

NOWRA 2023 Onsite Wastewater Mega Conference

Funding Installations: Virginia's Septic and Well Assistance Program (SWAP)

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<https://www.vdh.virginia.gov/environmental-health/swap/>

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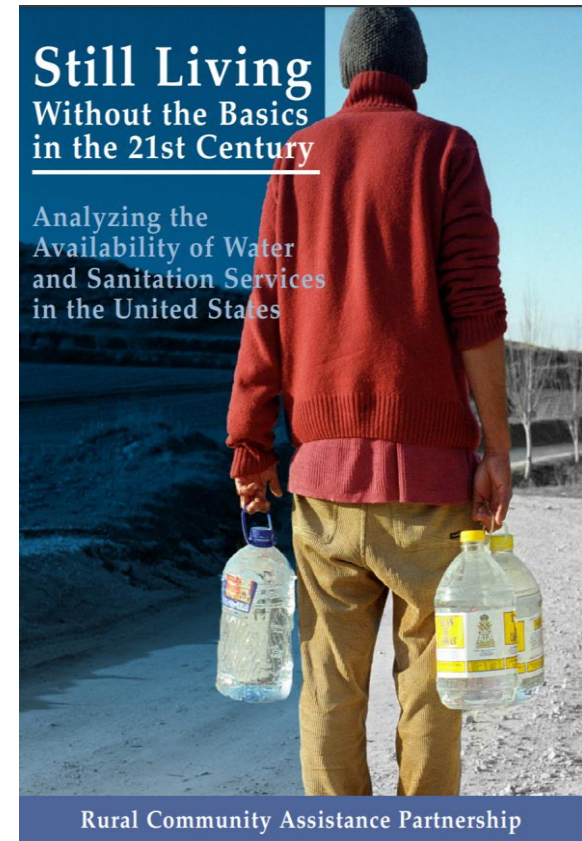
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Overview

- History of Virginia Wastewater Issues
- 2023 VA Wastewater Needs Assessment
- Septic and Well Assistance Program (SWAP)
- Funding Change
- Success Stories

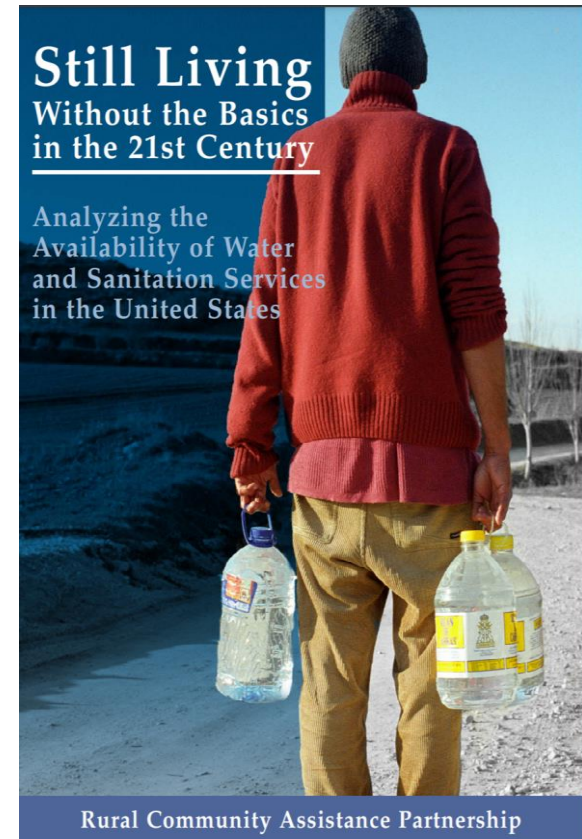
Overview of Septic in VA

- 1.1 million septic systems.
- Average lifespan of a septic is 30-40 years.
- Nearly 50% of septic systems are 40 years+.
- Estimated 113,000+ onsite sewage systems will need repaired by 2032
- Areas with no proper plumbing or wastewater management



Overview of Septic and Well Issues in VA

- 1.7 million VA rely on private drinking supplies (cisterns, springs or 700,00 private wells).
- No ongoing water quality criteria for private wells.
- 40% of private wells tested exceeded safe levels of total coliform bacteria (Source: Virginia Household Water Quality Program)



