

# Mitigation Update

Update to Water Policy Interim Committee  
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# Overview

- Background
- Terminology
- Opportunities and Solutions
- What's Next



Holland Lake, MT

# Background – What is Mitigation?

- Montana **conjunctively** manages surface water and groundwater as a **connected resource**
- Most surface water has been fully-appropriated for decades, in some areas 10x over appropriated
- Any depletion to fully appropriated surface water must be mitigated
  - Exception is for **Exempt Groundwater Rights**
- For new permit applications in closed basins, mitigation is required.



# Mitigation Challenges

When a water body is fully appropriated, any new water use must be mitigated by retiring or changing an “effective” older water right

Mitigation must offset depletions at the same  
**Rate, Location, Timing**

When changing an old water right to mitigation, the effective location of what it can mitigate can be very limited



# Mitigation Challenges

When a water body is fully appropriated, any new water use must be mitigated by retiring or changing an “effective” older water right

## Rate, Location, Timing

Most older water rights are seasonal irrigation.

Most new use demands are year-round for domestic and municipal.



# Terminology

**Water Market** – Marketplace for existing water rights.

**Water Trust** – “parking place” for water rights to avoid “non-use”.

**Mitigation Bank** – Actual bank that uses wet water rights on the front end, transitions the timing of the right from seasonal to year-round, sells credits to public to use for mitigating new uses of water.

# Terminology - Water Market

## Water Markets

- Marketplace for existing water rights
- Good tool to help identify and facilitate transfers or leases of existing rights
- More useful for large water users like municipal, irrigation, large developments
- Workable within existing policy framework.
- Several states have a version of this.

# Terminology – Water Trust

## Water Trusts

- Temporary or Permanent – more or less a "parking place" for a water right
- Tool to assess value of a water right (priority, volume, location, etc.)
- Identify potential water rights for mitigation
- Several states have a version of this

# Terminology – Mitigation Bank

**Mitigation Banks** – Actual bank that uses wet water rights on the front end, can change the timing of the right from seasonal to year-round, sells credits to public to easily use for permanently mitigating new uses of water.

- Like a “Water User District”
- Surface storage or groundwater recharge
- For individual homeowner or small subdivision
- Growth occurs with a net zero impact on senior water right holders



# Mitigation Bank Example

## MAR – Managed Aquifer Recharge

- “Shallow” or “deep” groundwater recharge system
- Groundwater directly returns to stream

