for a map of project locations throughout the Commonwealth. The remaining \$3,000,000 has been set aside for use as administrative funds. If underutilization of administrative funds is identified, funds will be obligated to existing projects. DEQ also began tracking disbursement of ARPA funds against project schedules to evaluate if projects are on track to utilize funds within the prescribed timeframes. Through November 2024, over a quarter, or \$183,893,481,

of the funds appropriated to DEQ has been disbursed, see Figure 1. Disbursements are currently trending as on target to meet the December 31, 2026 deadline.

Figure 1

DEQ ARPA Grant Disbursement



Wastewater Infrastructure Policy Goal Progress – ARPA

Through implementation of ARPA Wastewater funds, the Commonwealth has begun to resolve the backlog of wastewater infrastructure needs in disadvantaged communities and households. These funds are grant dollars, with no repayment required, allowing communities that cannot afford to finance wastewater projects to complete these necessary projects without placing a financial burden on their ratepayers. Scoring criteria for SCS and SLPP applications included several factors related to a community’s ability to afford the project, fiscal stress, the state revolving fund affordability criteria, and median household income. Additionally, implementation of these funds helps advance the Commonwealth Wastewater Infrastructure policy by including scoring criteria that prioritize regional and community-based solutions

and evaluate whether or not the projects protect public health and the environment and support local economic growth and stability.

Water Quality Improvement Fund (WQIF) – Point Source

DEQ's CWFAP administers the point source portion of the WQIF, a state sourced fund used to provide grants for nutrient removal technology and conveyance infrastructure at Publicly Owned Treatment Works (POTWs) in the Chesapeake Bay watershed. A detailed overview of WQIF was provided in the 2023 Wastewater Infrastructure Working Group Report. This year's report provides an update of the status of WQIF.

Since program inception in 1997, a total of \$1,593,681,258 has been appropriated to the fund and \$28,344,384 in interest earnings has been deposited into the fund. Of that total, \$1,123,165,406 has been awarded to grantees for 107 wastewater infrastructure projects. All but 14 projects are complete and fully disbursed. There are 8 WQIF applications under evaluation requesting a total of approximately \$900 million.

Wastewater Infrastructure Policy Goal Progress – WQIF

Through implementation of WQIF point source funds, the Commonwealth helps resolve the backlog of wastewater infrastructure needs in disadvantaged communities and households. Because these funds are grant dollars, with no repayment required, communities that cannot afford to finance WQIF eligible wastewater projects are able to complete these necessary projects without placing a financial burden on their ratepayers. In accordance with the Water Quality Improvement Act, the cost share percentage for grantees is based on median household income, reasonable sewer cost, and annual residential sewer charge for the service area. Additionally, by adding design and installation of certain wastewater conveyance

infrastructure as an eligible project type, the Commonwealth advanced the Commonwealth's wastewater infrastructure policy goal to prioritize regional and community-based solutions.

