

Anne Arundel County Clean Water Program

Our wAAter Public Advisory Group Meeting

May 6, 2024

Our wAAter.



Agenda

- 01** Meeting Objectives
- 02** Outreach Update
- 03** FY 25 County Budget
- 04** PFAS Updates
- 05** Wastewater Treatment Enhancements
- 06** Minor Systems
- 07** Single Septic Connection Program
- 08** Next Steps





01

Meeting Objectives



Meeting Objectives

- Present status updates for key issues and discuss as a group
 - Minor Systems
 - Wastewater Treatment Enhancements
 - PFAS
 - FY25 County Budget
- Receive feedback
 - Single Septic Connection Program
 - Health Department and Planning & Zoning involvement in Clean Water projects



02

Outreach Update

Recent Events



- DPW Outreach Day – May 4



Upcoming Opportunities: River Days



- Saturday, June 29 - 11:00 to 4:00
 - Smithsonian Environmental Research Center - 647 Contees Wharf Rd, Edgewater
- Saturday, July 20 - 11:00 to 4:00
 - Annapolis Maritime Museum Park in partnership with CRAB and Annapolis Sailing School - 7300 Edgewood Road, Annapolis
- Sunday, August 11 - 11:00 to 4:00
 - West River Center - 5100 Chalk Point Rd, West River
- Sunday, August 25 - 11:00 to 4:00
 - Quiet Waters Park - 600 Quiet Waters Road, Annapolis
- Saturday, September 14 - 11:00 to 4:00
 - Fort Smallwood Park - 9500 Fort Smallwood Rd, Pasadena

Septic-to-Sewer

- Recent post-application meetings
 - Crain West
 - Poplar Point
 - Indian Hills / Glen Eden
- Upcoming post-application meetings
 - Ulmstead Estates





03

FY 25 County Budget

FY25 County Budget Overview



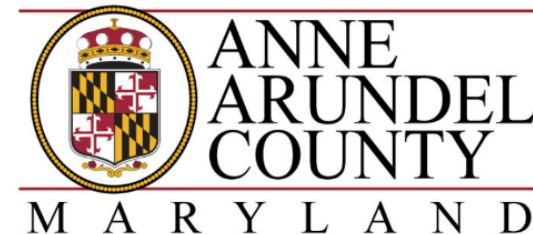
Six Year Totals

- Water \$530 million
- Wastewater \$730 million

Three new capital projects:

- Mayo Peninsula Septic Replacement
- Aeration System Improvements (for upgrades at four facilities)
- Heritage Harbor Water Interconnection

Proposed Capital Budget and Program



Steuart Pittman
County Executive

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FY25 County Budget Overview



Future Challenges & Drivers

- Aging infrastructure
- New regulations
- Technology improvements
 - AMI meter program
 - Biosolids

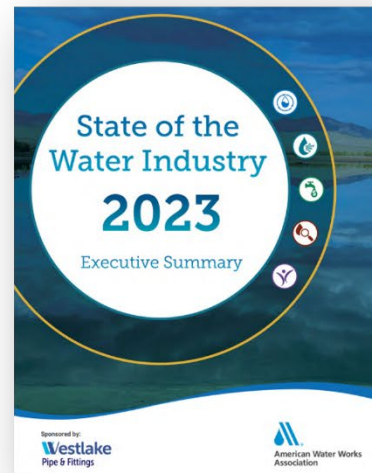
Regulations

20%

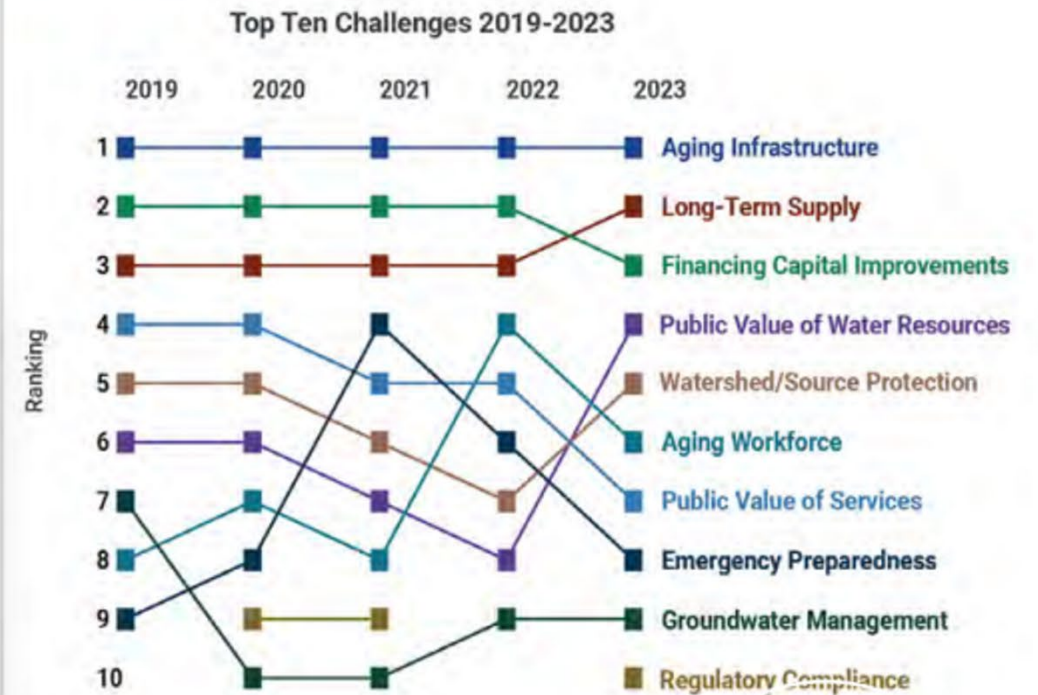
of respondents are extremely concerned about their ability to comply with regulations related to **PFAS**.

