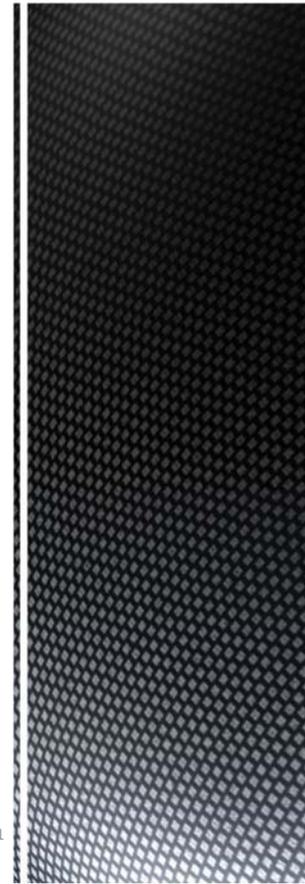


Groundwater Advisory Committee Workgroup issues

Whitney Katchmark, Principal Water Resources Engineer
January 4, 2017



1



Workgroup #2B: Trading

Goals of Trading program:

1. Cost Effective / economic efficiency for whole region
2. Encourage efficient use of aquifer
3. Flexibility
4. Incentivize Investments
5. Mechanism to deal with growth and environmental concerns
6. Need for Stability and Predictability
7. Sharing risks associated with changes in available water

Discussed 2 concepts:

1. Australian Model
2. ASR / Banking Strawman



2



Workgroup #2B: Trading

Australian Model:

1. Government issues shares of total available water to users.
2. Government /stakeholders determine total amount of water available for withdrawal (consumptive use) for specific time period.
3. Allocation is volume of water that you can withdraw in specific period. Based on number of shares (% of total shares) x total water available.
4. Water shares and allocations can be transferred, sold, banked.
5. Total available water can be increased if water is injected and stored.
6. Government can change total available water but not number of shares that entity owns (permanent entitlement).



3

Workgroup #2B: Trading

Potential Virginia application:

1. GWMA creates broad goal but not specific targets for water withdrawals. Missing information causes uncertainty.
2. Setting withdrawal limits for GWMA or zones will not maximize total withdrawals. Inherently conservative.
3. Could be comprehensive framework for incentivizing injection. Would be forced to define rights to water injected.
4. Most significant challenge is determining who gets shares and how many.



4

Workgroup #2B: Trading

ASR / Banking Strawman:

1. Proposal for DEQ to grant groundwater credit to any party that injects water into the aquifer.
2. Seasonal storage credit: allows recovery of injection by same facility within 1 year period.
3. Long term storage credit:
 - a) allows recovery at off-site locations within “spatial recovery zone”,
 - b) recovery factor would be applied that reduces withdrawal credit to less than injection volume,
 - c) credit can be transferred to another party.
4. Workgroup thinks it can be implemented with regulatory changes. No statutory changes required.



5

Workgroup #1/2A: Alternate Sources

Workgroup identified 6 Alternative Sources as best options and addressed 5 factors for each (benefits, costs, actions needed, feasibility, specific projects).

6 options were not ranked.

1. Aquifer Recharge – purified wastewater
2. Aquifer Recharge – surface water
3. Reservoirs – quarry
4. Surface Water Reservoir (New)
5. Surface Water Withdrawal
6. Infrastructure (Potable Water) Enhancements



6

Workgroup #4: Funding

Purpose of funding:

1. Provide entities funding to pay for recharge of aquifer
2. Ensure long term viability of potable aquifer
3. Ensure DEQ has funds needed to manage resource
4. Pay for projects to remove users from groundwater
5. Support and expand necessary infrastructure

User fees for groundwater withdrawals

- Support from homebuilders and industry. Ag objects. Some discussion of how to collect fee.

Regional Commission

- Interest in having priorities for region. Maybe TPO model of ranking projects but not having funding or permitting authority.

