

Anne Arundel County Clean Water Program

Our wAAter Public Advisory Group Meeting

November 16, 2023

Our wAAter.



Agenda

- 01** Introductions and Background
- 02** Program Updates
- 03** Proposed Legislation
- 04** Outreach
- 05** Meeting Schedule





01

Introductions and Background

Introductions



**Elle
Bassett**

Arundel Rivers

**Tammy
Domanski**

Anne Arundel Comm.
College Environmental Ctr.

**Sally
Hornor**

Magothy River Association

**Erik
Kreifeldt**

**Lloyd
Lewis**

Chesapeake Environmental
Protection Association

**Doug
Nichols**

Greater Severna Park
Council

**Jerry
Pesterfield**

Heritage Harbor

**Bill
Squicciarini**

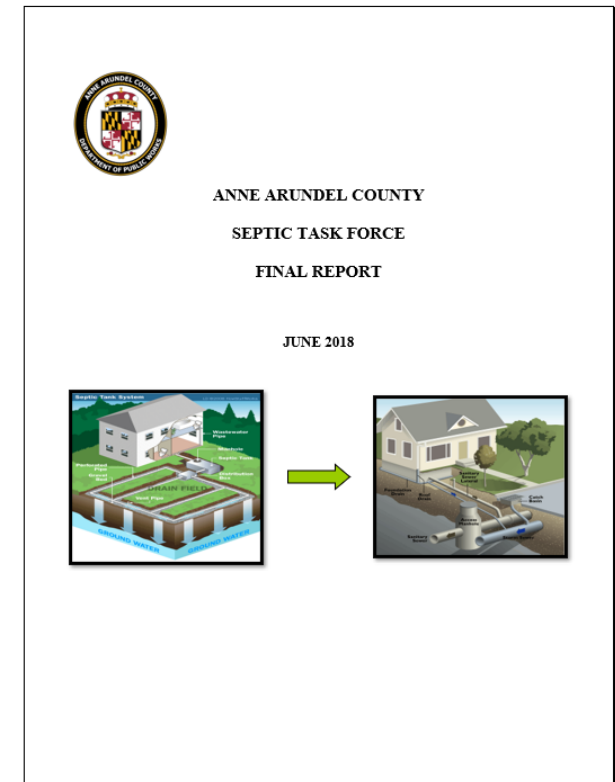
**Tim
Williams**

Water Environment
Federation(retired)

Recent Task Force / Advisory Activity



- Septic Task Force 2017-2018
 - Mission
 - Develop a suite of recommendations that will inform decision makers.
 - Identify strategies and approaches.
 - Identify areas requiring additional investigation for County Staff.
 - Participants
 - Community leaders, River Keepers, Developers
 - County leaders: Public Works, Health Dept, P&Z
 - Outcomes
 - Foundation of the OSDS Strategic Planning Program
 - Policy, funding, and land use recommendations



Recent Task Force / Advisory Activity



- Septic Task Force 2019-2020

- Mission

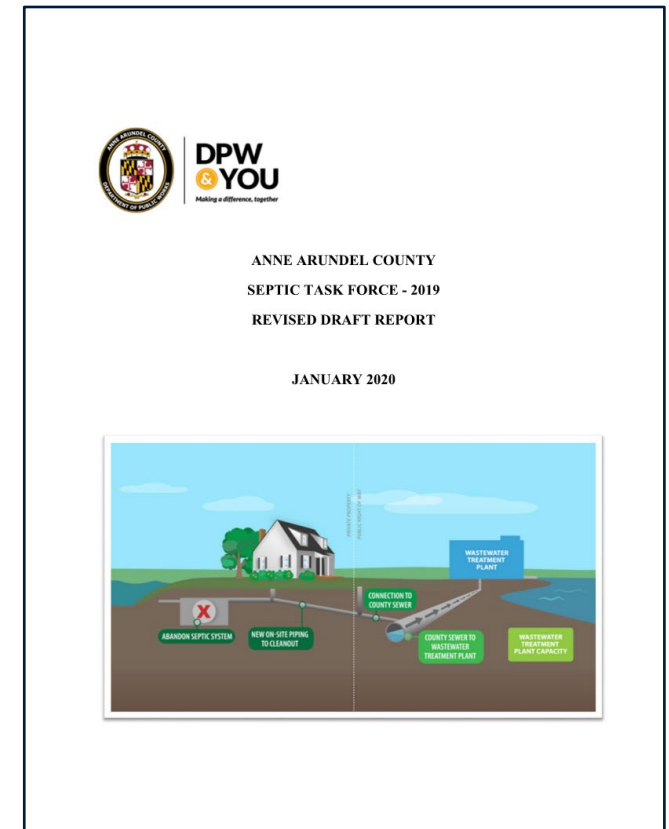
- Confirm prioritization of program areas
 - Guide DPW's development of septic conversion policy
 - Provide input on draft legislation

- Participants

- Community leaders, River Keepers, Developers
 - County leaders: Public Works, Health Dept, P&Z, **County Executive, County Council**

- Outcomes

- County legislation regarding subsidy and deferment
 - Further development of policy and funding recommendations



Recent Task Force / Advisory Activity



- Our wAater Public Advisory Group 2022-2023
 - Mission
 - Provide input on Our wAater program components
 - Provide input on Integrated Management Plan
 - Help inform the public about DPW initiatives
 - Participants
 - Community leaders, River Keepers, environmental advocates
 - County leaders: Public Works
 - Outcomes
 - Input to inform the Integrated Management Plan and public outreach initiatives



Our wAAter Meeting Summary



Meeting Date	Topic
October 19, 2022	DPW Overview
November 16, 2022	Small Systems Upgrades Septic-to-Sewer
December 14, 2022	Managed Aquifer Recharge (MAR) Advanced Water Treatment (AWT)
January 25, 2023	Drinking water, wastewater, and stormwater program needs Prioritization and weighting exercise
February 22, 2023	Integrated Management Plan (IMP) Our wAAter program feedback