15%

of respondents are extremely concerned about their ability to comply with regulations related to **Lead and Copper**.



Challenges



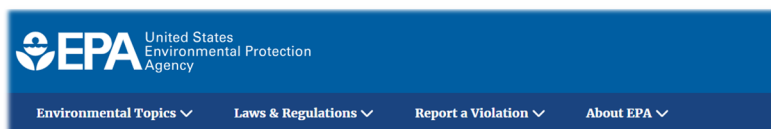


04 PFAS Updates

Drinking Water PFAS Updates



- US EPA has finalized Maximum Contaminant Limits (MCL) for six PFAS chemicals in Drinking Water
 - Of those six, we have detected three (PFOA, PFBS and PFHxS) in the MAR Pilot influent
 - Only one (PFBS) was detected in the pilot effluent after 18 months of pilot operation and was below the MCL



[Safe Drinking Water Act](#)

Per- and Polyfluoroalkyl Substances (PFAS)

Final PFAS National Primary Drinking Water Regulation

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (i.e. GenX)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 Hazard Index	1 Hazard Index

Hazardous Waste PFAS Updates



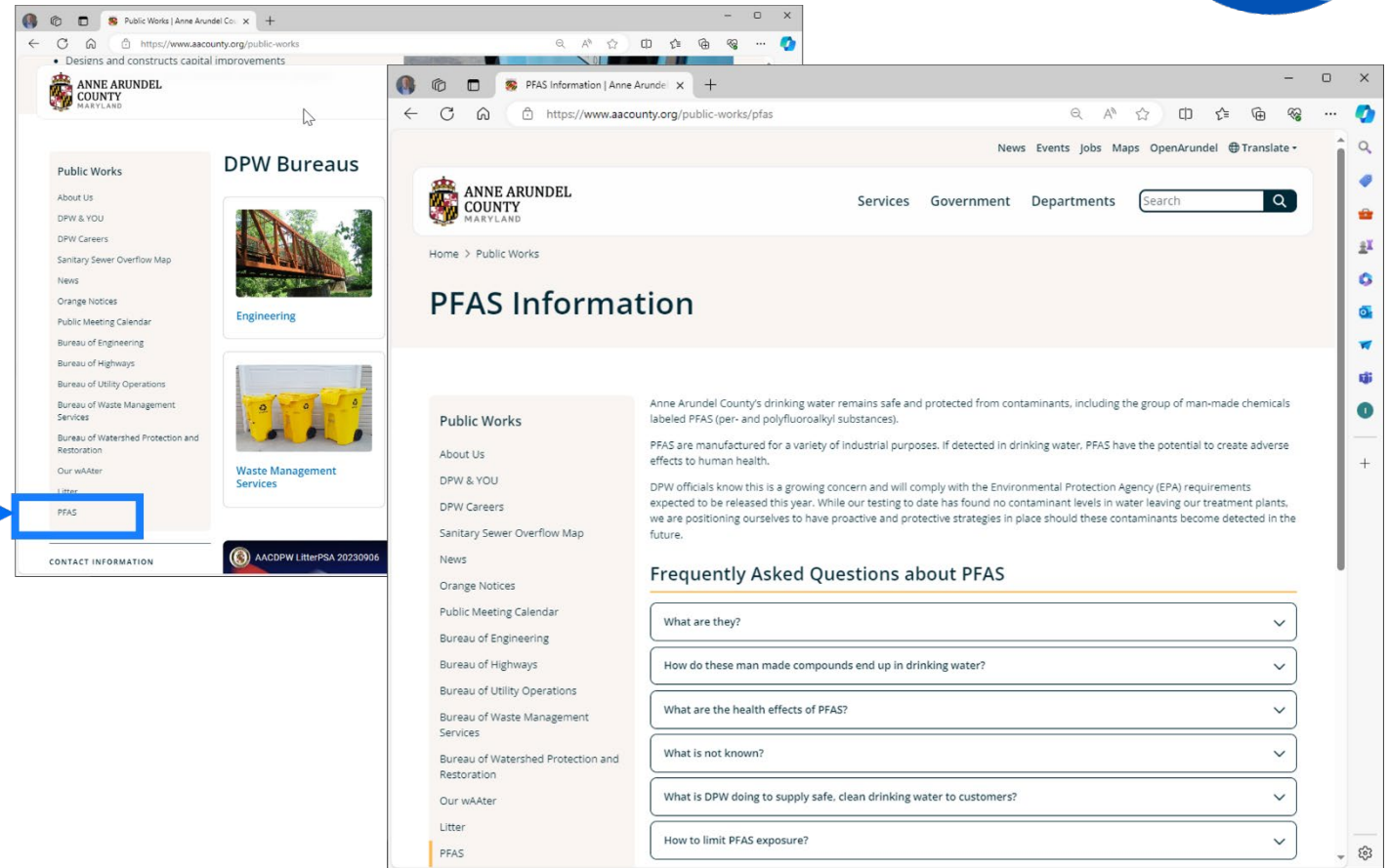
- EPA finalized to regulate PFOA and PFOS as hazardous substances under the Resource Conservation and Recovery Act (solid and hazardous waste).
- Potentially include regulations for additional three PFAS
 - Of these additional three, two detected MAR pilot influent
 - Perfluorobutanoic acid (PFBA) detected in pilot effluent after four months of operation
 - Perfluoro hexanoic acid (PFHxA) detected in pilot effluent after six months of operation

**Final CERCLA Hazardous Substances
Designations for PFOA and PFOS**

Current Actions Related to PFAS



- DPW reviewing the final standards
- Regular monitoring is expected
- Basic PFAS information provided on DPW website





