



Columbia Basin Sustainable
Water Coalition
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ASR / MAR Projects and Drinking Water Wells

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PUBLIC HEALTH
ALWAYS WORKING FOR A SAFER AND
HEALTHIER COMMUNITY



Definitions – Departure Points

- Aquifer storage and recovery (ASR) and Managed Aquifer Recharge (MAR) are artificial processes or natural processes enhanced by humans that convey water underground.
- Although ASR and MAR are often used interchangeably, they are separate processes with distinct objectives.
- MAR is used solely to replenish water in aquifers.
- ASR is used to store water, which is later recovered for use.
- The stored water may be recovered from the same well used for injection or from nearby injection or recovery wells.
- Washington State ASR and MAR can help increase the availability of water during the summer by capturing and storing water during our wetter months when stream flows are high and water demands are low.

Regulatory Framework Regarding ASR and Drinking Water Wells

~~— Water quality standards for water injected~~

- Ecology

~~— Water quality standards for withdrawal~~

- DOH – Drinking Water

❖ All ASR & MAR must comply ECY WAC 173-157

❖ All ASR & MAR involving any drinking water wells or sources of supply must also comply DOH WAC 246-290 – drinking water regulations.

Drinking Water Regulations

- **WAC 246-290-130 Source approval.**
- *(1) Every purveyor shall obtain drinking water from the highest quality source feasible. Every purveyor shall, prior to using a source as a public water supply, obtain approval from the department for:*
 - *(a) All new sources.*
 - *(b) Previously unapproved sources.*
 - *(c) Modifications to existing sources.*
- *(2) In no case may a purveyor maintain an intake or other connection between a public water system and a source of water not approved by the department.*
- Only water from DOH-approved potable water sources may be injected into any drinking water source involved in an ASR or MAR project. This applies to any proposed or existing water source. No existing drinking water source may be augmented by an ASR or MAR project without explicit DOH authorization.

Drinking Water Regulations

- Surface water sources –
 - “Water quality standards” vs. ‘Treatment Techniques’
 - Cannot test out of TT requirements!
 - Required treatment steps – design and operate 24/7/365.
 - Continuous monitoring – reporting
 - Operated by properly certified operator (different levels depending upon treatment).



Drinking Water Regulations

- Other requirements to consider:
- Water system planning – comprehensive 10 year planning documents focus on supply, capacity, infrastructure needs.
 - Required for engineering review and approval of capital projects.
 - Required for funding – SRF (state revolving fund).



Diabolical Ironclad Beetle

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