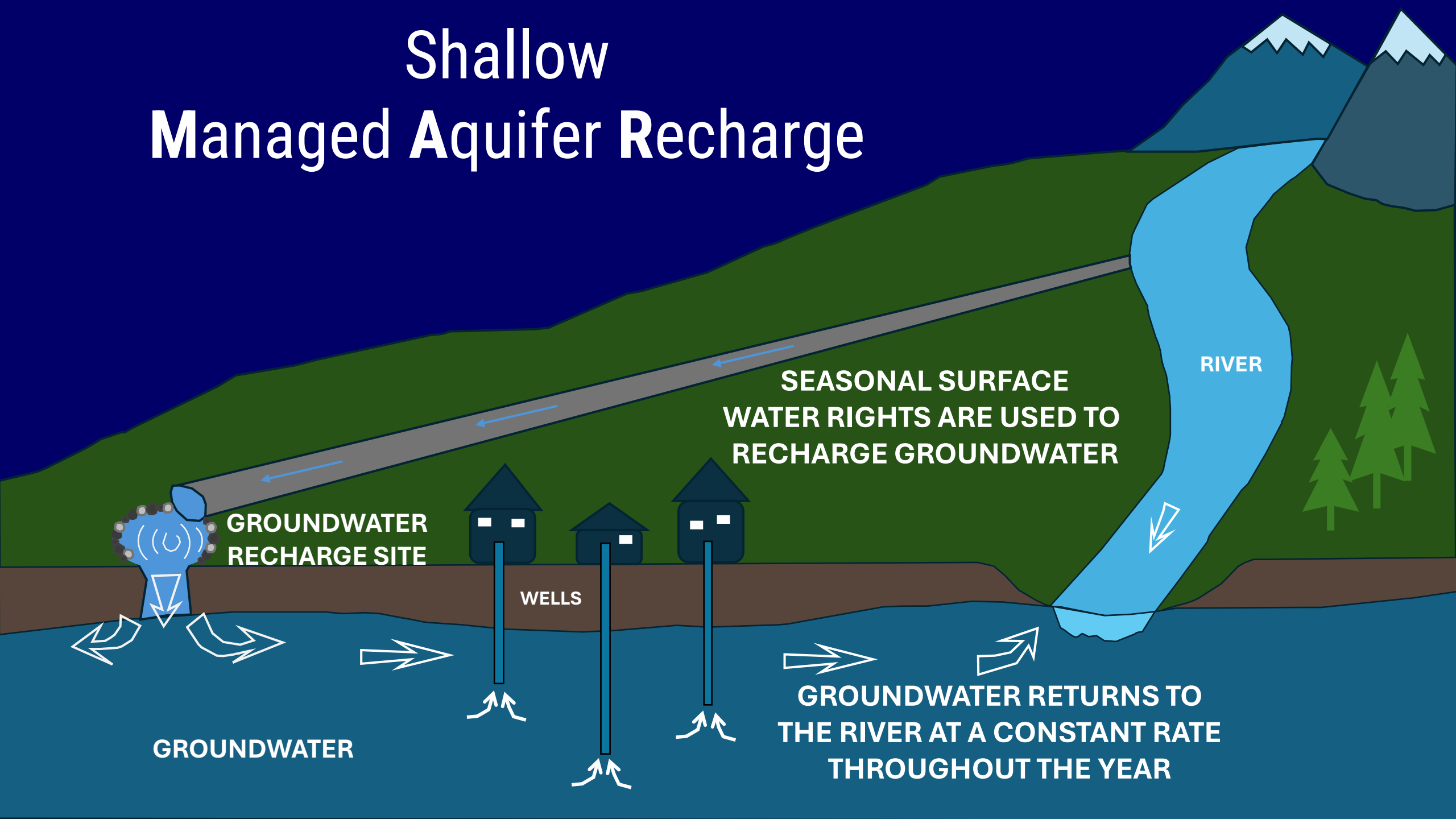
## ASR – Aquifer Storage and Recovery

- “Deep” confined groundwater system
- Groundwater is stored and then “recovered” via pumping