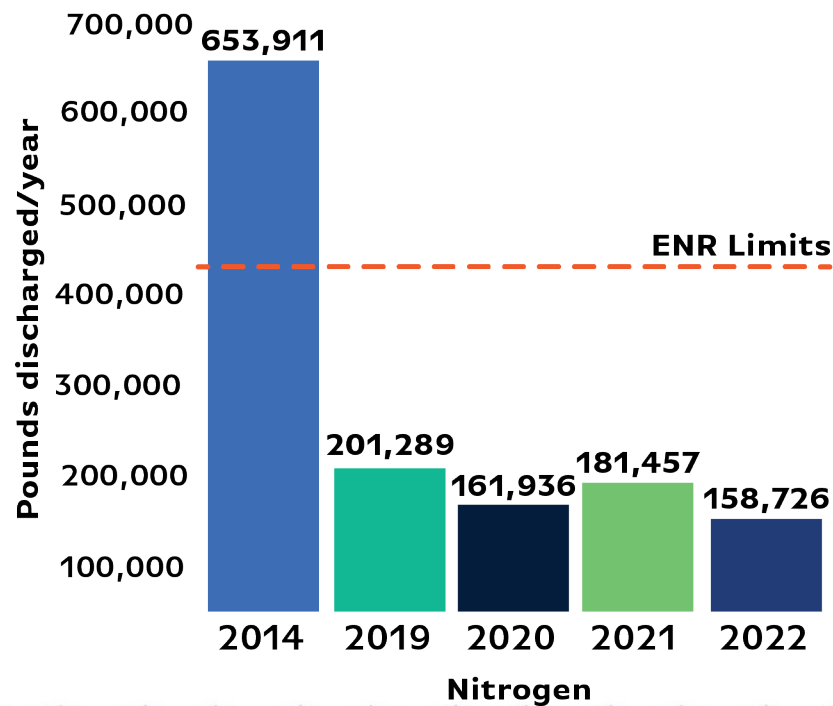
05

Wastewater Treatment Enhancements

Wastewater Treatment Enhancements



Anne Arundel County Permitted Nitrogen Discharge Limits



- Most County Water Reclamation Facilities (WRFs) upgraded to Enhanced Nutrient Removal (ENR) technology by 2017
 - Bay Restoration Fund provided support
 - Enabled removal of far greater amount of nitrogen and phosphorus.
- Facilities performing significantly less than allowable limits for phosphorous and nitrogen
 - Consistent performance earned recognition from the National Association of Clean Water Agencies

Wastewater Treatment Enhancements



DPW working to develop more tools to help run and maintain these state-of-the-art facilities, improve monitoring and control of these processes, and improve equipment reliability



Innovative process improvements will be examined to determine where current approaches can be modified to improve performance, increase efficiency, or enhance reliability



The goal of these efforts is to maximize the overall performance of the WRFs

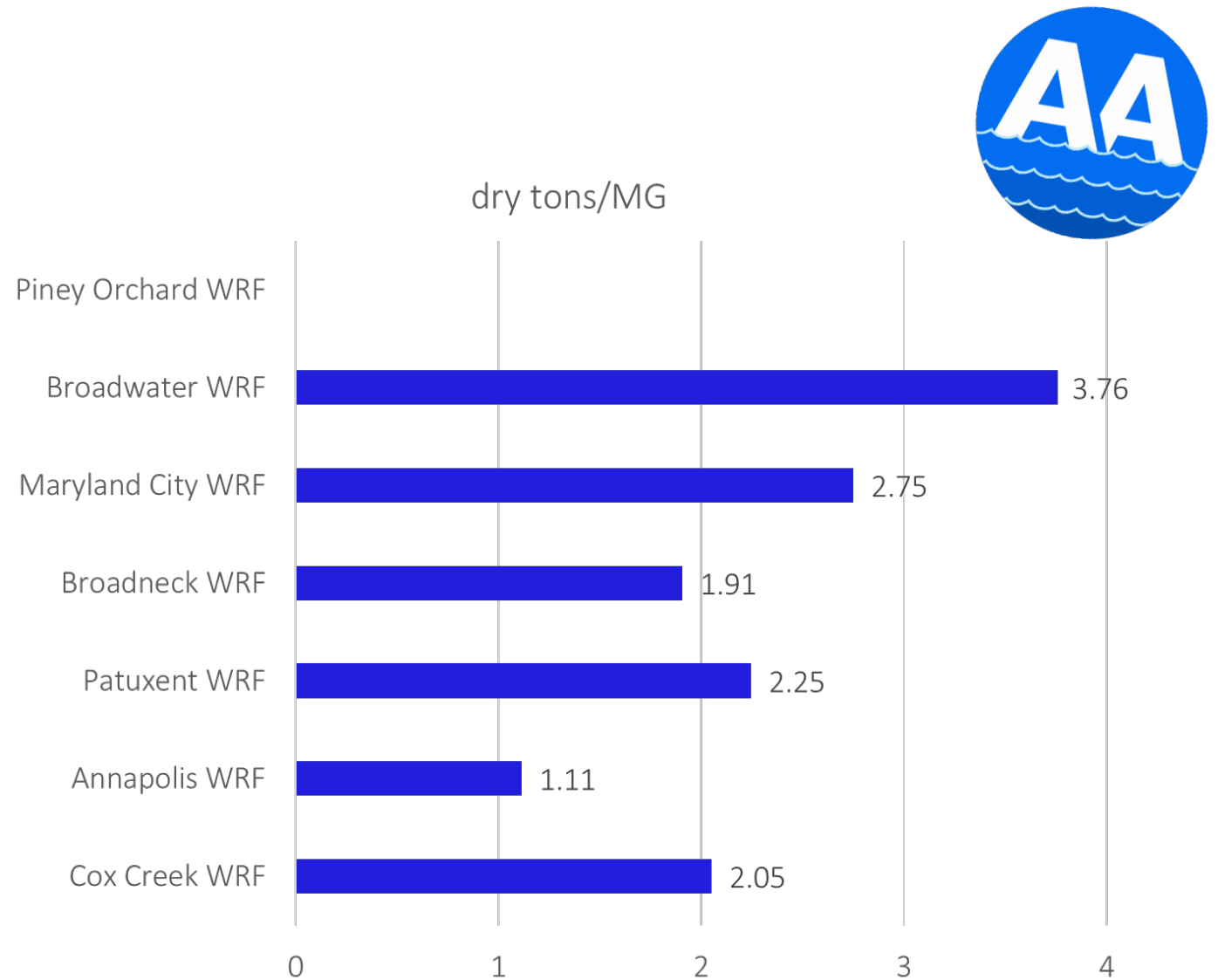
Electricity and Chemical \$ per lb-N Removed