VA Onsite Funding History

- Past/Current Sources of onsite funding
 - EPA Section 319 Nonpoint Program
 - State Water Quality Improvement Fund
 - EPA Clean Water Revolving Load Program.
 - National Fish and Wildlife Foundation Grants
 - Virginia Environmental Endowment Grants
 - Indoor Plumbing Rehabilitation Program (HUD)
 - Chesapeake Bay Preservation Act (Virginia)
 - EPA funded Chesapeake Bay Implementation Grants
- No statewide coordination of onsite septic funding
- No consistent or statewide funding source

Recent History: 2019-2020

- July 2019: Interagency Wastewater Infrastructure Work Group established
- 2020: Virginia Wastewater Infrastructure Manager Position approved
- 2020: Interagency Wastewater Infrastructure Work Group Recommendations submitted to GA

Recent History: 2021

- 2021: Senate Bill 1396 passed, creating the Commonwealth's Wastewater Infrastructure Policy

§ 62.1-223.1 “It is the policy of the Commonwealth to prioritize universal access to wastewater treatment that protects public health and the environment and supports local economic growth and stability”

Recent History: 2021 (con't)

- 2021: Senate Bill 1396 passed, :
 - Funding for Wastewater Infrastructure Manager allocated
 - Indemnification Fund updated to allow septic repairs
 - Wastewater Infrastructure Working Group established
 - Wastewater Infrastructure Annual Report
 - Virginia Wastewater Infrastructure Needs Assessment
- August 2021: HB7001 established Septic and Well Assistance Program (SWAP) and allocates \$11.5m ARPA for SWAP

ARPA Funding For Septic and Well

- August 2021: HB7001 established Septic and Well Assistance Program (SWAP) and allocates \$11.5m ARPA for SWAP

\$11.5 million to the Department of Health to provide improvement funds for well and septic systems for homeowners at or below 200 percent of the federal poverty guidelines.

Persons in Household	200% Federal Poverty Guidelines
1	\$27,180
2	\$36,620
3	\$46,050
4	\$55,500
5	\$64,940
6	\$74,380
7	\$83,820
8	\$93,260

10 *Table: 200% Federal Poverty Guidelines*

2023 VA Wastewater Needs Assessment

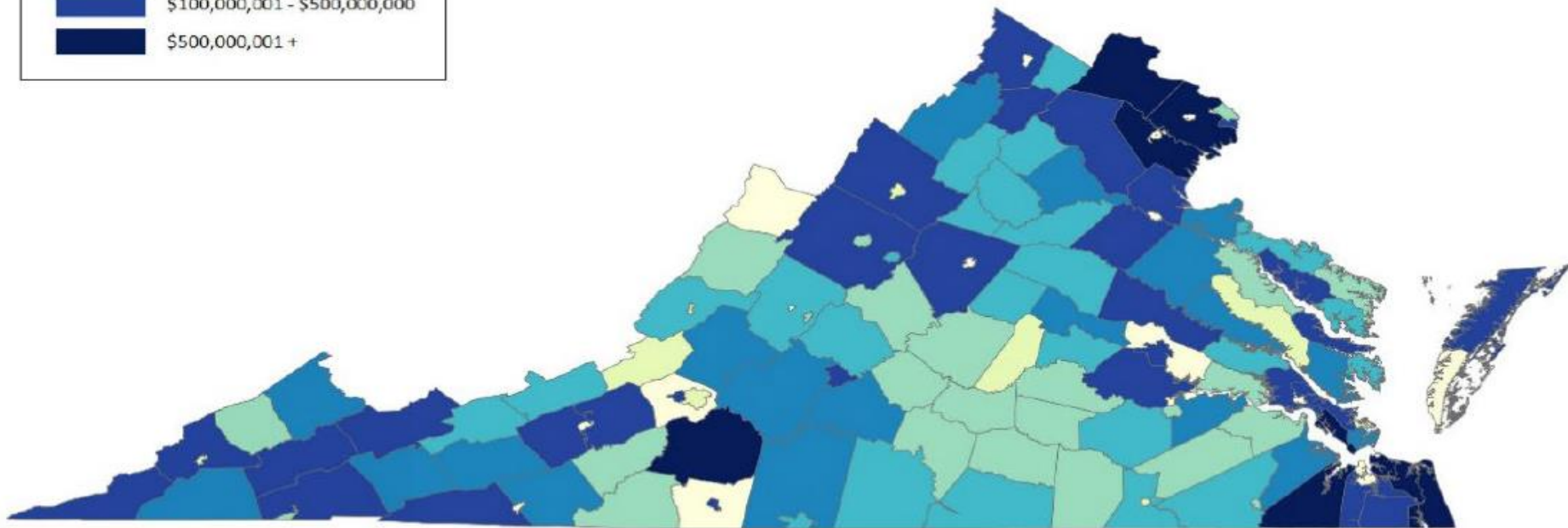
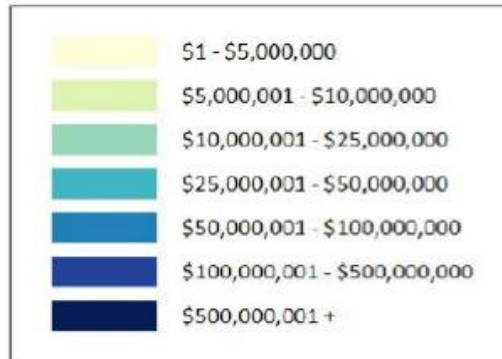
- Produced by DEQ and VDH
- Assesses the total wastewater infrastructure need over a 20-year period (2022-2042) in Virginia to implement Commonwealth’s Wastewater Infrastructure Policy established in § 62.1-223.1 of the Code of Virginia