Recommendations Review

1.	Flatten IMP 30-year Total Investment Curve	Complete
2.	Provide Glossary of Terms and Acronyms to the IMP	Complete
3.	Review Zoning Regulations with OPZ to Assess Redevelopment Risk for Small Systems	In Progress
4.	Communicate how Additional Connections Surrounding Small Systems will be Controlled	In Progress
5.	Expand Septic System Maintenance as Topic during Community Meetings/ County Website	In Progress
6.	Implement Education Campaign to Communicate Septic Tank Operation & Environmental Impacts	Complete
7.	Consider Approach for Conveying Home Value Increase as Septic-to-Sewer Benefit	In Progress
8.	Emphasize County Funding may not be Available Long-term for Septic-to-Sewer	In Progress
9.	Identify Advocate for Septic-to-Sewer Program	In Progress
10.	Evaluate Cluster Systems as an Alternative within the Septic-to-Sewer Program	In Progress
11.	Communicate to Public that MAR Source Water is High Quality prior to Advanced Treatment	Partially Complete
12.	Create More Opportunities for Public to Visit Facilities Including the Pilot Treatment Facility	In Progress
13.	Implement Case Study Communication through MAR Public Outreach (e.g., SWIFT Program)	In Progress

Meeting Materials on ourwaater.org



[Get Involved](#)

[Application Form](#)

[Meeting Materials](#)

February 22, 2023

- [Presentation Slides](#)
- [Meeting Summary](#)

January 25, 2023

- [Presentation Slides](#)
- [Meeting Summary](#)

December 14, 2022

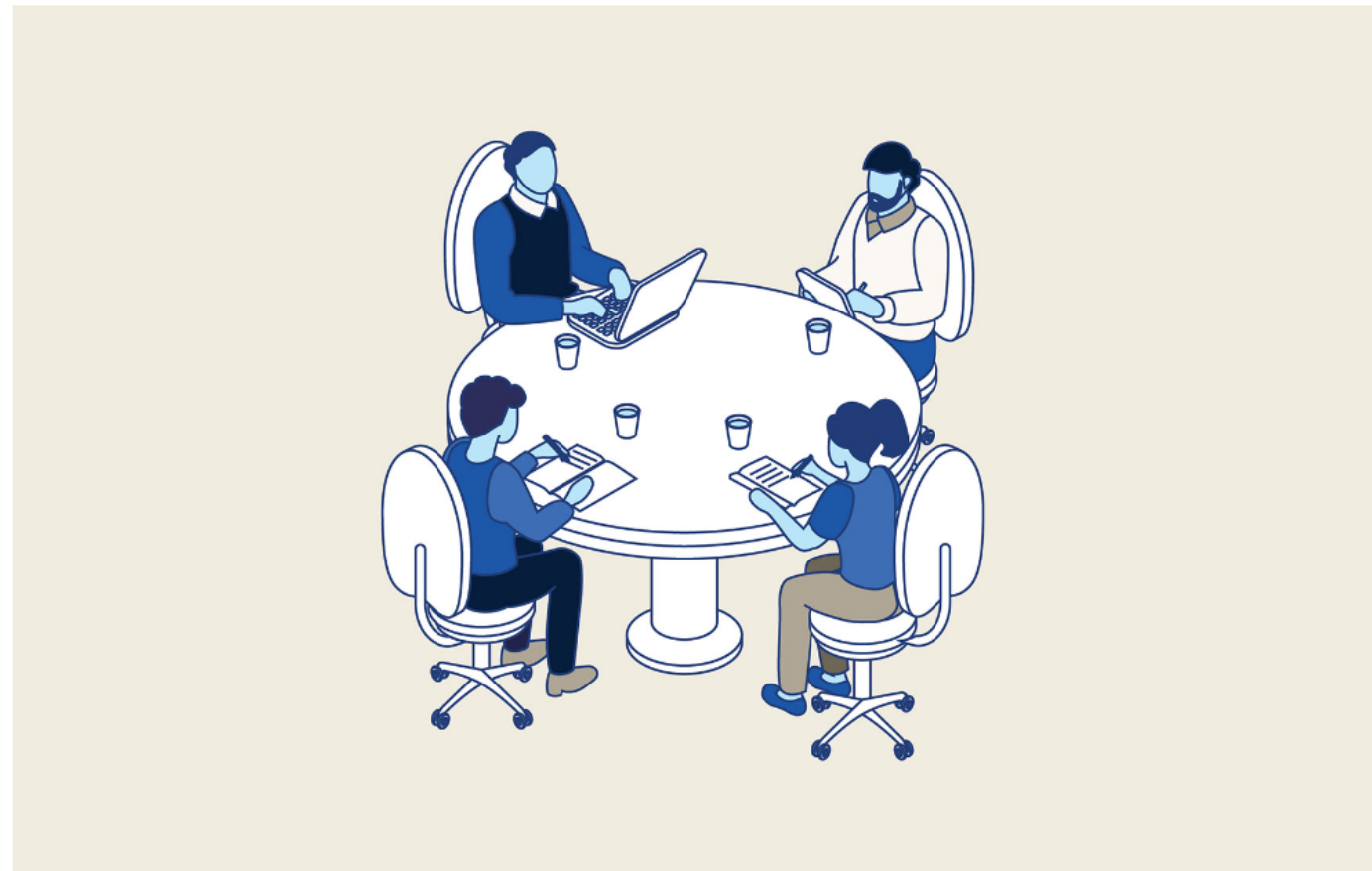
- [Presentation Slides](#)
- [Meeting Summary](#)

November 16, 2022

- [Presentation Slides](#)
- [Meeting Summary](#)

October 19, 2022

- [Presentation Slides](#)
- [Meeting Summary](#)



Mission Statement

The mission of the Our wAater Public Advisory Group is to provide input and public perspective on behalf of Anne Arundel County residents to the Department of Public Works (DPW) as they implement the Our wAater program.