- Cox Creek and Maryland City have the highest portion of external carbon cost per lb-N removed - use a more expensive carbon source (MicroC)

Solids Production

- Broadwater has high solids production – high metal salt dose
- Dry tons includes lime





06

Minor Systems

Minor Systems

- \$1.1M in fines issued to Horizon through EPA Consent Agreement
- County continues to consider takeover of minor WWTP facilities
- New task will be issued to team for developing funding strategy and options



Mobile home park firm fined \$1.1 million for pollution violations in Patuxent River watershed

EPA in Maryland

CONTACT US

Public Notice: Proposed penalty of \$280,000 against Patuxent MHC, LLC and Horizon Land Management, LLC

Publish Date: April 8, 2024

Summary

The United States Environmental Protection Agency (EPA), Region 3 is hereby giving notice that it proposes to enter into a Consent Agreement and Final Order ("CAFO"), which commences and concludes an administrative action against Patuxent MHC, LLC ("Patuxent"), located in Lothian, Maryland and Horizon Land Management, LLC ("Horizon") located in Crofton, Maryland. Patuxent is a manufactured home community located at 5380 Sands Road, Lothian, Anne Arundel County, MD 20711. Patuxent has National Pollutant Discharge Elimination System ("NPDES") Permit No. MD0024694 to operate its Wastewater Treatment Plant ("WWTP"). Horizon is the property management company that serves as the managing agent for Patuxent and manages the service contract with a third party to operate and manage WWTP at Patuxent. This CAFO alleges that Patuxent and Horizon allegedly violated its NPDES Permit as follows:

How to Comment

Comments Due: May 20, 2024

Comments can be submitted to the Region 3 Regional Hearing Clerk via email or hard copy mail:

For email please submit to:
R3_Hearing_Clerk@epa.gov

For hard copy mail please submit to:

U.S. Environmental Protection Agency,
Region 3

1600 John F. Kennedy Boulevard

Minor Systems

Department of Health Role



- Recreational water closings/advisories posted at
 - <https://www.aahealth.org/environmental-health/recreational-water-quality/closings-and-advisories>
- Dept. of Health follows criteria issued by the State & EPA.
 - Recreational water bodies that are deep enough for most people to swim with their entire body underwater
 - Beaches must meet criteria to be sampled and monitored
 - Dept of Health monitors 81 beaches from Memorial Day to Labor Day

Waterways and Health Risks

Recreational Water Quality

Beach Cleanup After Heavy Rainfall

Beach Swim Guide

Closings and Advisories

Water Quality Report

Waterways and Health Risks

After rainfall, all Anne Arundel County beaches are under a no swimming and no direct water contact advisory for 48 hours due to predicted elevated bacteria levels. Do not swim until 48 hours after rainfall or until the water clears.

Under State of Maryland regulations, the Anne Arundel County Department of Health conducts water quality sampling at community bathing beaches along area creeks and rivers from Memorial Day to Labor Day. The water bodies are tested for levels of enterococci bacteria. Below are the most commonly asked questions about the Department of Health's water quality sampling and recreational use of natural water bodies.



Frequently Asked Questions

How does the Department determine which bodies of water to monitor?

The Department of Health follows criteria issued by the State of Maryland and the U.S. Environmental Protection Agency (EPA). The EPA criteria are for recreational water bodies that are deep enough for most people to swim with their entire body underwater. [Maryland Beaches Program](https://www.aahealth.org/environmental-health/recreational-water-quality/closings-and-advisories).

<https://www.aahealth.org/environmental-health/recreational-water-quality/waterways-and-health-risks>

Minor Systems

Department of Health Role



- Horizon violations have not posted on HD website
 - Discharge exceedances of discharge compliance parameters are not posted
 - Sanitary Sewer Overflows are posted
 - Wastewater Treatment Plants are regulated by the Maryland Dept of the Environment
- Health Dept. FAQ has link to Maryland Beaches Program about which locations are monitored
- Advisories issued for swimming but not boating, crabbing, and fishing

