

TRANSACTION COSTS AND WATER TRANSFERS

Policy Challenges and Recommendations

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RECLAMATION

Managing Water in the West



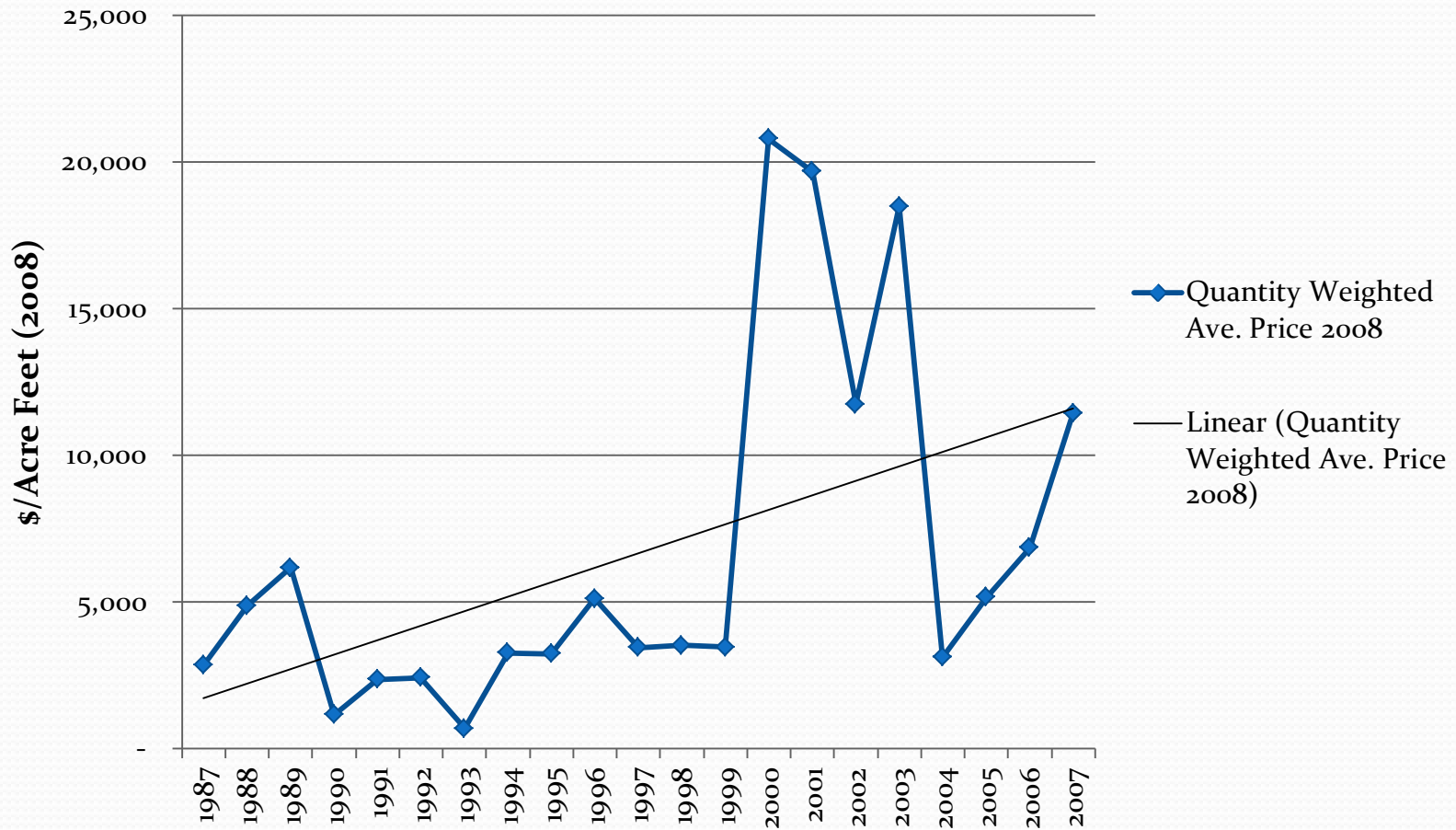
The Walton Family Foundation

Key points covered