Table 1: Commonwealth Wastewater Infrastructure Needs	
Community Wastewater Infrastructure Needs	\$10,756,421,873
Onsite Wastewater Infrastructure Needs	\$5,050,763,675
Total Wastewater Infrastructure Needs	\$15,807,185,548

Source: Draft “Commonwealth of Virginia Wastewater Infrastructure Needs Assessment – 2023”

Combined Wastewater Needs in Virginia Counties and Cities

**Total Need: \$15,807,185,548
(2022-2042)**



Source: Draft “Commonwealth of Virginia Wastewater Infrastructure Needs Assessment – 2023”

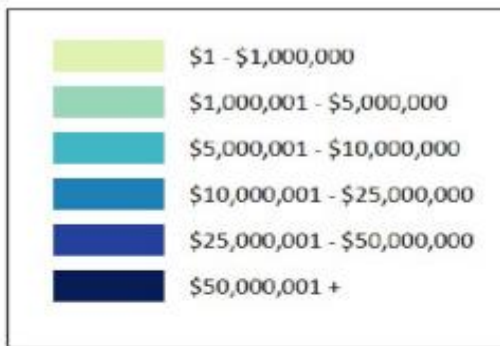
Onsite Wastewater Infrastructure Needs

Table 7: Total Estimated Needs and Costs by Onsite Need Category Over 20-Year Period

Category Number	Category	Total Number of Needs	Total Cost
1	Connection to public sewer in lieu of repair	9,615	\$240,370,034
2	COSS repair	39,646	\$779,040,321
3	AOSS & alternative discharge system repair	5,114	\$177,966,183
4	COSS operation & maintenance	1,088,253	\$1,871,794,341
5	AOSS operation & maintenance	145,984	\$1,981,592,796
Total		1,288,612	\$5,050,763,675