Waterways and Health Risks

Recreational Water Quality

Beach Cleanup After Heavy Rainfall

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Closings and Advisories

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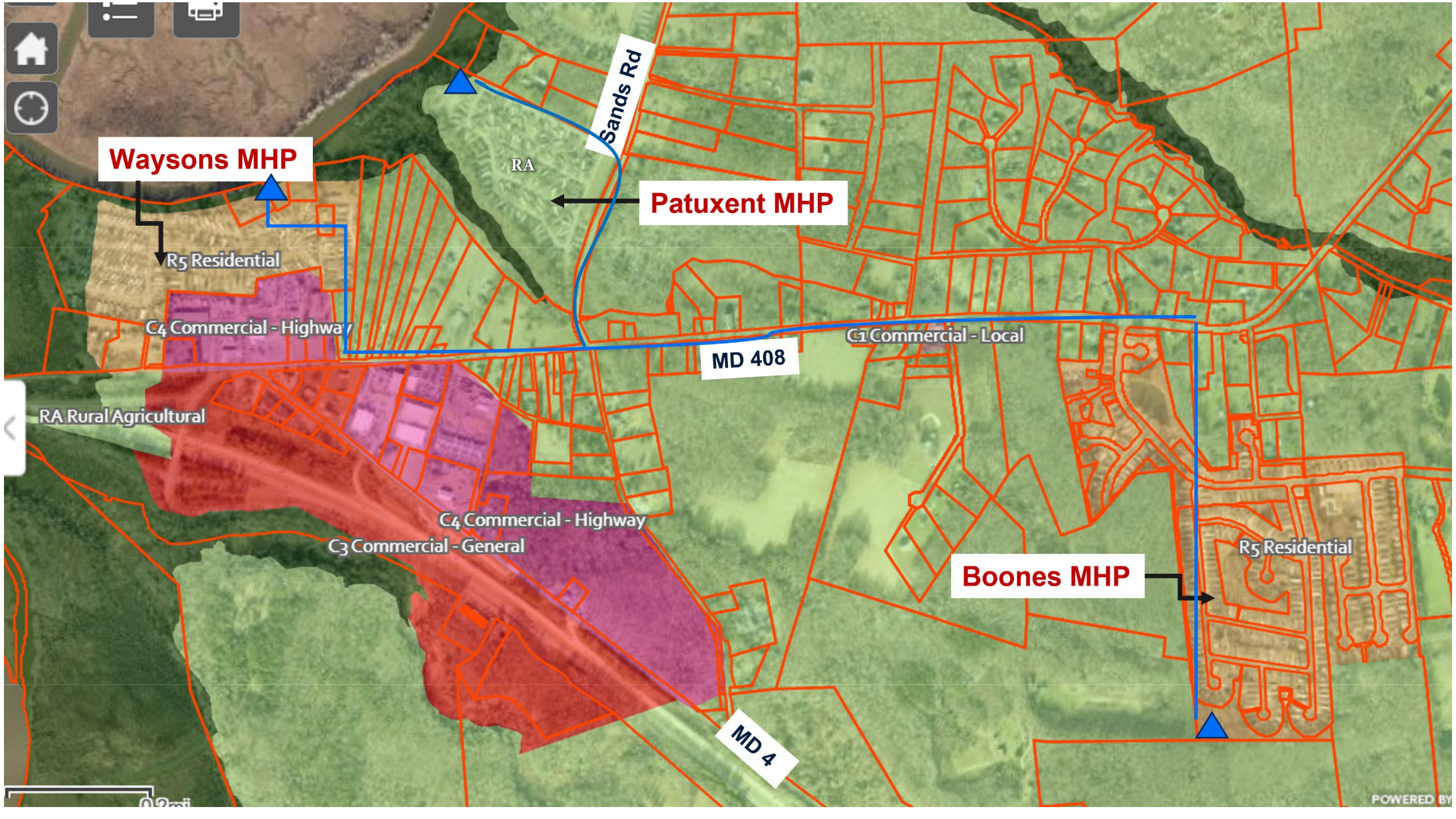
<https://www.aahealth.org/environmental-health/recreational-water-quality/waterways-and-health-risks>

Minor Systems

Office of Planning & Zoning Role



- Five WWTPs under consideration for County takeover
 - Not in PFA
 - Not in Planned Sewer Service Area
- Area is in Growth Tier 4
 - Areas not planned for public sewer service and that are generally planned or zoned for land, agricultural or resource protection or preservation
- PFA Map Adjustment – Administrative map adjustment requested by OPZ
 - Not compatible with surrounding areas. Not pursued
- Projects may qualify for a categorical exception if scope of project does not provide for growth.
 - “Upgrade of existing plants with no increase in capacity or change in service area.”



Waysons MHP

R5 Residential

C4 Commercial - Highway

RA Rural Agricultural

C4 Commercial - Highway

C3 Commercial - General

Sands Rd

Patuxent MHP

MD 408

C1 Commercial - Local

Boones MHP

R5 Residential

MD 4

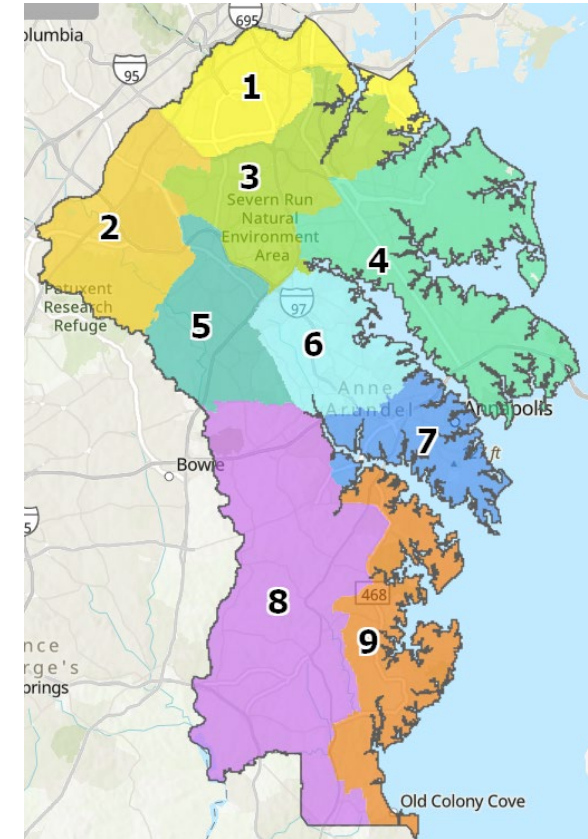
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Plan 2040 Considerations

- Region 8 is largely rural and agricultural areas
 - Large lot residential areas, farms and very limited commercial and industrial areas outside of the PFA
 - Small commercial areas exist at the nodes of these rural roads, including Waysons Corner
 - Served by private septic
- Development is limited to protect the rural and agricultural heritage and economy and limit the costly extension of public facilities and services.