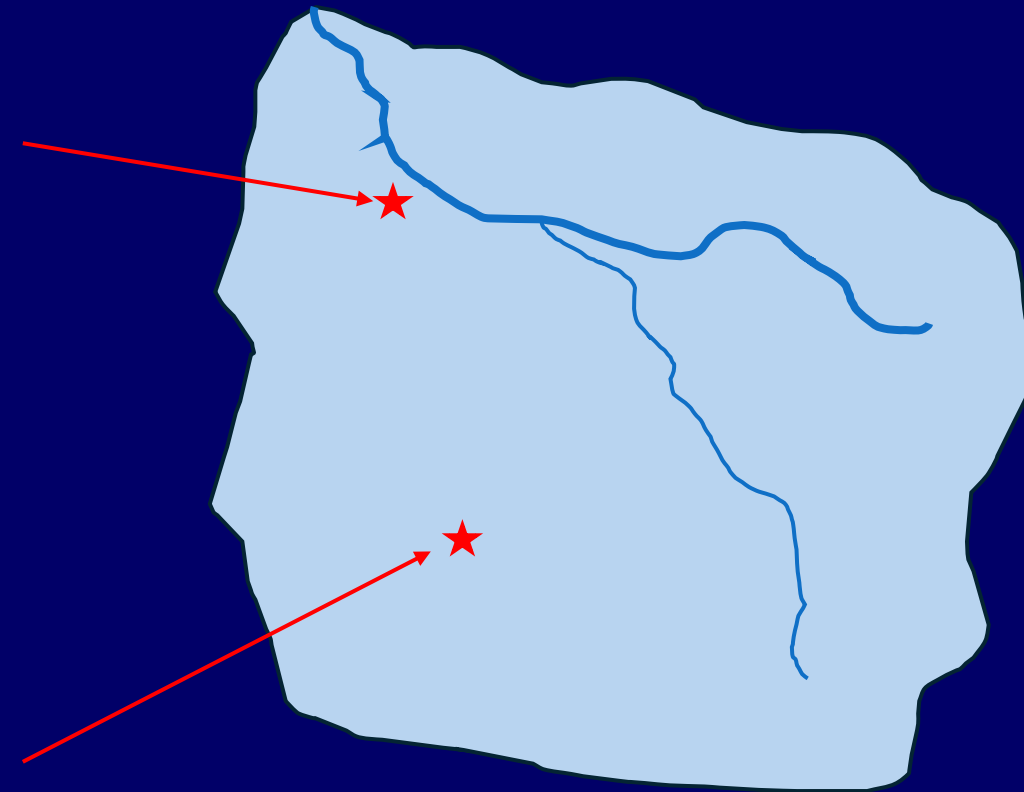
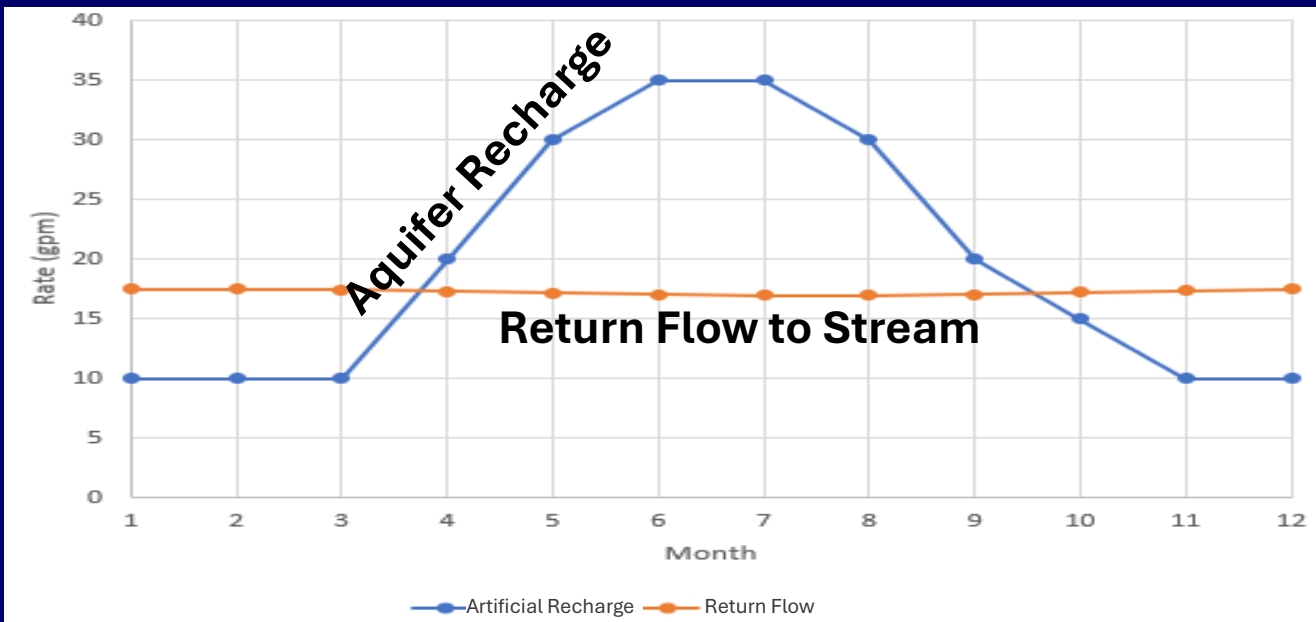
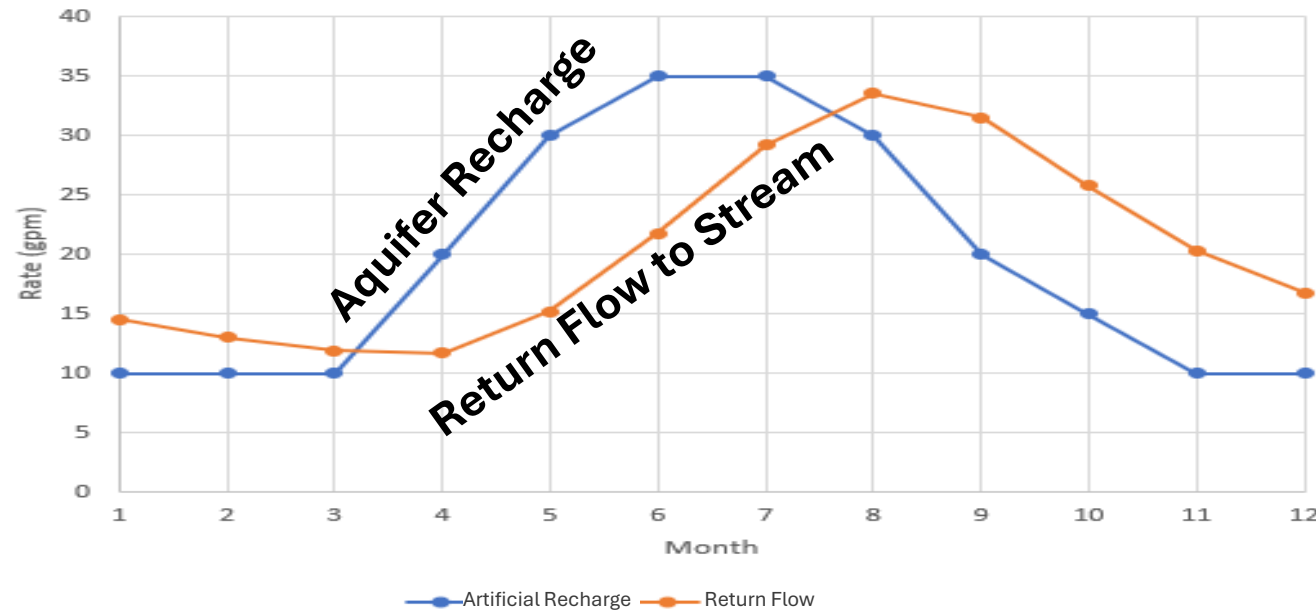
## Surface Reservoir Storage

- Water can be stored and released throughout the year

# Shallow Managed Aquifer Recharge



# Managed Aquifer Recharge



# DNRC Mitigation Work (2024-today)

- Comprehensive Water Review, State Water Plan, and State Drought Plan identified the challenges of mitigation
- DNRC and external collaboration began meeting monthly in Sept. 2024



# DNRC Mitigation Work (2024-today)

- Montana Constitution and Water Use Act guide the work- conform to the fundamental principles of the prior appropriation doctrine
- Focused on wet-water solutions
- Exploring solutions that may require changes to rule or statute



# DNRC Mitigation Work (2024-today)

- Began with information gathering
  - Researching other states/countries
  - Engaging those other states to talk about what is working or could work better
- Developed mitigation terminology
- Engaged local groups and consultants
- Identified challenges and potential opportunities



# Next Steps

- Exploring a range of mitigation solutions:
  - Rate, timing, location challenges (e.g., seasonal mitigation vs monthly)
  - Uncertainty challenges (e.g., timing of evaluation of effectiveness)
  - Availability challenges (e.g., readily accessible water for mitigation)
- Identifying policy, rule, or statutory changes needed
- Continued collaboration: legislators, stakeholders and the public

# Questions?



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