We serve as advisors to DPW as they develop and begin to implement innovative and cost-effective programs designed to address regulatory requirements and future needs for drinking water, wastewater, and water resource protection.

The Advisory Group focuses on five key initiatives:

- **Septic-to-Sewer Connections**
- **Small System Upgrades**
- **Groundwater Resiliency**
- **Stormwater Improvements**
- **Wastewater Treatment Enhancements**



Mission Statement



- Input and Public Perspective
 - How are outreach materials perceived?
 - Input on County policy and direction of water infrastructure investment
 - Seek perspective from organizations you are involved in



02

Program Updates

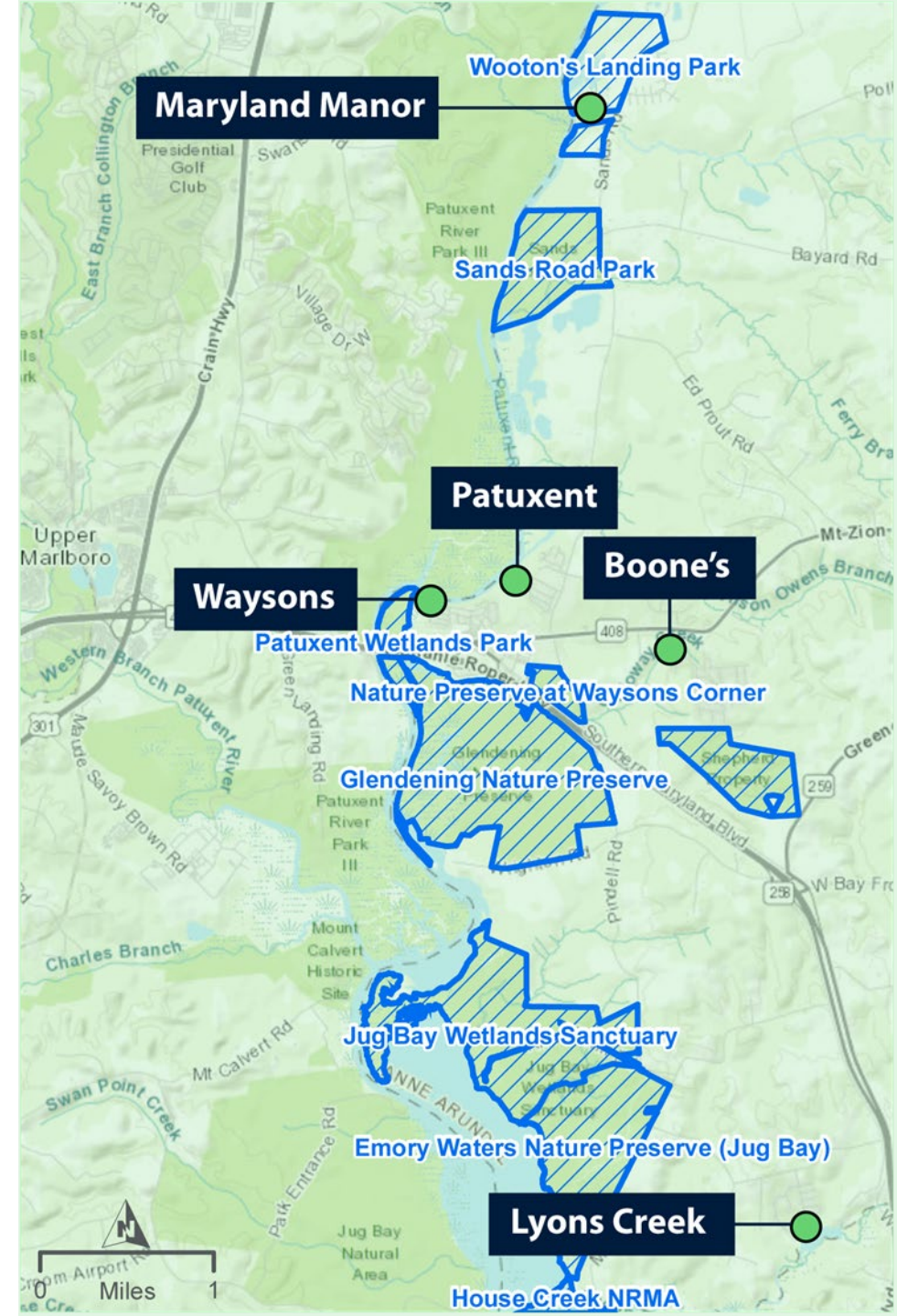
The Clean Water Program

5 initiatives | one strategy



Small System Upgrades

- Plant upgrades for reduced N discharge of nearly 12,000 lb/yr to Patuxent River watershed
 - 5 existing plants discharge to Patuxent River and tributaries
- Total treatment capacity and number of connections not intended to be increased
- Improved plant performance and accountability under County ownership and operation



Small System Upgrades

- New wastewater treatment systems under conceptual design
- Likely reduce initial upgrades from 5 plants to 4 plants
- Small system upgrade challenges
 - Operational costs
Relates to County's financial sustainability requirements
 - Affordability for residents
 - Potential agreements with owners
 - County continues to evaluate



Stormwater

- Restore streams and wetlands, and improve stormwater infrastructure
- Permit compliance for managing nutrients and sediment
- Nearly 8,000 acres impervious area restoration completed to date
 - Awards received for water quality program innovation
 - Ahead of schedule to meet 2026 permit compliance
 - Increased incremental cost of additional treatment
- WPRP agreed to make funding available to support septic connections