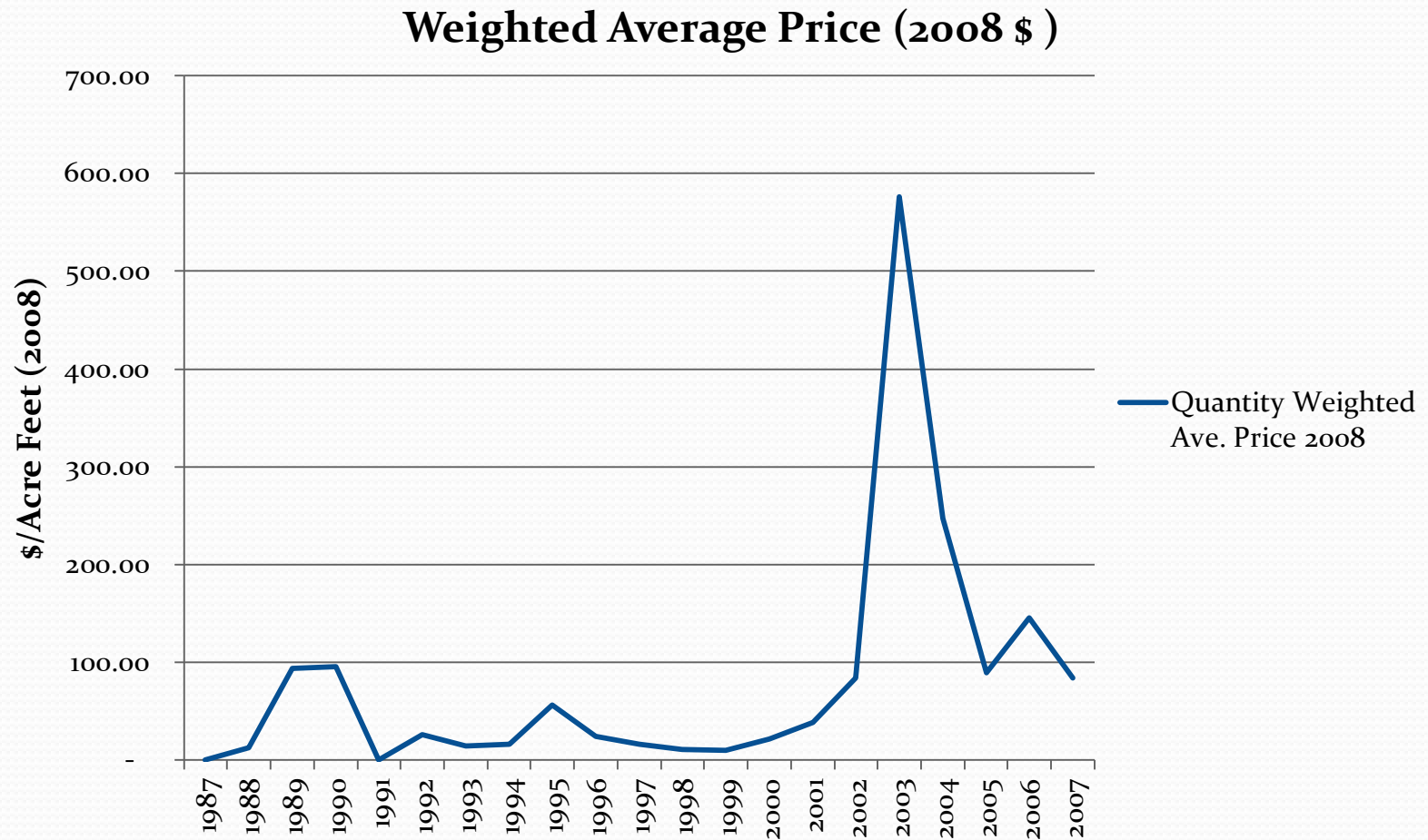
- Background on water transactions in Colorado
- What are transaction costs (TC)? Why do we care?
- Creating balanced transfer review procedures
- Importance of TC for temporary transactions
- Recommendations