Plan 2040 Region Areas





Plan 2040 Considerations



- The Wayson's Corner area has a development policy area of Neighborhood Preservation existing low-medium density development and commercial node
- Policy area characterized by existing, stable communities not intended for substantial growth or land use change



Development Policy Overlays

-  Transit-Oriented
-  Village Center

Village Center Overlay

Existing or planned; walkable, pedestrian-oriented, mixed-use areas that are suburban or rural in character compatible with the underlying Policy Area and surrounding community; development and redevelopment is oriented toward the community, enhances community heritage, and is implemented by a village sector plan.

Plan 2040 Considerations

- Region Planning is starting soon

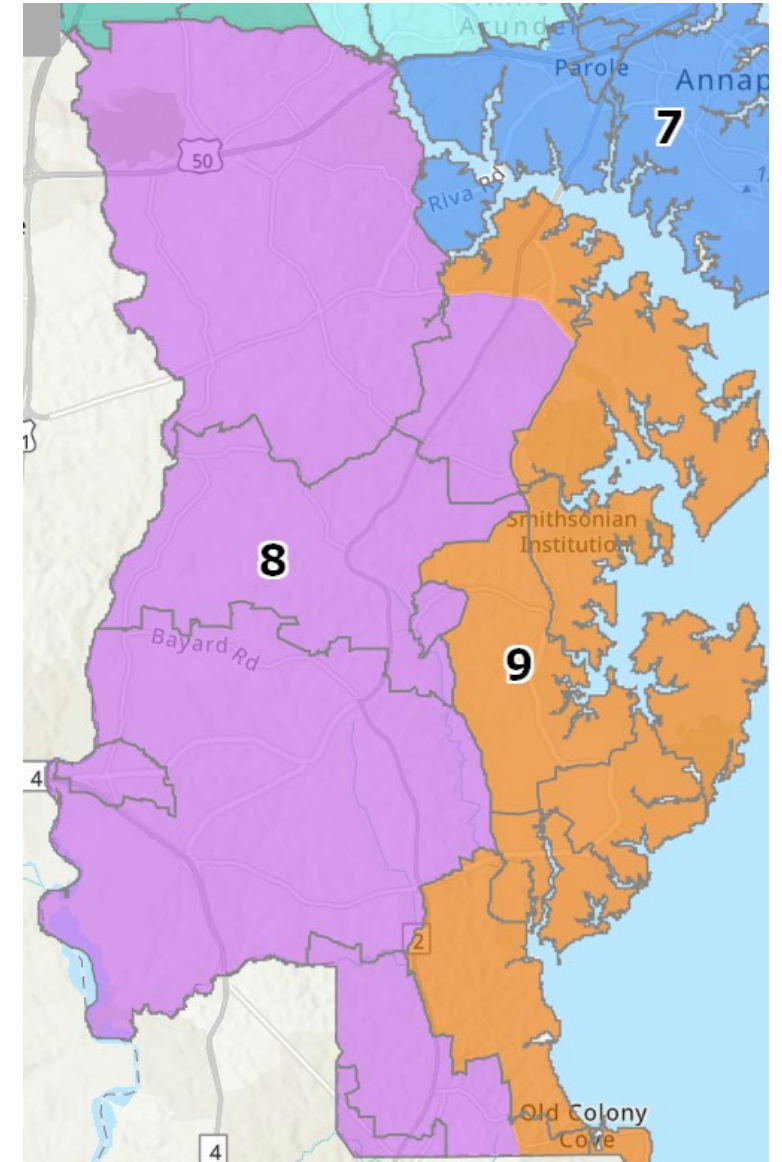
! Regions 5, 6, and 8 Starting Now

We invite you to fill out a brief questionnaire to share what you love and what you want to see changed in your community.

REGION 5

REGION 6

REGION 8



Minor Systems



Land Use Considerations

- Current growth potential
- Future requests for zoning changes
- Coordination with Stakeholder Advisory Committees to continue through 2025



Potential Strategies

- Attempt to keep alignments out of public right of way
- Denied access infrastructure for any assets in public right of way
- Terms in takeover agreement that provide limitations on the land use.





07

Single Septic Connection Program

Septic-to-Sewer

Department of Health Role



- Wells and Septic System Program part of Environmental Health
 - Work with residents on all well and septic system issues
- Manage requests by homeowners to connect to existing sewer and facilitate BRF grant program
- Dept of Health receives BRF Grant annually between \$2.5 to \$3.5 Million approved by MDE and the Board of Public Works
- BRF Grant also is utilized to install Best Available Technology Nitrogen Reducing Treatment Units on on-site sewage disposal systems



Anne Arundel County
Department of Health

Home

Environmental Health

The Bureau of Environmental Health promotes and protects the safety of the residents of the County through environmental regulation, inspection, investigation and education of the public in the areas of community housing, food protection, private septic systems and wells, recreational waters and other environmental programs.

Septic-to-Sewer

Department of Health Role



- Dept of Health has administered the BRF Grant annually since 2008.
- Evaluate and define presence of Onsite Wastewater Management Problem Areas
- Department inspects new septic tanks
- Maintenance and pumping of septic tanks are the responsibility of the homeowner



Anne Arundel County
Department of Health

[Home](#)

