

# PANELISTS



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# Water Markets: Law and Economics

Confluence Water Conference

July 18, 2019

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# Basic Supply and Demand

- Why are water prices increasing so quickly?
- Water Supply
  - In Northern Colorado water is fully appropriated
  - New supplies possible on the horizon but fixed for now
- Water Demand
  - Municipal demand – boom in population and development
  - Industrial demand – boom in water for energy industry
  - Recreational and wildlife and aesthetic beauty demand up

# Competition for Water: Transfers and Prices

- Water is being reallocated among competing uses - largely transfers out of agriculture to domestic and industrial use
- Water prices are basin specific but in general, water prices have increased 400% since the end of the great recession
- Water prices are not the whole story – must consider the transaction costs of transferring water

# Central Issue: Interdependence

- Water is not a typical economic good like corn or oil – if I consume corn or oil, it is entirely gone – “rival”
- Water can and is reused over and over in water basins – and surface and groundwater often connected (S. Platte)
- Consumptive use varies but rule of thumb is 50/50 ag., 20/80 mun.  $\text{Withdrawal} - \text{Consumptive Use} = \text{Return Flow}$
- Downstream users depend on return flows (both quantity and quality) and have legal right to them
- **Water users and water rights are highly interdependent**

# Basic Legal Issues That Affect Water Values

- Water Shortage: “first in time is first in right” - senior rights are protected. When rights are sold, they retain their priority date. **Priority affects value – all rights are not equal.**
- Water Reallocation: **Only the consumptive fraction may be transferred.** For any change in use (type, location, etc.) return flows must stay intact - both senior and junior are protected. **Consumptive use is the true measure of a Colorado water right.**

# Water Reallocation and Prices: Transfers from Ag. to Mun. and Ind.

- \* All changes in water rights must go through the water courts to determine consumptive use and return flow impacts.
- \* Types of Transfers
  - \* Buy and Dry
  - \* Buy and Lease Back
  - \* Interruptible Water Supply Agreements
  - \* Buy and Supply Exchanges

# Transaction Costs: Water Court

- Basic steps in Water Court Adjudication/Approval
  - File application for a change
  - Published and objections received – usually MANY
  - Review and discovery of consumptive use and return flows– water engineers, lawyers – physical intricacies of water are paramount
  - Settlement or trial – can take years – value of time
  - Decree – final approval
- Legal transaction cost is a key component of water cost



# Key Take Aways

- \* The face value of water prices is only part overall cost.
- \* The physical nature of water interdependence (and water infrastructure) is key to understanding water markets – it's complicated.
- \* The legal aspects of our water rights system and transactions costs key to understanding water costs.
- \* Prices and transactions cost will very likely increase as Colorado and water demand grow.