Colorado Sales - Average Annual Price

Average Price (2008 \$)

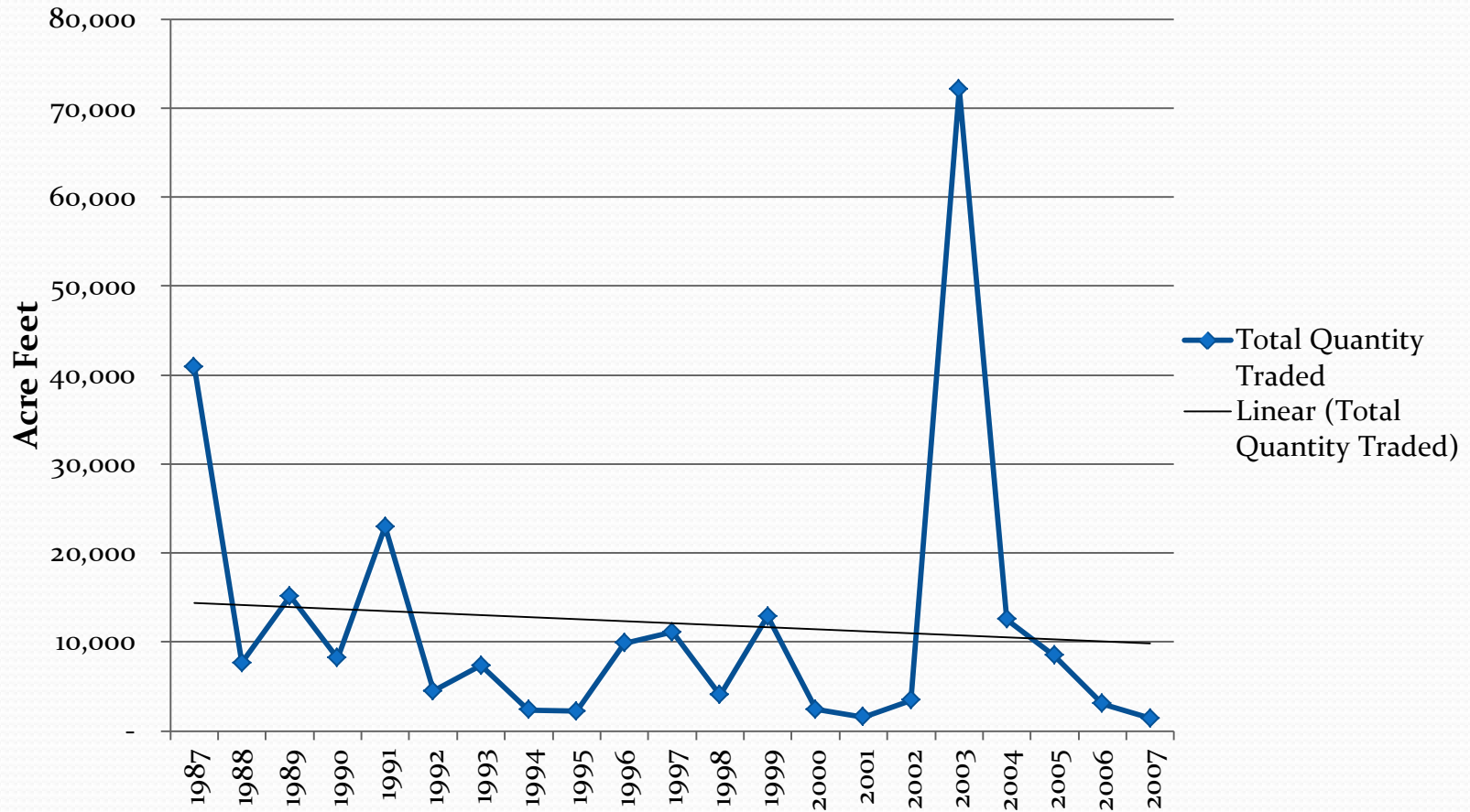


