

The Potomac Aquifer Recharge Oversight Committee
Draft Meeting Minutes
June 27, 2022

In attendance: Whitney Katchmark (Committee Chair), Jay Bernas, Charles Bott, Ryder Bunce, Julie Henderson, Dan Holloway, Scott Kudlas, William Mann (remote), Jamie Mitchell, Harry Post, Mike Rolband, Gary Schafran (remote), Mark Widdowson, Lauren Zuravnsky, Jill Sunderland, Scott Morris

Ms. Katchmark called the meeting to order at 11:30 am.

There was a motion to approve the minutes of the previous meeting as distributed; it was seconded; and the minutes were approved without objection.

Dr. Schafran (PARML) presented the benefits of using their combined method to analyze both nitrosamines and 1,4-dioxane in a single analysis, including: 1) saving time without compromising the quality of the analysis and 2) using less solvent, resulting in less hazardous waste. He also discussed their examination of isotopic ratios of oxygen and hydrogen in water molecules to potentially serve as a groundwater tracer and reviewed research on tracking dissolved oxygen through the process train.

Mr. Kudlas (DEQ) provided a review of the water level trends and permits in the Coastal Plain. Beginning in the 1940s, withdrawals from the Potomac Aquifer increased substantially until they peaked in 1990. The groundwater levels continued to decrease until recently. Since 2007, the groundwater levels have been increasing. The Groundwater Management Act was codified in 1973. The total permitted withdrawals are significantly higher volumes than the withdrawal amounts that have been used. In 2017, the groundwater permits were updated to limit withdrawals to be closer to actual use. Areas with the most land subsidence also align with groundwater levels, with the most measurable impacts centered on major pumping operations, such as paper mills. Mr. Kudlas also presented modeling results showing the projected recovery of the water levels of the Potomac Aquifer with the replenishment from HRSD's injection wells over 50 years.

Mr. Holloway (HRSD) presented an overview of the modeled movement of the SWIFT water in the aquifer over time. He explained that the water moves slower as it gets further away from the injection well. At the SWIFT Research Center, HRSD has found that SWIFT water takes one-to-two weeks to move 50 feet through the aquifer, and then eight or more months to travel 400 feet. The first full-scale SWIFT facility, the James River plant, will have a target flow rate of 16 MGD and is scheduled to start up in early 2026. Once all five full-scale facilities are operational, the SWIFT facilities will have a total capacity of about 100 MGD.

Dr. Widdowson (PARML) explained the groundwater models needed for local-scale analysis of SWIFT projects. The first step was to validate the regional model, then develop a local model with a finer grid for more resolution, followed by model scenarios. The modeling objectives include predicting the expected water level changes in the vicinity of the James River and determining where to monitor water levels to document impacts. PARML is working in collaboration with HRSD to conduct local water level monitoring. While they can utilize some existing wells, they will also install new monitoring wells within the next couple of years.

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Mr. Bunce (VDH) presented highlights of the James River SWIFT Draft UIC Permit. The 10-year permit has two components, the Statement of Basis, which is much like an executive summary and the Draft UIC permit, which includes the construction, operation, and monitoring requirements. There are four sections of monitoring: 1) regulatory, 2) non-regulatory performance indicators and Virginia groundwater protection standards, 3) critical control points, and 4) groundwater. The PFAS limits in the permit will be modified if EPA issues an updated health advisory or PMCL. The draft permit requires the establishment of a monitoring well network to evaluate the cumulative effects of the operation of the James River SWIFT injection wells and specifies an extensive list of parameters and constituents to be monitored.

Ms. Mitchell (HRSD) presented an update on the interim Health Advisories for PFOA and PFOS recently released by EPA. Draft MCLs are likely to be issued by the end of this calendar year, with final MCLs anticipated in 2023. HRSD has been studying the fate and transport of PFOA and PFOS for years. Monitoring data at the research wells indicates that the aquifer system provides an additional barrier of protection for drinking water. Source control is a key element of the SWIFT program and HRSD is working to identify industrial sources of PFAS. As Mr. Bunce mentioned, the draft UIC Permit will be reopened to make updates to PFOA and PFOS based on the issuance of an updated Health Advisory Level (HAL) or PCML. HRSD will submit a comment requesting that the EPA consider waiting to reopen the permit until the enforceable PCML are released, particularly since the facility will not be discharging until 2026. HRSD also intends to comment that using the Lifetime HAL is more appropriately considered as a running annual average as opposed to a single sample result.

The Committee members expressed interest in submitting a general letter of support. Ms. Katchmark will distribute a draft of the letter for review.

Mr. Bernas noted that the state funding for PARML was approved and will be available on July 1.

There were public comments. Before the meeting, Ken Bannister notified the chair that he might want to make a public comment. However, the elevator for the meeting required a key card or escort so he went home. Then the zoom link did not work when he tried to log in virtually. The chair apologized for the logistical problems via email.

The meeting adjourned at 2:00 p.m.

Approved:

Date:

Committee Chair

Committee Members:

- Mike Rolband, Director of Virginia DEQ
- Dr. Colin Greene, Virginia State Health Commissioner

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- Dr. William Mann, Governor Appointee
- Doug Powell, Governor Appointee
- Whitney Katchmark, HRPDC
- Adil N. Godrej, Co-Director Occoquan Watershed Monitoring Laboratory
- Dr. Mark Widdowson, Co-Director of the Potomac Aquifer Recharge Monitoring Lab
- Dr. Gary Schafran, Co-Director of the Potomac Aquifer Recharge Monitoring Lab

Non-voting members:

- Mark Bennett, Director of Virginia and West Virginia Water Science Center
- Leslie Gillespie-Marthaler, Deputy Director Water Division, US EPA Region 3

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