A LAND OF RIVERS

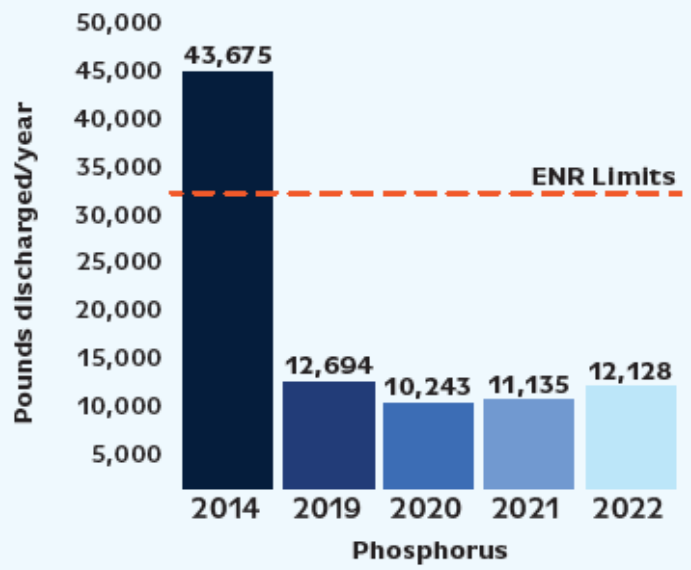


DPW & YOU
Making a difference, together

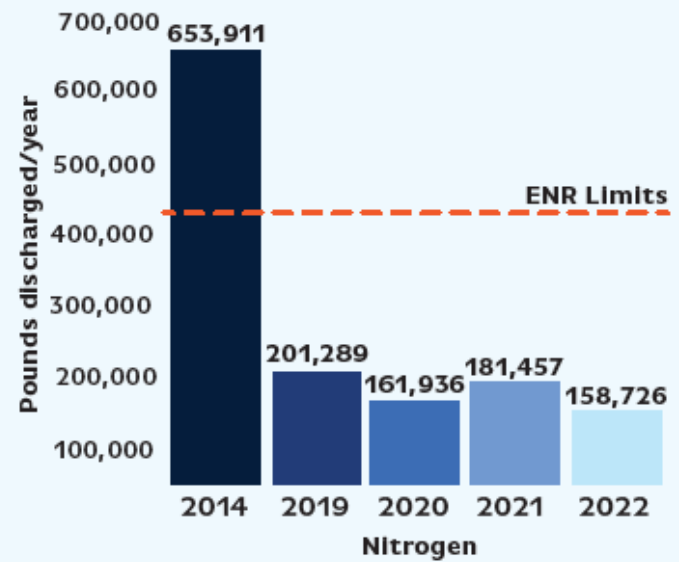
Wastewater Treatment

- Enhanced nutrient reduction upgrades completed in 2017
 - All WRFs performing below permit limits for TN and TP
- Continue investments in innovative technology and advanced treatment that results in cleaner wastewater that is eventually discharged to local rivers and the Chesapeake Bay.
- 2023 performance summary

Anne Arundel County Permitted Phosphorus Discharge Limits



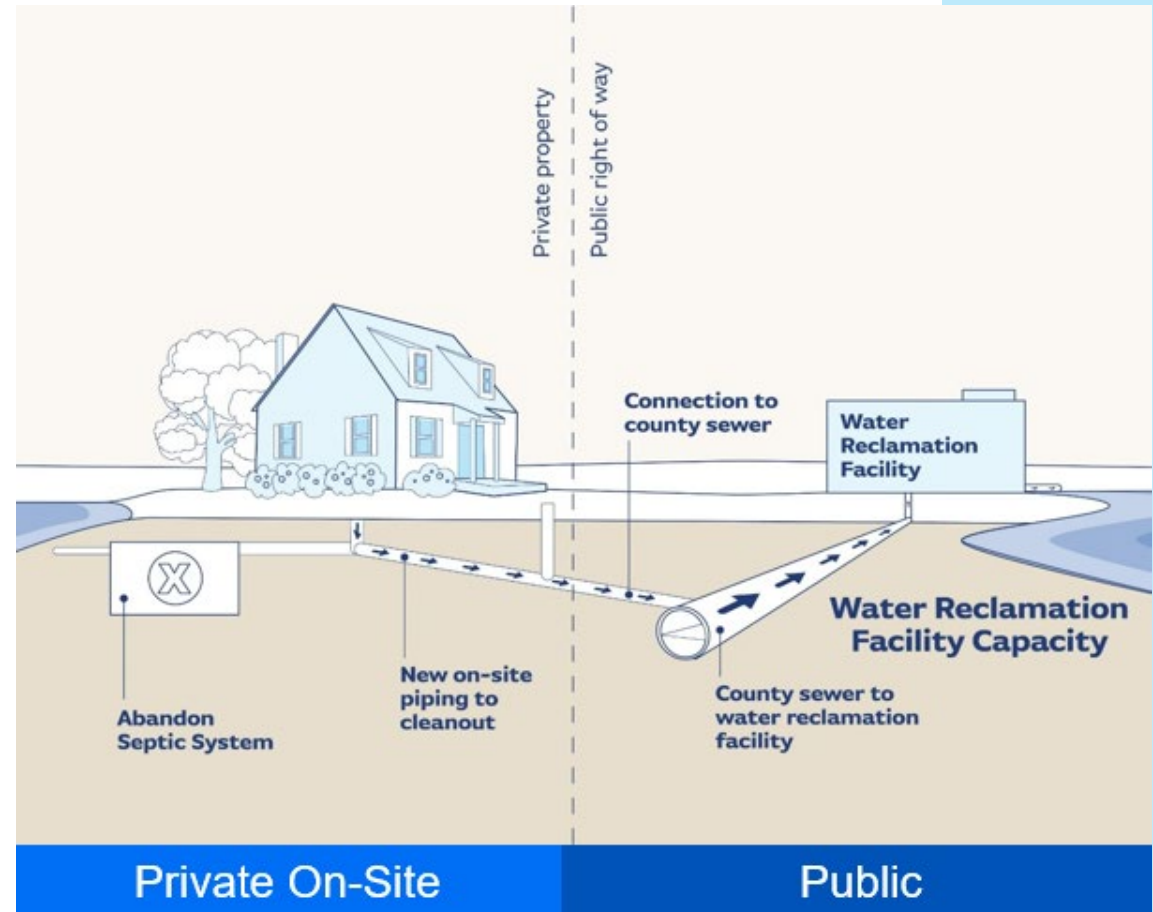
Anne Arundel County Nitrogen Discharge Performance



Septic-to-Sewer



- Convert eligible communities from septic systems to publicly owned water reclamation facilities operating at advanced treatment levels
- Reduce the costs of converting from private septic tanks to the county sewer system
- Convert up to 6,000 private septic systems to public sewer connections over the next 30 years.