Colorado Leases Average Annual Price



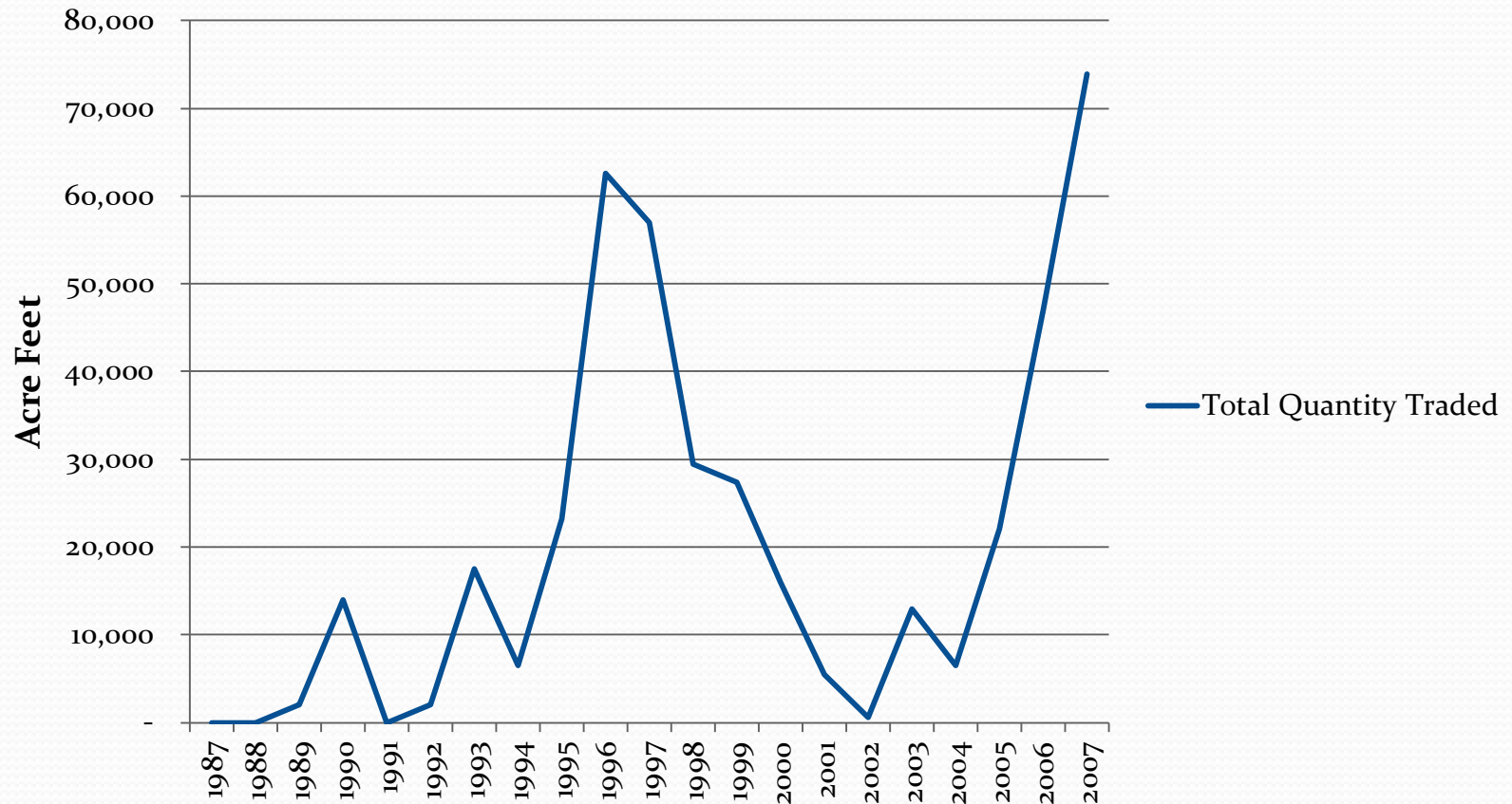
Colorado Sales - Annual Volume Transacted

