



Our wAater Public Advisory Group Meeting #3 Summary

Meeting Date: December 14, 2022

Meeting Time: 3:00 – 5:30 p.m.

Location: Patuxent Water Reclamation Facility - 1640 Professional Blvd, Crofton, MD

Anne Arundel County Department of Public Works (DPW)	HDR	Public Advisory Group
George Heiner	Ed Shea	Tammy Domanski, Anne Arundel Community College Environmental Center
Karen Henry	Melanie Deggins	Sally Hornor, Magothy River Association
Chris Murphy	Christina Alito	Lloyd Lewis, Chesapeake Environmental Protection Association (CEPA)
Robert Kraus	Hannah Billian	Doug Nichols, Greater Severna Park Council
		Tim Williams, Water Environment Federation (retired)
		G. Jerry Hill, CEPA
		Gary Antonides, CEPA

Welcome

George Heiner opened the meeting by welcoming everyone and thanked them for volunteering their time and participating in the Public Advisory Group.

Purpose and Objectives

George Heiner reviewed the agenda and objective of the third meeting. The objective of the meeting was for the group to provide feedback on the Managed Aquifer Recharge (MAR) program and review the advanced water treatment (AWT) approach for validation.

Managed Aquifer Recharge Overview

George Heiner provided an overview of the MAR program. He highlighted the importance of long-term water sustainability within Anne Arundel County.

- Regarding the County aquifers, Sally Hornor asked if the confinement zone can be recharged once it is depleted. George Heiner noted that the confining units can be recharged, but it is possible that after a certain point of withdrawal from this zone the soil matrix can collapse.

- George Heiner noted that MAR will include AWT prior to aquifer injection to reduce contaminants and ensure stability of the aquifer. Next steps include completing the AWT pilot validation study before moving forward with aquifer monitoring and injection wells to develop a robust hydrogeological model. Aquifer monitoring will give the County estimates regarding the travel time and water quality of the injected water within the aquifer.

Pilot System

Christina Alito provided an overview of the County's AWT pilot system to validate treatability and final water quality prior to demonstration-scale implementation of MAR within the County. She noted that tertiary effluent from the Patuxent Water Reclamation Facility is used as the source water to the pilot system and that drinking water treatment processes are being added.

- Tim Williams mentioned that the effluent from the Patuxent Water Reclamation Facility is already cleaner than surface water in the Patuxent River before being treated via MAR. George agreed and noted that this is a good point for communicating the program to the public, and that it is vital to make it clear that the source water from the Patuxent WRF is high quality.
- Regarding affordability, Christina Alito noted that the goal of the pilot treatment optimization is to balance the cost of the treatment with optimal water quality production. She provided an example of how peroxide can be added to the ozone process to produce advanced oxidation, but this step may not be necessary if the water meets drinking water standards without it.

The pilot system focuses on meeting drinking water treatment standards while monitoring a number of unregulated emerging contaminants. One group of emerging contaminants currently under evaluation are called per- and polyfluoroalkyl substances (PFAS). PFAS are emerging contaminants that persist in the environment and may have potential environmental and health risks. These substances have properties that both repel and attract water. The group discussed the County's role in treating PFAS in the AWT system and the greater PFAS management strategies the County has implemented in multiple sectors (biosolids management, landfill treatment, etc.).

- Sally Hornor noted that the detectable limit for PFAS is a moving target since our detection limits increase with technological advancements.
- Tim Williams asked if the County has an inventory of PFAS sources within the County and if source control is an option.
 - Christina Alito mentioned that source control is the best option to prevent the spread of PFAS in the environment, but noted that PFAS are removed through the advanced drinking water treatment processes used in the AWT pilot.
 - Karen Henry also noted that the County Health Department has jurisdiction over groundwater wells for public health risk monitoring.
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- Gary Antonides asked if granular activated carbon removes all contaminants. Christina noted that GAC gets excellent emerging contaminant reduction for pharmaceuticals, personal care products, pesticides, herbicides, and industrial chemicals. Some substances, such as sucralose, that have no known health effects, do not get removed which makes them good indicators for tracking wastewater influence in downstream water systems such as the aquifer.

Site Tour

Christina Alito led the tour of the AWT pilot facility.

- During the site tour, Christina led the group through each of the treatment processes, the intended goals of each treatment process, and the operation of the pilot system. The pilot will validate treatment for at least 12 months, with weekly, biweekly, and monthly sampling of various constituents, including organic carbon, heavy metals, and emerging contaminants.
- Doug Nichols suggested that the County communicate to the public how the AWT process has been well-tested in other parts of the country.

Final Discussion, Wrap-Up, and Next Steps

George Heiner thanked everyone for their participation and encouraged the participants to visit the Our wAAter webpage.

- Meetings 4 and 5 will be held in the Independence Room of the Heritage Complex, 2664 Riva Road, Annapolis MD.