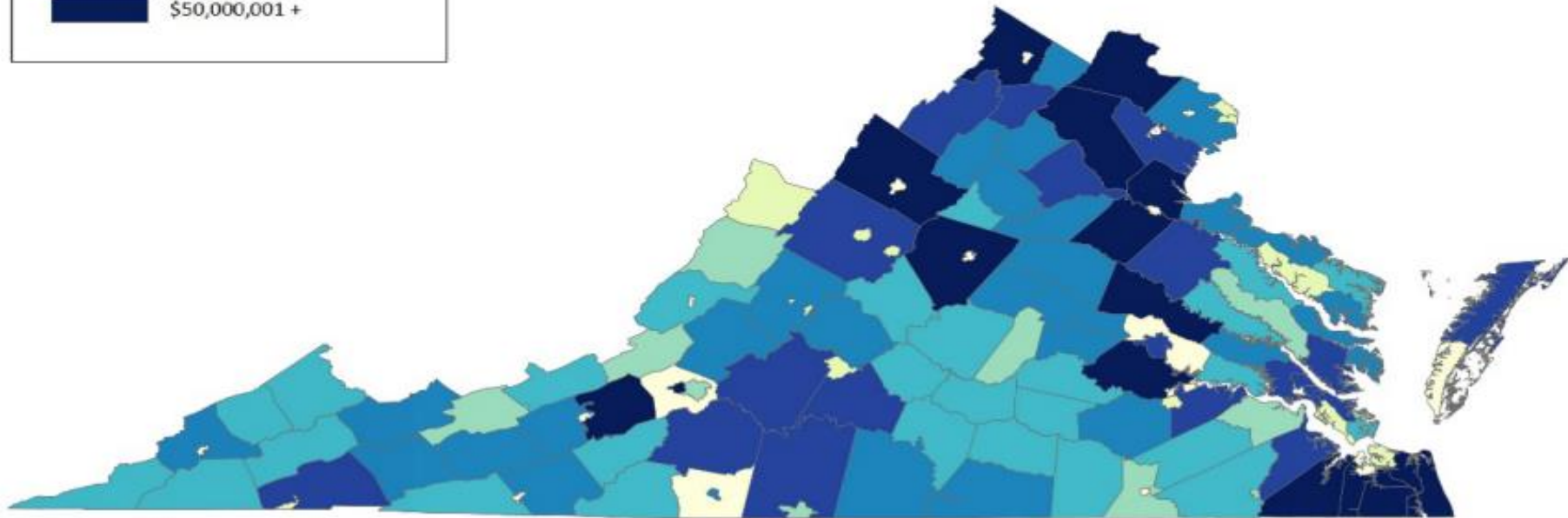
Source: Draft “Commonwealth of Virginia Wastewater Infrastructure Needs Assessment – 2023”

2022-2042 Onsite Wastewater Needs in Virginia Counties and Cities



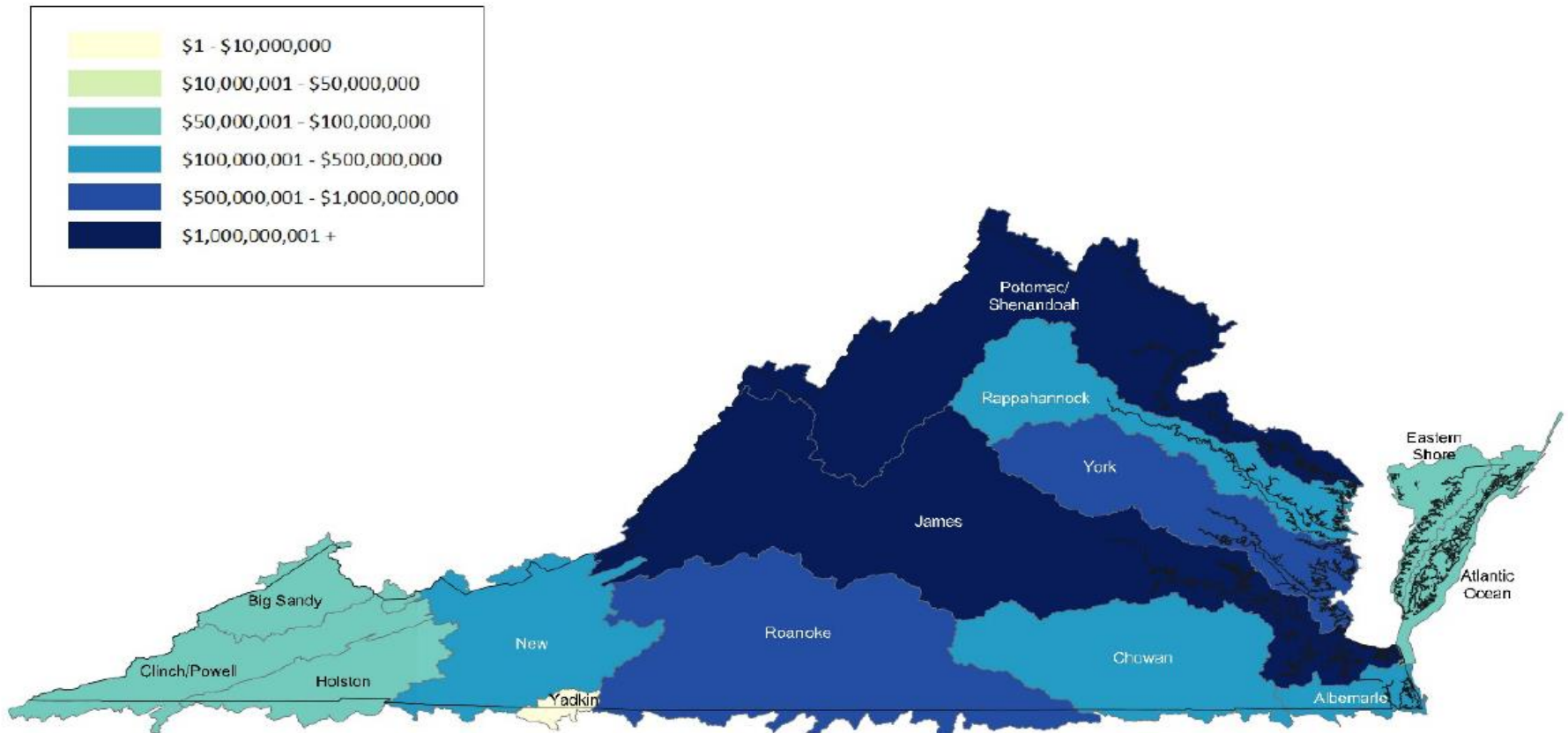
**Total Onsite Needs: \$5,050,763,675
(2022-2042)**