Septic-to-Sewer

- DPW has hosted ~30 community meetings since June 2021
- Website enhancements
- 9 applications received
 - 1 awarded BRF loan – Parker Drive 11 lots
 - 2 communities voted no or withdrew
 - 1 still developing community interest
 - 2 pending BRF funding / PFA determination
 - 3 unlikely to receive BRF funding
 - **None submitted in 2023**

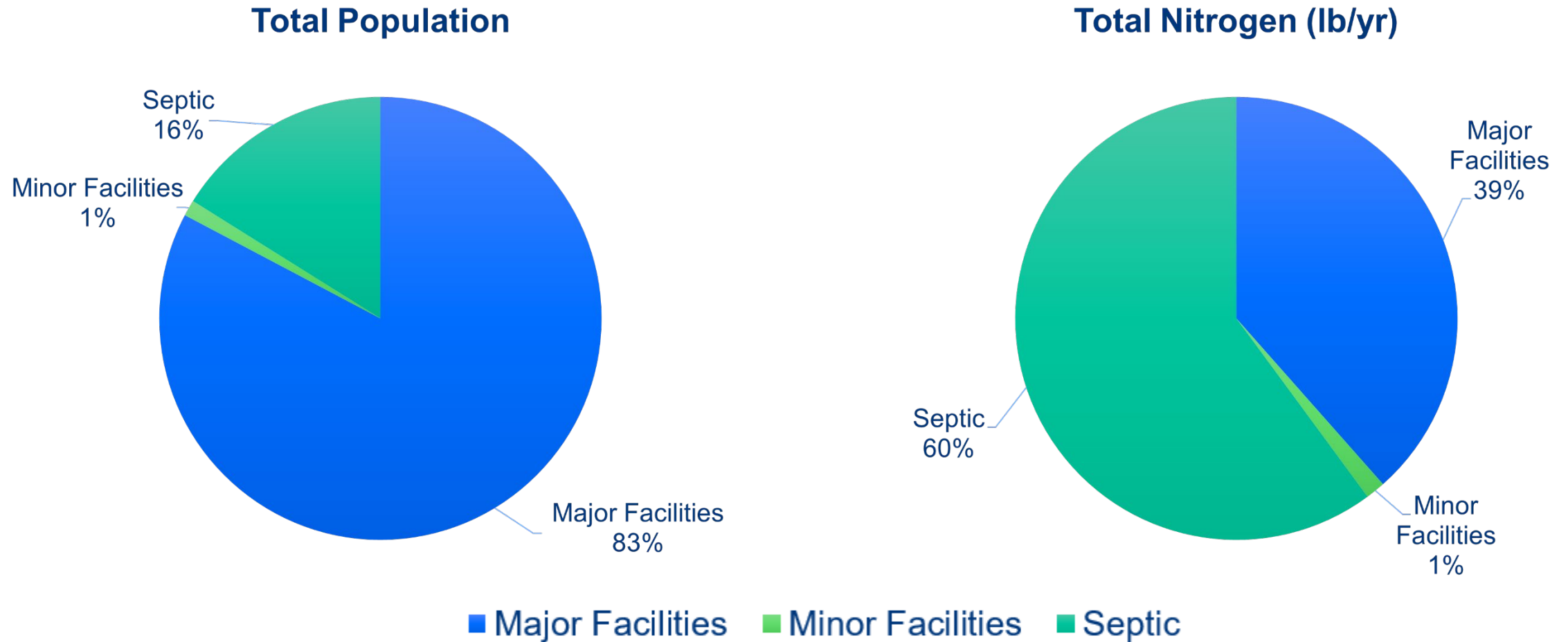


Septic-to-Sewer Challenges

- Even with subsidies, deferrals, and State funding, costs for septic-to-sewer system projects remain unaffordable for most when costs are passed on to the homeowners
- Growth fears impact the ability to obtain PFA exceptions (which are imperative to receive State funding)
 - May result in neighbor vs. neighbor conflicts



TN Discharge from Wastewater Sector



• Source: EPA ECHO Database and County 2020 Water and Sewer Master Plan

• Notes: 1. Major and Minor Facilities include both homes and businesses; 2. Charts based on 2020 data

