Water Markets

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What are water markets?

1. Management tools for surface water and groundwater systems
   Depend on other rules and regulations as well as good governance

2. Ways to change where water is used in a way that increases its value
   Cost-effective way of reaching management goals

3. Voluntary transactions between willing buyers and sellers
   Should increase profits for all participants
Water market basics

- **Why do we need water markets?** Can be used to help with many water management issues
  Allocative mismatch, drought mitigation, aquifer depletion, instream flow concerns, surface water-groundwater interaction, water quality

- **Who takes part in water markets?** Parties that can hold water rights
  Farmers, tribes, businesses, irrigation districts, municipalities & government agencies, water trusts

- **How common are water markets?** Exist worldwide
  Throughout the West, but also S America, Europe, Australia, NZ, Middle East, Africa, Asia (India, China, Pakistan)
Water market basics

- **What happens in a water market?** Two distinct things
  Regulatory component → Permitting and compliance
  Financial component → Price discovery and negotiation

- **Who operates and oversees water markets?** This varies enormously, based on local rules and regulations
  Water districts, government agencies (local, state, and national), private industry

- **What’s actually traded in a water market?** Often not water itself
  Rights to water, irrigated land, wells or development; derivatives; technology choice
Common misconceptions about water markets

Water ‘markets’ generally aren’t markets
Common misconceptions about water markets

Water markets won’t lead to all irrigation water moving to cities
Common misconceptions about water markets

Water markets . . .

- Are not a new idea
  Have been around for at least 1000 years

- Work with all kinds of water rights
  Not just appropriative, correlative, or other

- Are common between agricultural water users
  Not just ag-urban and ag-environmental transfers
Common misconceptions about water markets

Water markets . . .

- May or may not be neutral to participants
  Perceived or actual inequity can limit effectiveness

- Shouldn’t need large government spending to operate
  Voluntary transactions between buyers and sellers

- Include regulatory and financial components that can be unbundled
  Bundling can lead to lack of trust
What is traded in a water market?
What is traded in a water market?

What is the unit of exchange?

1. Volume of water
2. Right to irrigate acres
3. Right to operate a well or divert water
4. Access time

*Often, a unit of water is not exchanged for a unit of water*

What is the associated right that is traded?

1. Permanent
2. Lease – single season, multi-season, split-season
3. Derivative (e.g. option)
4. Something more complex (e.g. offset, swap)
Local issues to consider

- Third party impacts
  - Canal infrastructure
  - Groundwater flow patterns
  - Surface water-groundwater connections
- Monitoring and enforcement costs
- Paper water
- Local economic impacts
Kinds of water markets

Differences are to do with how matching occurs, the number of participants, information sharing, and price discovery.

1. Coffee shop
2. Bulletin board
3. Auction
4. Smart market
Design summary

- Most existing water ‘markets’, including electronic platforms, are bulletin boards or bilateral contracts and not true markets.
- Groundwater markets are generally much more complex than surface water markets, and their design needs to reflect this.
- Perceived fairness and financial privacy are underappreciated obstacles in water markets; trust is vital.
Public policy perspective

- Water markets are not suitable everywhere
- Local concerns and issues are vital to water market design
- Water market design affects efficiency and equity of outcomes
- Managing water markets should be cheap or free for governments
- Water markets must provide clear opportunities for rights holders
Thank you!

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