

Establishing a Demonstration Project in Anne Arundel County to Improve Water Supply and Water Quality

Anne Arundel County requests approval to investigate technologies and approaches for providing long-term benefits to water supply resiliency and nutrient challenges using applied scientific research. This legislation proposes that Anne Arundel County, under the guidance of Maryland Department of the Environment (MDE), conduct a carefully managed aquifer recharge demonstration project that is protective of public health while addressing critical regional water resource challenges. The demonstration is needed to validate groundwater compatibility and transport dynamics within the aquifer.

Water Supply and Water Quality Benefits



- Supports innovative, integrated, proven, long-term sustainable solutions to meet water resource challenges impacting local water supplies and the Chesapeake Bay.
- An element of the County's Integrated Plan, Our wAAtEr, to leverage nutrient reduction and water supply solutions centered around resiliency and sustainability.
- Provides cost effective nutrient removal in support of the Chesapeake Bay Total Maximum Daily Load.
- Injection water is treated to remove PFAS, pharmaceuticals and personal care products that are not regulated in surface water discharges.
- Returns water pumped from aquifers, Anne Arundel County's drinking water source, which in turn rebalances the County's water budget.
- Provides potential long-term mitigation against saltwater intrusion and land subsidence due to groundwater withdrawals.
- Consistent with the focus on water supply recommended in "Water for Maryland's Future: What We Must Do Today (2008)."

Legislation Summary

Authorize MDE to approve limited groundwater injection of advanced treated wastewater that meets or exceeds drinking water standards to certain aquifers through permits obtained through the Underground Injection Control program. Minimum standards would be set that:

- Meet or exceed all current and proposed Safe Drinking Water Act standards
- Demonstrate pathogen removal consistent with the most stringent indirect potable reuse requirements enacted elsewhere
- Allow for use of proven technologies for meeting the above goals, including nonmembrane treatment systems
- Require detailed testing and monitoring plans to demonstrate compliance with the treatment requirements and groundwater compatibility



Supporters November 2024

- Anne Arundel County
- City of Annapolis
- Calvert County
- Chesapeake Environmental Protection Association
- City of Bowie
- WateReuse, Mid-Atlantic Section

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