Average Need: \$252.5 million/year



Source: Draft "Commonwealth of Virginia Wastewater Infrastructure Needs Assessment – 2023"

2022-2042 Onsite Wastewater Needs in Virginia River Basins



Source: Draft “Commonwealth of Virginia Wastewater Infrastructure Needs Assessment – 2023”

VA Septic and Well Assistance Program (SWAP)

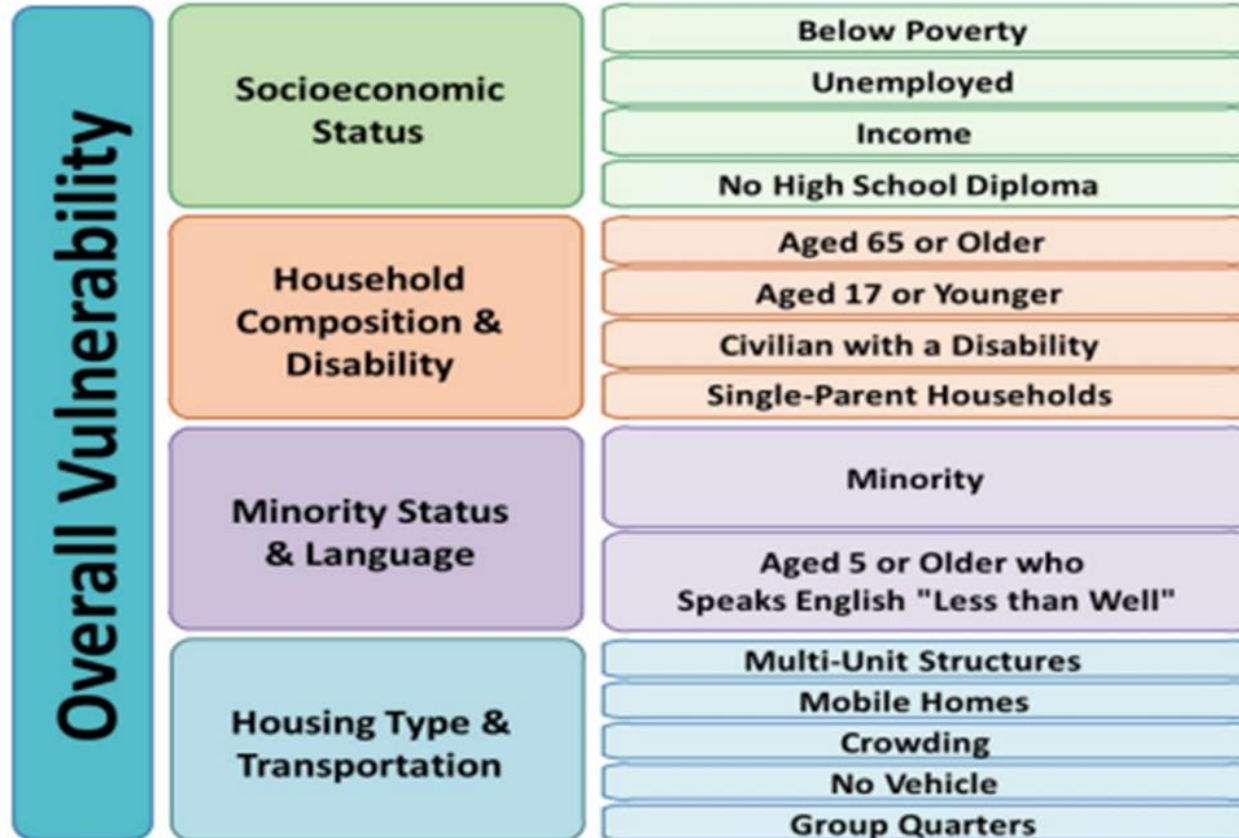
- **Established:** 2021
- **Initial funding:** \$11.5 million from ARPA
- **Total Funding** (to date): \$13.5 million
- **Purpose:** to provide funding assistance to homeowners (economically and socially disadvantaged) with documented failing onsite septic systems (or straight pipes) and inadequate private drinking water supplies (wells, springs, cisterns)

