

The Potomac Aquifer Recharge Oversight Committee

Meeting Minutes

December 12, 2025

In attendance: Whitney Katchmark (Committee Chair), Mateo Acosta, Mark Bennett (remote), Charles Bott (remote), Brian Campbell (remote), Weedon Cloe (remote), Curtis Consolvo (remote), Dan Holloway, Preston Kirby, Mark Kram (remote), Erin Ling (remote), William Mann, Jamie Mitchell, Becky Nardacci, Ivy Ozmon, Mahesh Parija, Zach Pauley (remote), Mack Pearce, Ryan Pollyea, Harold Post (remote), Doug Powell (remote), Jennifer Reitz, Gary Schafran, Ethan Truman (remote), Chris Wilson, Mark Widdowson.

Ms. Katchmark (HRPDC) called the meeting to order at 11:03 a.m.

The September 18, 2025 meeting minutes were approved without changes.

Mr. Holloway (HRSD) provided a comprehensive update on the James River SWIFT facility. Construction is approximately 85% complete. Key milestones include operational demonstration of water injections scheduled for October 2026 and final completion in April 2027. Current activities focus on commissioning, testing, and operator training. The injection well ramp-up strategy was discussed, emphasizing sequential well activation and monitoring to ensure system stability. Challenges such as equipment delays and contractor coordination were noted.

Dr. Widdowson and Dr. Schafran shared outcomes from the NWRI five-year review workshop. The panel confirmed that the Potomac Aquifer Recharge Monitoring Lab (PARML) fulfills its mission and recommended improvements in anomaly documentation and communication protocols. Discussion included monitoring plans for James River SWIFT and resource needs for expanded analytical capabilities.

Follow-up action: Form a workgroup to establish communications protocols.

Follow-up action: Form an ad hoc technical workgroup to refine monitoring strategies.

Ms. Ling (Virginia Tech (VT) & Virginia Cooperative Extension) presented an overview of the statewide program for private well testing. The program offers affordable water quality analysis and education for homeowners, testing water samples collected from premise plumbing for 28 parameters including bacteria, nitrate, and metals. She highlighted common findings like coliform bacteria in 40% of samples and lead from plumbing, stressing the importance of proactive engagement with private well owners to address potential public health concerns. Opportunities for collaboration with SWIFT were discussed, particularly for baseline data collection and public outreach. The VT research labs test water quality from faucets which could be different than groundwater. However, the committee acknowledged the importance of proactive engagement to address potential public concerns and having data that demonstrated that water quality in homes was consistent could result in more public confidence in SWIFT. Ms. Ling emphasized that participation in SWIFT-related monitoring in Suffolk and surrounding localities has been low despite subsidies. She suggested targeted outreach strategies such as working with HOAs, schools, and local media to improve engagement.

Follow-up action: Explore expanding private well testing outreach through the HRPDC.

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Dr. Pollea (VT) delivered a detailed presentation on seismic risk mitigation. He outlined risk factors, modeling results, and the proactive measures implemented, including a five-station seismic monitoring network operational since 2022. Virginia Tech developed conceptual and stochastic models to predict pressure propagation. Simulations suggest pressure could reach depths of ~3 km under full-scale operations, which is within the range where small earthquakes could occur. Modeling shows that the discontinuous clay layers between recharge zones and basement rock in coastal Virginia will help dampen pressure transmission. While the risk of large earthquakes is considered very low, proactive monitoring and controlled ramp-up are important to minimize seismic risk and maintain public confidence. An example of large-scale injections in Oklahoma was discussed including lessons learned. Strategies for ramping-up injection rates and monitoring for adaptive management were discussed. The committee emphasized the need for clear communication protocols and contingency plans should seismic activity occur.

Mr. Holloway and Mr. Pearce (HRSD) presented details on JR SWIFT initial operations and how HRSD will mitigate the potential for induced seismicity. HRSD will integrate the Virginia Tech recommendations and avoid a full start-up and instead implement a gradual ramp-up of recharge wells. Wells will be activated sequentially, not simultaneously, to minimize pressure shocks to the aquifer and underlying basement rock. Each step will last three to four weeks to allow stabilization before adding the next well. HRSD is working with AECOM to develop a high-resolution local model to predict pressure changes and optimize well sequencing. Real-time seismic monitoring will be conducted using Virginia Tech's five-station network, supplemented by portable sensors during ramp-up for higher resolution. If seismic activity is detected, HRSD plans to adjust recharge rates or pause operations. While no formal mitigation plan is finalized, the approach will mirror successful strategies from Oklahoma by reducing injection rates or temporarily shutting down wells if needed.

The committee discussion adopting an electronic meetings policy was deferred to the next meeting.

Follow-up action: Distribute the draft electronic meetings policy for review.

No public comments were received during the session.

The meeting adjourned at 2:30 PM after confirming next steps and scheduling considerations for 2026 meetings.

Approved:

Date:

Committee Chair

Committee Members:

- Mike Rolband, Director of Virginia DEQ
- Dr. Karen Shelton, Virginia State Health Commissioner

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- Dr. William Mann, Governor Appointee
- Doug Powell, Governor Appointee
- Whitney Katchmark, HRPDC
- Dr. Stanley Grant, Director of 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 the Virginia and West Virginia Water Science Center, USGS
- Greg Voigt, Deputy Director, Water Division, US EPA Region 3