

State Water Commission



HB1036 Groundwater Trading Work Group Report

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Shannon R. Varner

Troutman Pepper / Mission H2O

Eastern Virginia Groundwater Management Area Advisory Committee (2015 - 2017)

- **Topics examined included:**
 - “alternative management structures, such as a water resources trading program.”

- **The Committee’s report included a**
 - “Groundwater Banking Strawman” developed by the Committee’s Trading Workgroup

- **Committee recommended that the General Assembly should:**
 - Authorize DEQ to develop and implement a groundwater banking program.
 - Direct DEQ, with a timeline and resources, to create a framework in consultation with stakeholders for an EVGWMA groundwater trading program to be submitted to the General Assembly.

DEQ Response to EVGMAC Report (2017)

- **Trading recommendations should be taken with caution –**
 - There are temporal and spatial limits to the benefits of “credits” that may be generated, and without appropriate controls may lead to negative local impacts.
 - Trading program may be too limited to be economically attractive to potential participants.
 - Increased monitoring would be needed, and current monitoring network is likely insufficient to provide reasonable protections.
 - Current predictive modeling tools may be insufficient for the increase in complexity resulting from a trading program.
 - Fiscal impacts and uncertainty in cost of developing and implementing a trading program.

HB 1036 (2018 - 2020)

- **Continued the groundwater trading workgroup to further study:**
 - How to implement the EVGMAC's recommendation that an aquifer storage and recovery banking system be developed.
 - Conduct further study and identify component of a groundwater trading program.

Report to the the State Water Commission and DEQ Director by July 1, 2020.

HB 1036 Work Group Activities

- Discussions on City of Chesapeake experience with ASR
- Groundwater model capabilities
- Other state programs
- Need, goals, and concerns associated with an ASR or trading program
- Other means than injection for creating credits
- How to protect investment and expectations of potential participants in a trading program
- Review of evolving versions of the “strawman” placed in statutory form
- DEQ technical concerns

Key concepts in suggested legislation

“Groundwater storage credit” means the quantity of injected water that is authorized to be recovered from an aquifer.

“Annual water loss rate” means the rate at which injected water is not available as a groundwater storage credit due to water loss through the aquifer boundary related to the injection. An annual water loss rate is based on procedures developed by the department.

“Recovery factor” means the annual fraction of the remaining injected water that is available for recovery by a permittee. The recovery factor is calculated as one minus the annual water loss rate. Short term recovery factor is 1, long term is 0.8 until superseded by DEQ procedures.

Key concepts in suggested legislation (*cont'd*)

“Short term storage” means injected water that may be recovered within 36 months of the date of injection.

100% recovery allowed

“Long term storage” means injected water that may be withdrawn more than 36 months after injection.

Lower allowed recovery

Key concepts in suggested legislation (*cont'd*)

“Recovery zone” means the area within a spatial boundary from which injected water is authorized to be recovered.

“Local recovery zone” means a recovery zone no less than a one (1) mile radius from the point of injection. May be expanded by DEQ.

“Extended recovery zone” means a recovery zone located outside of the local recovery zone and defined through a technical analysis conducted by the department. Delayed effective date for extended recovery zone.

Key concepts in suggested legislation (*cont'd*)

- **Use of groundwater credits would still need a groundwater withdrawal permit**
- **Reporting and tracking requirements**
- **Fees**
- **Only applicable in Eastern Virginia and Eastern Shore Groundwater Management Areas**

Areas for Further Discussion for Expansion of the Program

- **Means other than injection to generate credits that could be traded**
- **Means to address DEQ technical and fiscal concerns so that extended recovery zones can be developed**
- **Potential expansion of the local recovery zone**
- **Additional means to protect investments made by those seeking to inject and/or withdraw injected water from:**
 - Withdrawals not requiring permits (those < 300,000 gallons per month)
 - Proposed new or expanding withdrawals in an expanded recovery zone



Shannon Varner
Troutman Pepper
shannon.varner@troutman.com