Key Objectives and Goals

- Improve the health of Virginians and provide additional protection to Virginia's communities through the assurance of adequate wastewater treatment and safe drinking water.
- Minimize overhead to use the greatest amount possible of the available funding to put projects in the ground.
- Prioritize outreach to historically disadvantaged communities and hot spots.
- That available funds be dispersed equitably based on the [CDC's Social Vulnerability Index](#) (SVI).

CDC Social Vulnerability Index

CDC's Social Vulnerability Index (SVI)



The most current available CDC Social Vulnerability Index is based on 2018 5-year ACS data

Projects Covered by SWAP Funds

- Repair failing onsite septic systems (conventional and alternative).
- Emergency pumping out of COSS/AOSS
- Replace straight pipes and privies.
- Public sewer connection.
- Replace inadequate private wells.
- Properly abandoned unused wells.
- Public water connection.
- Design of AOSS systems



Eligibility and Costs to Homeowner

- Eligibility

- Own home and land on which it sits
- At or below 200% FPG
- Income verified by VDH process
- System documented to be failing (septic) or one of 8 criteria for inadequate private drinking water

- No upfront costs to Homeowner

- Eligible to Petition for VDH Services for design
- Waiver of permit fee
- Direct installation of BMPs

- Minimize Homeowner long-term maintenance costs

- Provide assistance for operation and maintenance inspections for first 2 years

Original SWAP Plan

Distribute \$11.5* million of ARPA funds through two mechanisms

- Direct Homeowner Applications (\$4.5 m)
- Local Partner Initiative (\$5.6 m)

*(Program Administration (\$1.9m))

SWAP Plans/Dreams

October 2021: Hire Program Manager

March 2022: Hire SWAP Team and Train

March-June 2022: Soft Rollout of Application Process

July-Dec 2022: Promote/Advertise SWAP

Jan 2023-Dec 2024: Accept applications, start installations

December 31, 2024: All applications received;
All projects identified.

June 30, 2025:
all projects awarded contracts

June 30, 2026:
All projects installed

December 31, 2026:
\$11.5 million spent,
200 Families helped



2021

2022

2023

2024

2025

2026

SWAP Reality

January 2022: First Homeowner Application Received

February 2022: Program Manager Starts

March 2022: First Local Partner RFA released; First Homeowner Project installed/completed

April 2022: First Local Partner applications received

May/June 2022: SWAP Team fully staffed

July 2022: Soft Pause on homeowner applications

September 2022: Stopped accepting homeowner applications

November 2022: Stopped accepting Local Partner applications

October 2023: 271 projects completed/installed

June 2024: Direct Homeowner Projects Complete

December 2024: All Local Partner projects identified.