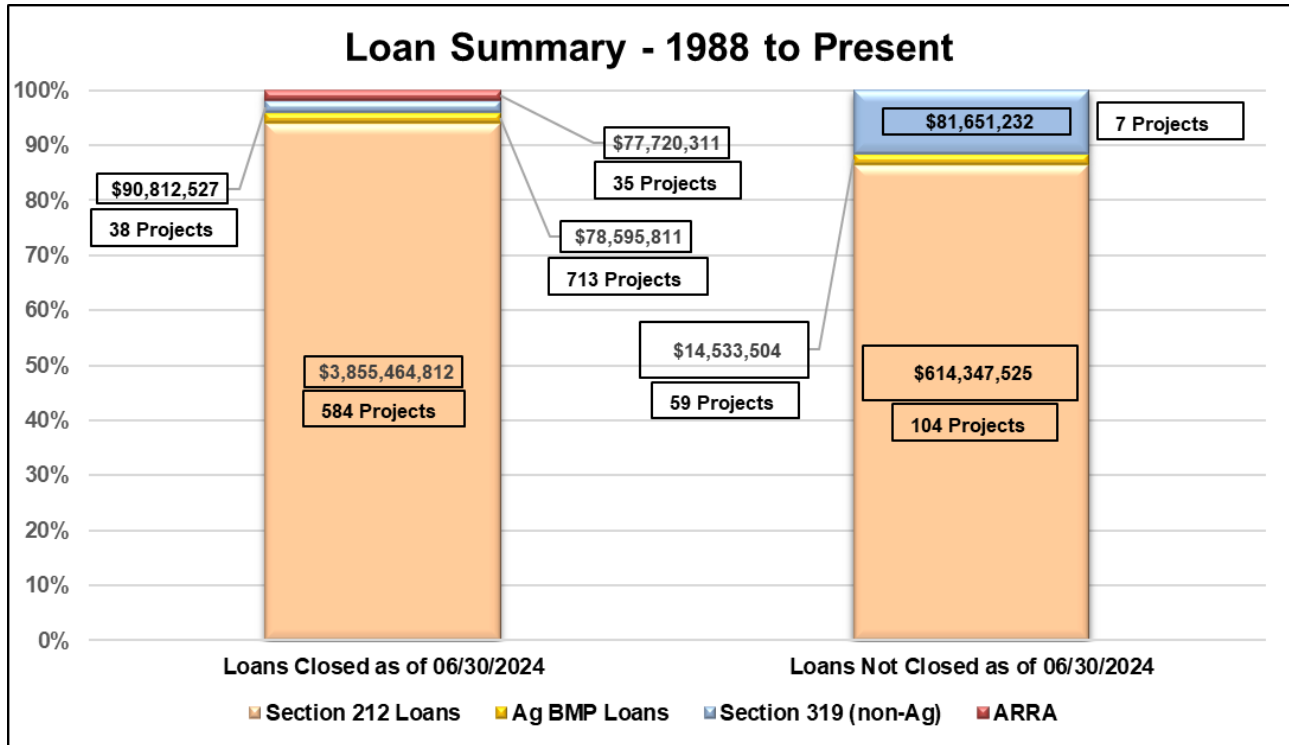
Virginia Clean Water Revolving Loan Fund (VCWRLF)

VCWRLF was created in 1987 to provide a perpetual source of funding for wastewater infrastructure projects. Initially, the VCWRLF included a single program to provide financial assistance in the form of low-interest loans to local governments for needed improvements at publicly-owned wastewater treatment facilities and/or collection systems. Since then, the scope of the VCWRLF has been expanded to include residential on-site septic repairs and replacement plus other non-point source pollution projects such as stormwater management and land conservation. A detailed overview of VCWRLF was provided in the 2023 Wastewater Infrastructure Working Group Report. This year's report provides an update of the status of VCWRLF.

Since program inception in 1987, a total of \$1,240,634,207 in federal funds, \$226,694,383 in state funds, and \$1,715,709,964 in repayments and fund growth have been provided to the VCWRLF. As of June 30, 2024, \$4,735,405,412 in low-cost loan funds have been authorized for water quality projects. Of that total, \$4,469,812,337 was provided for wastewater infrastructure, see Figure 2.

Figure 2

VCWRLF Summary



The FY25 annual solicitation for applications was conducted in June/July 2024. DEQ received 20 applications for wastewater infrastructure projects totaling \$340,487,078. Based on a review of the capacity of the fund, 17 projects totaling \$180,608,890 are being recommended for funding.

Wastewater Infrastructure Policy Goal Progress – VCWRLF

Through administration of the VCWRLF, the Commonwealth helps resolve the backlog of wastewater infrastructure needs in disadvantaged communities and households. Communities most in need qualify for the program’s hardship interest rate and are eligible to receive principal forgiveness. Since the Bipartisan Infrastructure Law (BIL) was signed into law in 2021, the program is able to provide even more principal forgiveness funding for projects that communities would otherwise be unable to afford.