Community Concerns

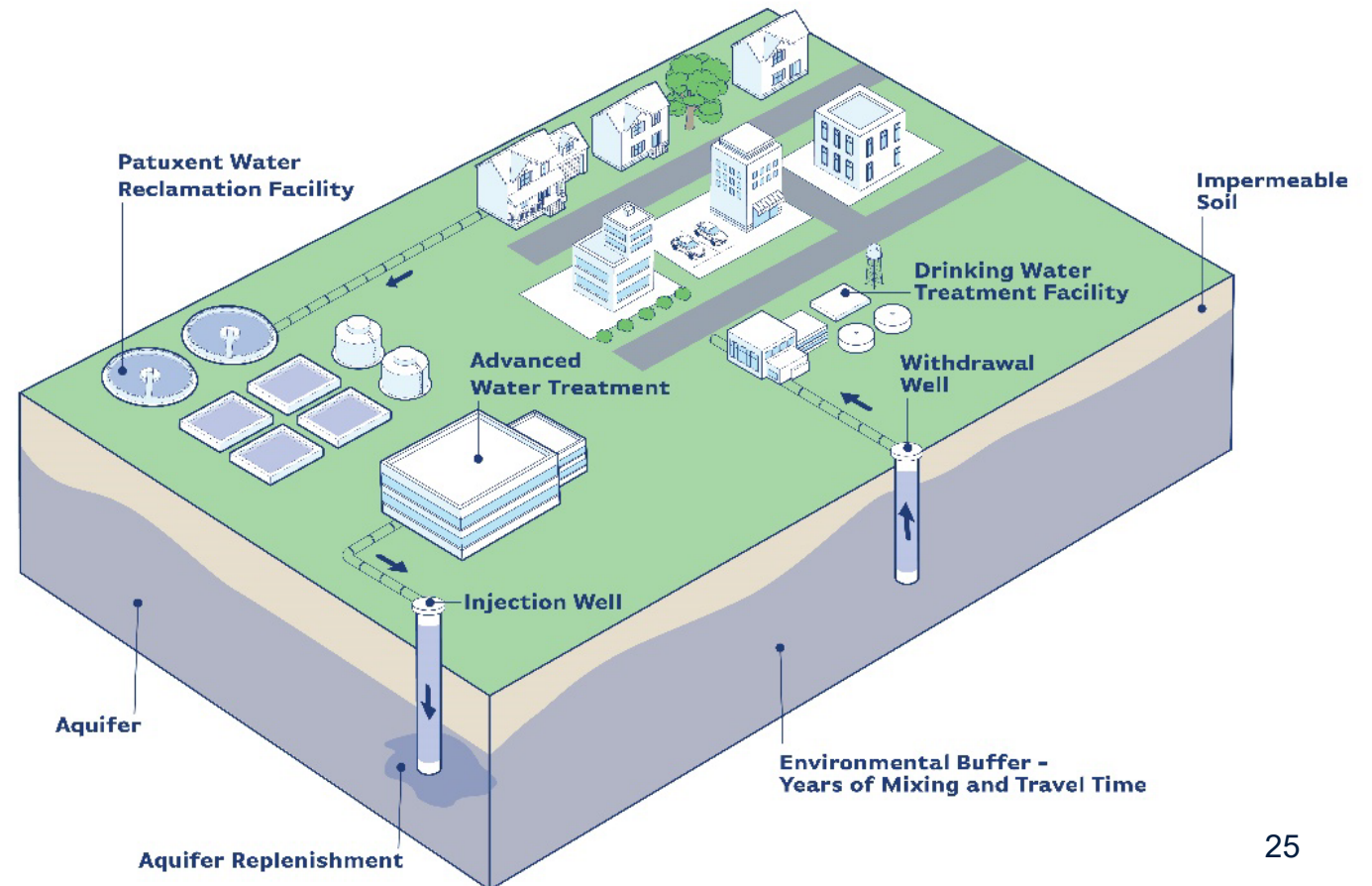
- Potential of increased development
- Impact of increased development on environment
- Unclear on notification process and relationship between DPW and MDE



Managed Aquifer Recharge (MAR)



- Piloting Advanced Water Treatment (AWT) system at Patuxent WRF
- Produces effluent meeting drinking water standards
- Injection well and demonstration facility pending regulatory approval
- Future capacity planned for 5-7.5 MGD
 - Nutrient reduction
 - Water supply resiliency



Managed Aquifer Recharge (MAR)

- Several tours conducted in 2023
 - MDE Secretary
 - EPA
 - State legislators
- New website content
- 3 meetings with ISAP
 - Initial report received early 2023
 - Draft second report received Nov 2023
- Regulatory challenges - MDE has expressed concerns
 - Water supply benefits not viewed as urgent/necessary
 - Concern regarding environmental buffer



Next Steps

- Developing State legislation to help advance MAR and ASR pilots, and increase funding opportunities for Septic-to-Sewer
- Developing Septic-to-Sewer alternative implementation approaches
- Review minor system operating costs with County leadership



New Challenges

- PFAS
- Develop asset rehabilitation requirements





03 Proposed Legislation

Possible Legislative Initiatives



- **Advance MAR pilot**

- Westminster IPR Pilot moving forward based on 2023 legislation
- 2023 legislation does not allow Anne Arundel county to move forward
- Consider “environmental health” relationship to “public health”
- Competitiveness of septic conversion projects in funding awards
- Priority Funding Area criteria



