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# Water Quantity Trading & Banking

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# Groundwater Trading

What is GW trading?

Why trading?

What is needed to make trading work?

# **Groundwater Management Under Scarcity**

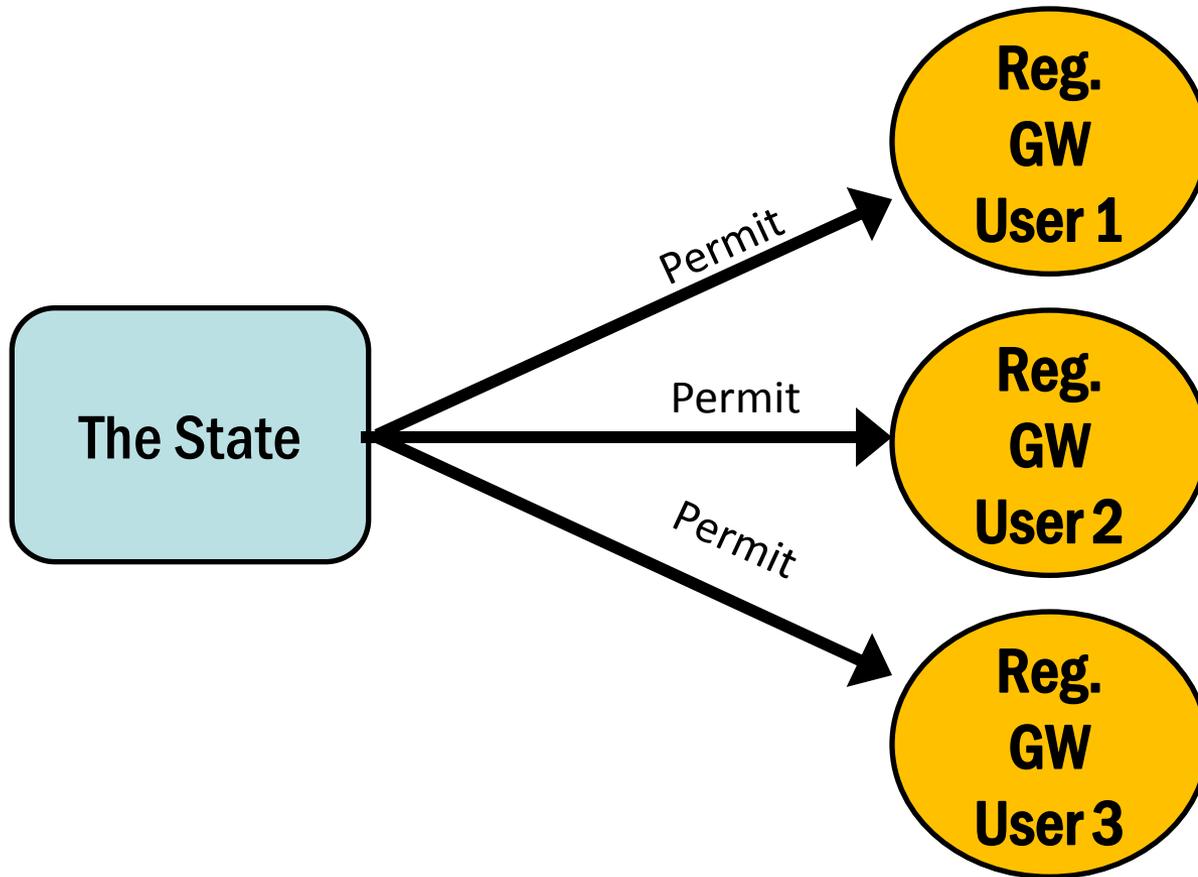
**What GW goal?**

**Who gets what and when?**

# **What makes a “good” groundwater management system?**

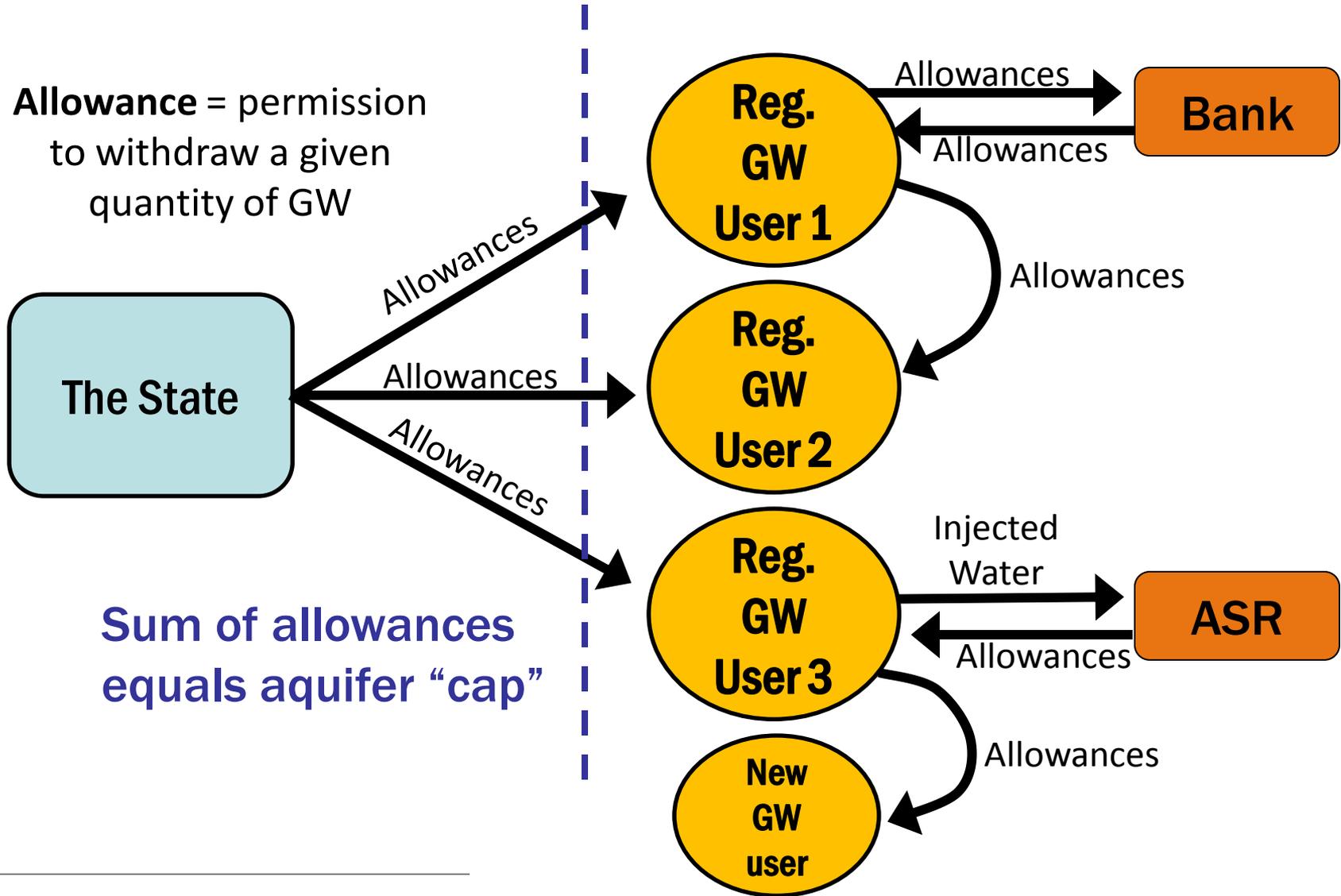
- **Achieve resource management goals**
- **Cost effective investments**
- **Incentives for water efficiency & reliability**
- **Maximize value of the resource**
- **Minimize of 3<sup>rd</sup> party impacts**
- **Equitable, “fair”**
- **Accommodate economic growth**

# Administered Permit System



# Groundwater Trading

**Allowance** = permission to withdraw a given quantity of GW



# Rationale for Groundwater Trading

- Achieve GW management goals
- Incentives to reduce GW withdrawals
- Incentives to use aquifer for storage
- Provides information on value of GW
- Water goes to highest valued uses
- Allow for economic growth given scarcity

# Requirements for an Effective GW Trading Program

Allowance limited in supply (system “closed”)  
Clearly defined conditions on allowance use  
Monitored and enforceable  
Ownership interest secure & predictable  
Transaction costs relatively low

# Issues Under Discussion

- Spatial extent of GW trades
- Banking (extent of allowance banking and banking of injected water)
- Initial assignment of GW allowances
- Groundwater allocation time period and allocation across time periods.