June 30, 2025:
all projects awarded contracts

December 31, 2026:
\$11.5 million spent,
400 Families helped



2022

2023

2024

2025

2026

Will complete 2.5 years earlier than estimated. Additional 80-100 families interested if funds are available, \$3-3.5 million more for Direct Homeowner Applications

Status of SWAP Projects (8/18/23)

- From 2/15/2022-10/16/2023 (~20 months)
- 270 Direct Homeowner applications for 537 projects (includes 140 pumpouts). 66 projects have been denied/cancelled.
 - **471 projects will be installed. Total requested~\$7.7 million.**
 - **428 (90.1%) projects in/thru the procurement process**
 - **271 (57.5%) completed/installed (over \$4 million)**
 - 90 awarded and under construction (27%)
 - 43 in procurement process
 - 24 procurements have been canceled
 - Projected Cost Estimation: \$7.6million (Includes other funds) 169% of original allocation of \$4.5 million.

Breakdown by Project type

Type of Activity	# projects*	% of total
Both Septic and Well	1	0.25%
Denial/cancelation	66	16.6%
Design (Septic or Sewer)	32	8.06%
Post Completion Fix	3	0.75%
Public Sewer	17	4.28%
Public Water	6	1.51%
Public Water & Sewer	1	0.25%
Septic (COSS, COSS w/pump, AOSS)	140	35.26%
Site Survey	1	0.25%
Well and/or Well abandonment	130	32.75%
Total # of projects	397	

*These totals do not include 140 pumpouts

Status of SWAP Projects (8/18/23)

- From 2/15/2022-10/16/2023 (~20 months)
- 6 Local Partner awards issued for \$1.8 million: Currently estimate over 90 homeowners have requested funding.

Finding the Money

- VDH ARPA SWAP: (\$11.5 million)
- VDH: SWAP Most Effective Basin (~\$2 million)
- VDH Indemnification Fund (Septic only) (~\$100k/year)
- VDH Application to Government 2 Government EJ: for wells only \$500k-\$1m
- VDH: Virginia Environmental Endowment (\$500k)
- DEQ: ARPA Septic Local Partner Program (\$5m)
- DEQ: Virginia Clean Water Revolving Loan Fund
- DEQ: EPA Section 319 Nonpoint Source (septic only)
- State: Water Quality Improvement Funds (septic only)
- SERCAP: Various funding programs

Documenting Our Successes

- Goal " To provide access to onsite wastewater and private drinking water systems that are fully protective of public health and the environment"
- Success Story: Keisha Hardy
- Success Story: Melanie Mehanes
- Success Story: Sherry Angell

Success Story: Septic and Well

- Newly renovated home but the septic system was homemade
- In need replacement of septic system and well
- When it rains the smell backs into the house and sometimes the water stops running
- Difficult being a single parent and trying to provide the best quality of life for your children and constantly running into obstacles.



Keisha Hardy's home where the sewage is coming up into the yard. The home was purchased with no idea that the septic system was homemade and failing.



Old board well installed prior to 1990
Virginia Water Well Regulations

"We just want to live a normal life...honestly, we do." – Keisha Hardy, SWAP beneficiary

"When God comes through, and you have people like yourself [SWAP TEAM] it really a blessing." – Keisha Hardy, SWAP beneficiary

Success Story: Wells – Melanie Mahanes

- Well covering was not secured creating a safety hazard
- Water was contaminated
- Ms. Mahanes had to fill up old milk containers at her neighbor's house because buying water became expensive so that she could cook meals
- Could only shower 2-3 times a week at her daughter's home