Potable Reuse Nationwide

NATIONAL WATER REUSE ACTION PLAN

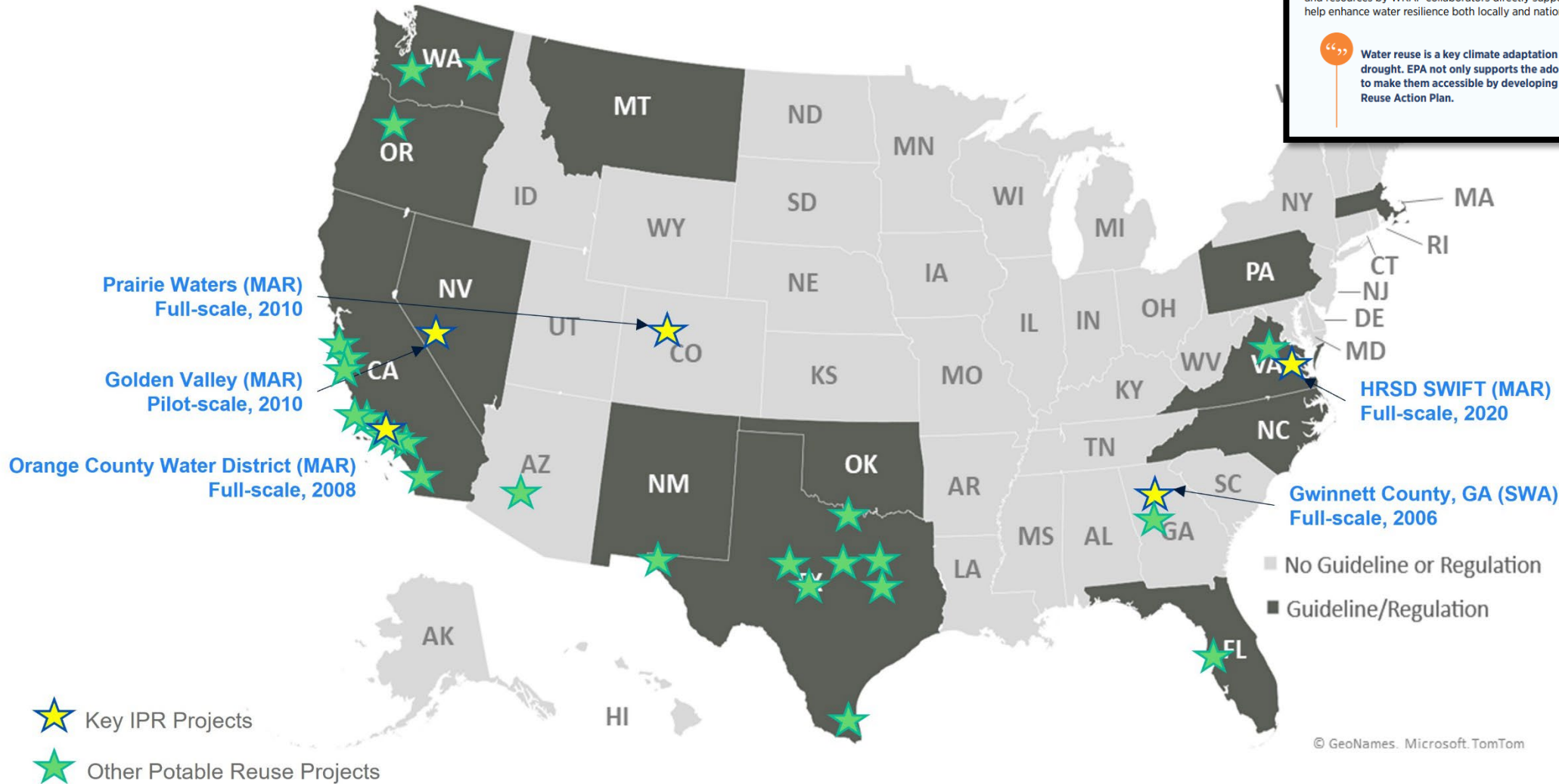
Update on Collaborative Progress – Year 3

MARCH 2023

The WRAP collaborative marks its third anniversary with increasing evidence of impact. Since inception it has grown to more than 60 actions. Many of these efforts are ongoing, while 13 have successfully concluded. All action outputs—now totaling more than 100—are freely accessible online. The development of this robust suite of tools and resources by WRAP collaborators directly supports the adoption of reuse in communities of all sizes and will help enhance water resilience both locally and nationwide.

“Water reuse is a key climate adaptation tool that can be leveraged to combat flooding and drought. EPA not only supports the adoption of these innovative solutions but is helping to make them accessible by developing tools and partnerships with the National Water Reuse Action Plan.”