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Septic-to-Sewer

Office of Planning & Zoning Role



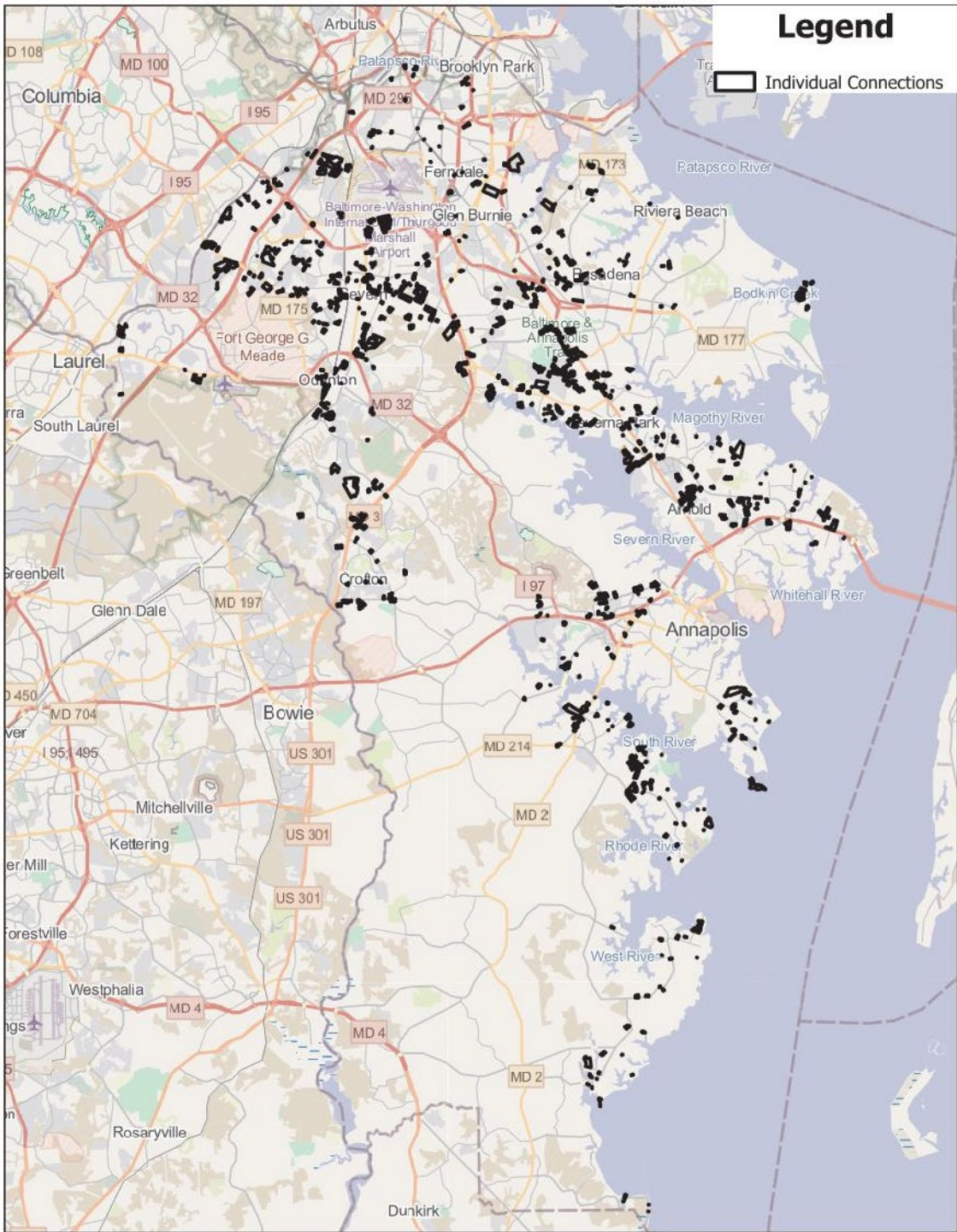
- Administrative PFA Line Correction
 - OPZ assesses lot density to correct PFA boundaries
- PFA Exception
 - Pre-Application to OPZ
 - Provide description of nature of threat to public health and safety
 - Describe growth potential – relates to infill potential
 - Describe steps to limit growth
 - DPW submits package to MDE for consideration
 - MDE submits request to the Smart Growth Interagency Coordination Committee under Maryland Dept of Planning (MDP)
 - Public Hearing is required
 - MDP approves request
 - Approval is sent to MDE for funding requests

Alternative Implementation Concepts



Focus Here

- WPRP funding
 - (\$1 million / year)
 - Offsets upfront (private plumbing) costs and Capital Facility Connection Charge (CFCC)
 - Aim for 100 connections/year
- Alternatives:
 - Individual septic-to-sewer implementation
 - Individual connections where a sewer main is available
 - No growth-related perception risks
 - \$6K-\$20K/EDU project cost
 - Small septic-to-sewer implementation
 - Smaller scale connections (<40 homes), sewer main not available
 - Same risks as larger scale program
 - \$30K-\$70K/EDU project cost



Potential Individual Connections



- Map shows parcels within 75 feet of existing gravity or low-pressure sewer
- Over 1300 potential sewer connections that could be eligible for BRF funding

Single Septic Connection Program



Two potential approaches:

- Expand existing program under Health Department
 - Passive outreach
 - Homeowner obtains 3 bids for work
- DPW competitively bid contract
 - Active outreach
 - County contractor performs work

Individual Connection Alternative 1



- DPW Blanket Sewer Connection Contract
 - Utility fund pays for ROW and on-site cost up to a certain amount
 - WPRP pays CFCC
 - Homeowner pays any overage
 - Contractor bids on unit price items
- Pro: DPW vetted contractor, homeowner does not need to obtain multiple bids
- Con: Previously ended, lack of bidders, high pricing

Individual Connection Alternative 2



- Fund Health Department's existing septic-to-sewer connection program
 - WPRP to pay for CFCC, ROW, on-site costs up to a certain amount when BRF runs out
- No Utility Fund funding
- Pro: Support existing program, no new process/personnel required
- Con: Homeowner needs to obtain 3 bids, passive program

The screenshot shows the Anne Arundel County Department of Health website. The header includes the county logo, navigation links for Services, News, and Jobs, and a search bar. The main heading is "Step-by-Step Instructions: Sewer Connections for Existing Dwellings Where Public Sewer is Available - BRF".