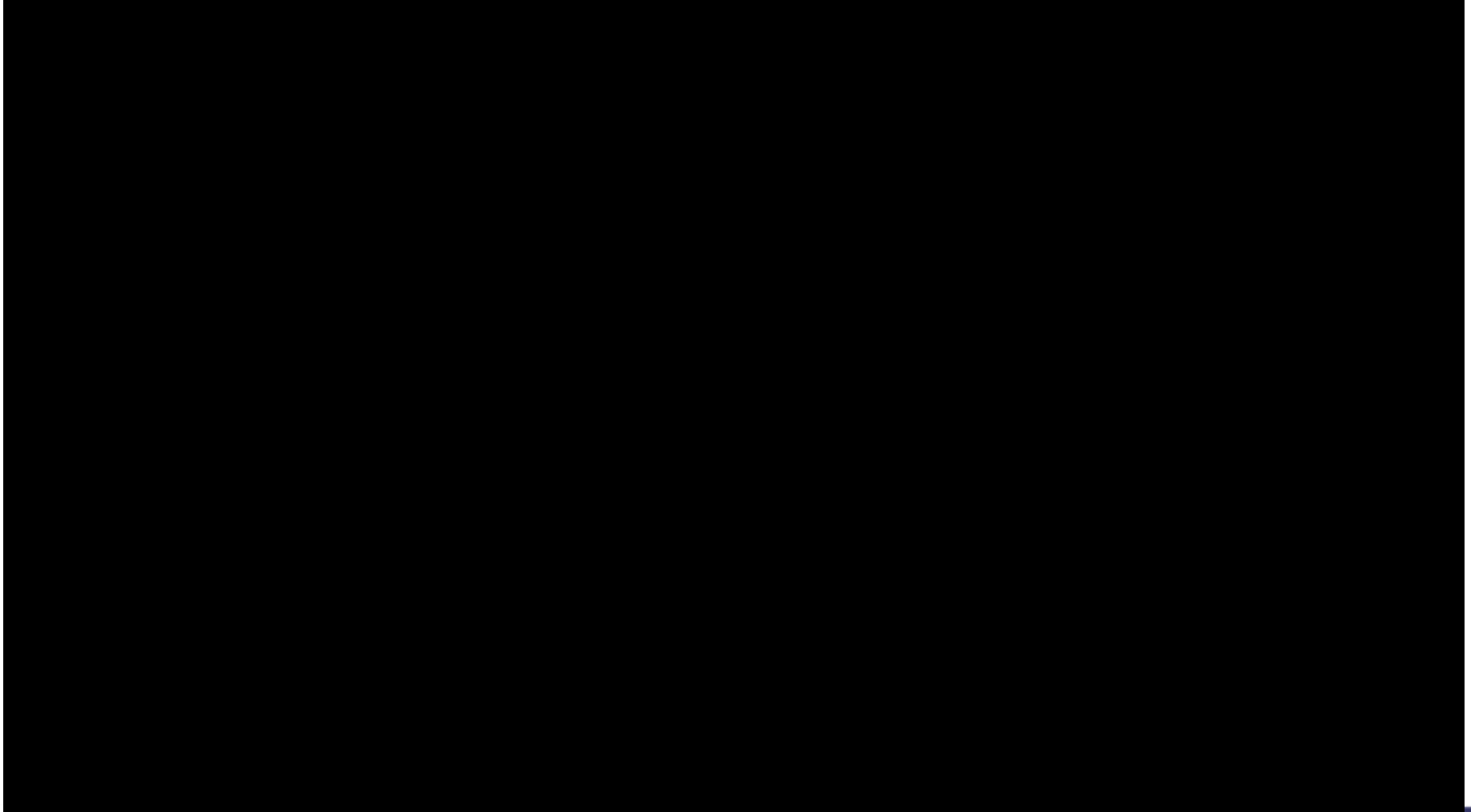


Melanie's old well which was very low in water and contaminated from a dead animal's remains that had gotten trapped in the well

[SWAP] "It's given me a sense of hope and just incredible humbleness." – Melanie Mahanes, SWAP beneficiary

"When I was approved [for SWAP] it was like winning the lottery. I was so blessed and thankful." – Melanie Mahanes, SWAP beneficiary

Video: Melanie Mehanes' Story



Success Story: VDH Program Provides Safe Water and Septic to Families



safe water and septic to Virginians, but now it's out of funding

RADIO IQ | By Mallory Noe-Payne

Published October 26, 2022 at 9:45 PM EDT



Sherry Angell walking on her family's property past the spring-fed system that has provided water to her house for more than 60 years.

Mallory Noe-Payne

- Virginia Public Radio:
October 26, 2022
 - <https://www.wvtf.org/news/2022-10-26/program-provides-safe-water-and-septic-to-virginians-but-now-its-out-of-funding>

"[This program] is a blessing, and I feel that it's God's hand working in it." – Sherry Angell, SWAP beneficiary



System in disrepair



Questions?

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