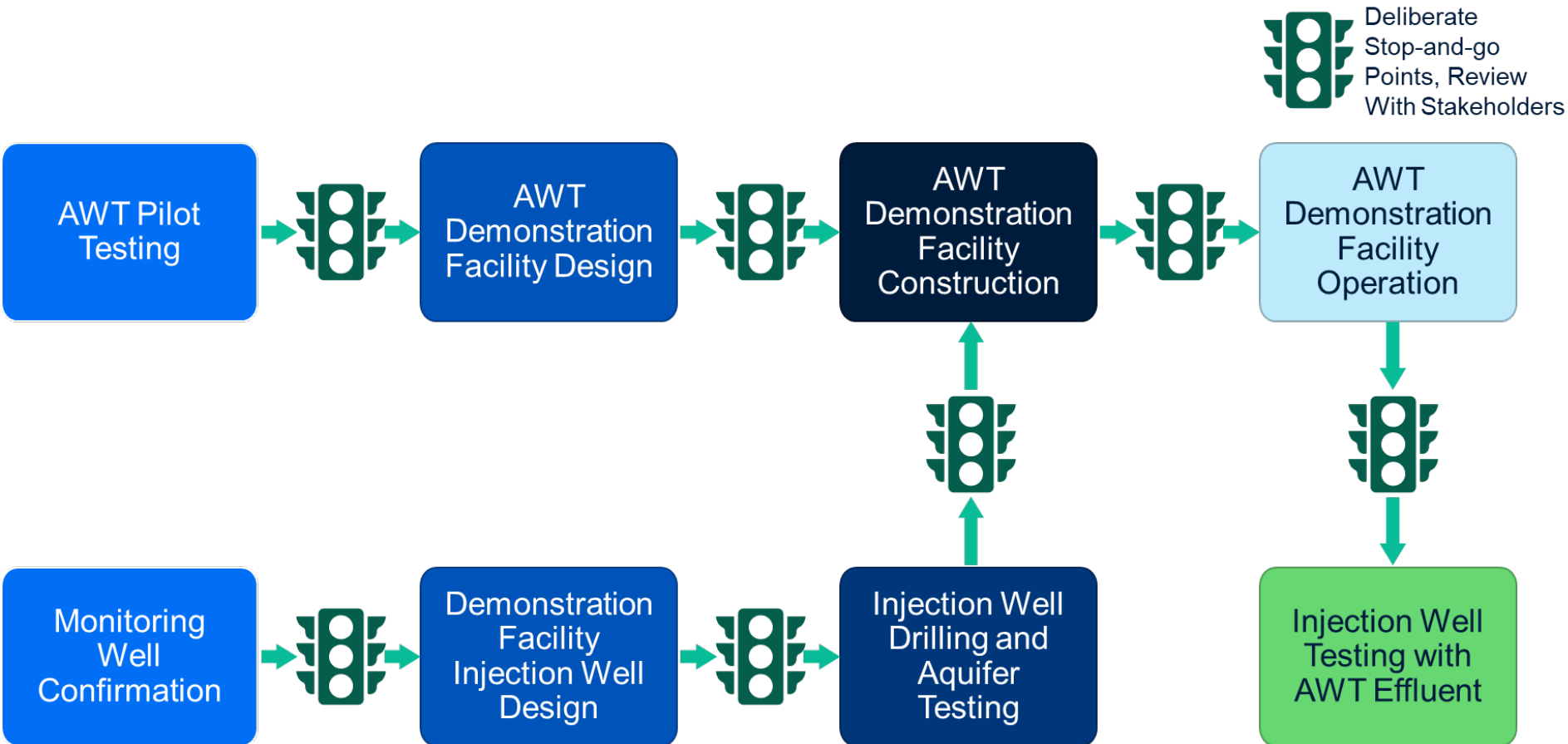
— EPA Administrator Michael Regan



Go Further / No Go Process for Testing

Multiple steps for review and confirmation prior to implementation

Testing is required to confirm suitability for implementation



Legislative Approach

- Authorize MDE to allow for **limited testing program** including treatment and underground injection
- Meet all existing and proposed primary and secondary drinking water standards
- Demonstrate pathogen removal consistent with other State indirect potable reuse regulations
- Establish requirements for allowing underground injection

Outcomes

- Provide objective data to confirm approach
- Inform future legislation and regulations
- No lasting impact to existing aquifers



Our Roadmap to Renewable Water

- Pilot
- ISAP review
- Demonstration concept
- MDE buy-in



2023

- Pilot
- Demonstration procurement
- Regulation development



2024

- Demonstration design
- Permitting



2025

- Initial well drilling
- Demonstration construction



2026

- Demonstration construction



2027

- AWT demonstrated performance
- Well testing using AWT water



2028

Requires collaboration, based on scientific research, between DPW staff, regulators, ISAP, and elected officials.

Anne Arundel County sees MAR as a potential key strategy to **address multiple water resources issues within the County and State.**

We desire **to collaborate with local leaders, MDE, the Independent Scientific Advisory Panel, and other stakeholders** to confirm the suitability and approach to MAR implementation through **applied scientific research.**

Our approach is based on **proven approaches followed throughout the Country**, including in neighboring Virginia.

Next Steps



Review pilot operational data, agree on performance objectives and critical control points



Resolve differences on aquifer injection testing and confirm testing plan

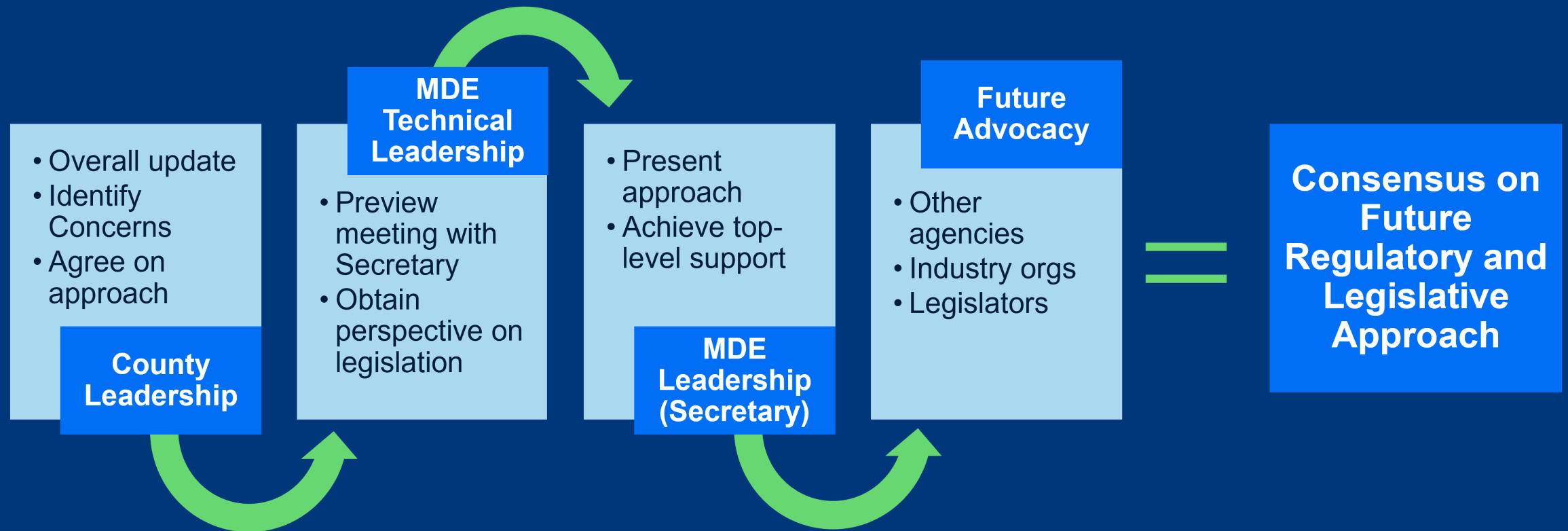


Introduce new legislation to allow for limited testing of advanced water treatment and underground injection Demonstration Facilities



Expand regional groundwater modeling

Next Steps & Path Forward





04 Outreach

River Days

- Held June-August
- Featured interactive educational activities for children
- Raised awareness about Our wAAter program





River Days & DPW Outreach Day



Upcoming Opportunities



- Suggestions for upcoming outreach events/meetings
- Hosting tours for the general public
 - Riverkeepers, River Associations





05

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

A person is silhouetted while sitting on a white plastic chair on a wooden pier, fishing with a long rod. The scene is set against a vibrant sunset sky with orange and yellow clouds over a body of water. A bicycle is parked on the pier next to the person.

Our wAAter.

THE ANNE ARUNDEL CLEAN WATER PROGRAM

Thank you!