Wells and Septic Systems

- Abandonment Guidelines When Property Is Connected to Public Sewer
- Instructions for Residential Subdivisions
- Licensed Liquid Waste Haulers Listing
- Perc Testing
- Request For Copies of Septic or Well Records Online
- Requirements for Best Available Technology (BAT) in the Chesapeake Bay Critical Area
- Septic Systems

Step-by-Step Instructions: Sewer Connections for Existing Dwellings

These instructions apply to sewer connections of existing dwellings where public sewer is available and the property is currently served by a septic system. Grants will be limited to \$25,000 per household and may be applied toward the Public Works Capital Facility Charge, the utility contractor's charges, or the master plumber's charges. Priority will be given to properties with failing septic systems located in Critical Areas and Priority Funding Areas within Existing or Planned Sewer Service Areas of the County. The property owner is responsible for permit fees and any other costs in excess of the grant amount.

STEP 1: DETERMINE THE AVAILABILITY OF PUBLIC SEWER

Contact the Department of Public Works at watersewerpetitions@aaacounty.org or 410-222-7517 to determine the availability of public sewer to your property and to obtain a Certificate of Availability of Public Wastewater and Estimate of Fees for Connection. To be considered for the grant program, the property must be located in an Existing or Planned Sewer Service Area and have public sewer bordering the property or located in a utility easement immediately bordering the property.

STEP 2: SUBMIT BRF GRANT APPLICATION

Submit a [completed Bay Restoration Fund \(BRF\) Grant Application](#) for an Individual Public Sewer Connection to the Department of Health. Also submit the first page of your federal tax return form 1040. Social security numbers should be redacted.

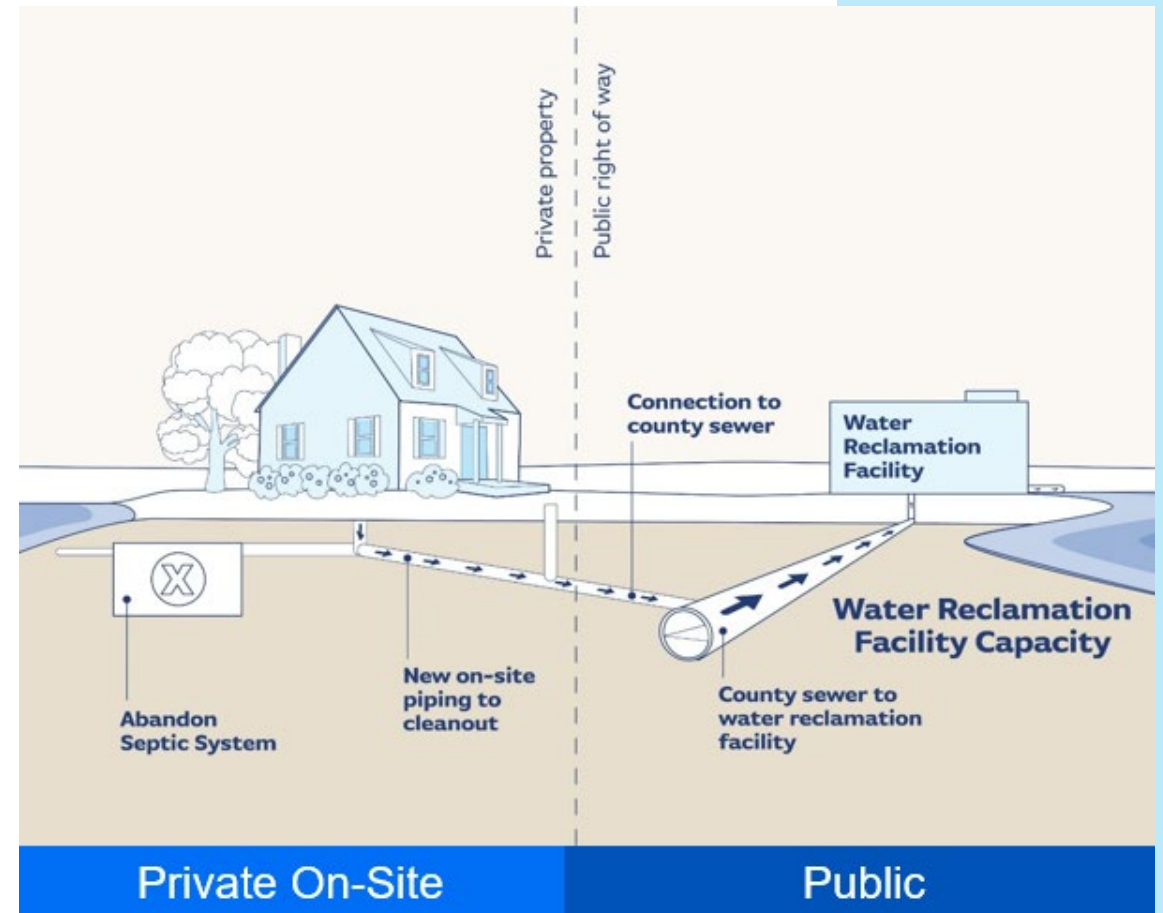
STEP 3: SECURE AT LEAST THREE WRITTEN BIDS

Prior to getting bids for the work that needs to be done in the right-of-way by a utility contractor, or the work that needs to be done on-site by a master plumber, you should contact Ed Peters, Bay Restoration Fund Grant Manager, at 410-222-7324 for further details about the bid requirements. The property owner will need to secure three written bids from Master Plumbers licensed in

Alternative Implementation Next Steps



- Coordination with Department of Health and Bureau of Watershed Protection
- Strategize outreach
 - Prioritize properties
 - How many to notify at one time?
 - Field verification of existing infrastructure





08

Meeting Schedule



Meeting Schedule

- November 16, 2023
- December 2023* (stakeholder tours)
- February 2024
 - Alternative septic delivery conversion concepts
 - Legislative update
 - MAR/other states' water reuse policies
- May 2024
 - Minor systems
 - Wastewater treatment enhancements
 - Outreach events
- **August/September 2024**
 - Stormwater/WPRP

Our wAAter.

THE ANNE ARUNDEL CLEAN WATER PROGRAM

Thank you!