Total Quantity Traded



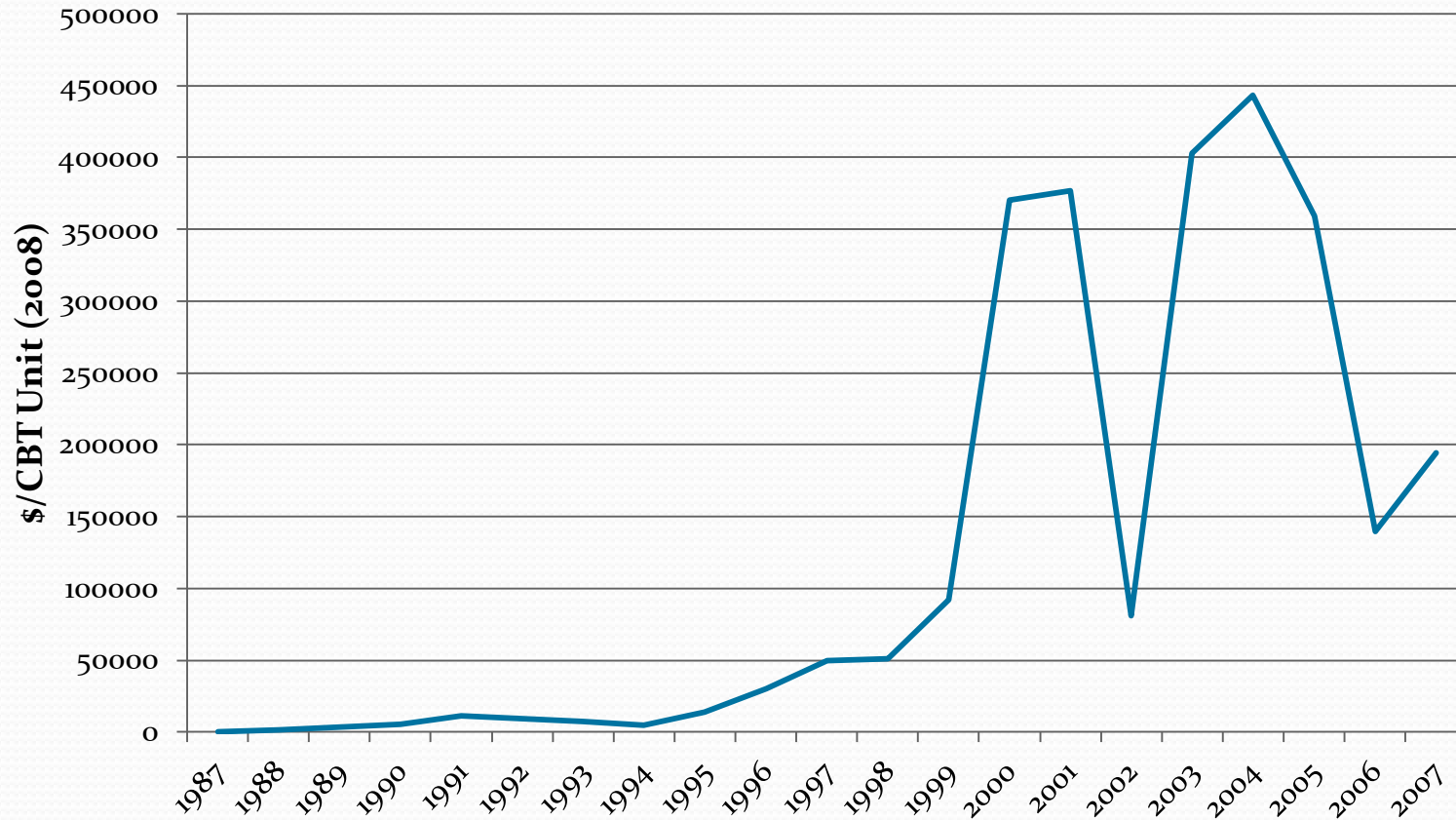
Colorado Leases - Annual Volume Transacted

Annual Quantity Traded through Leases



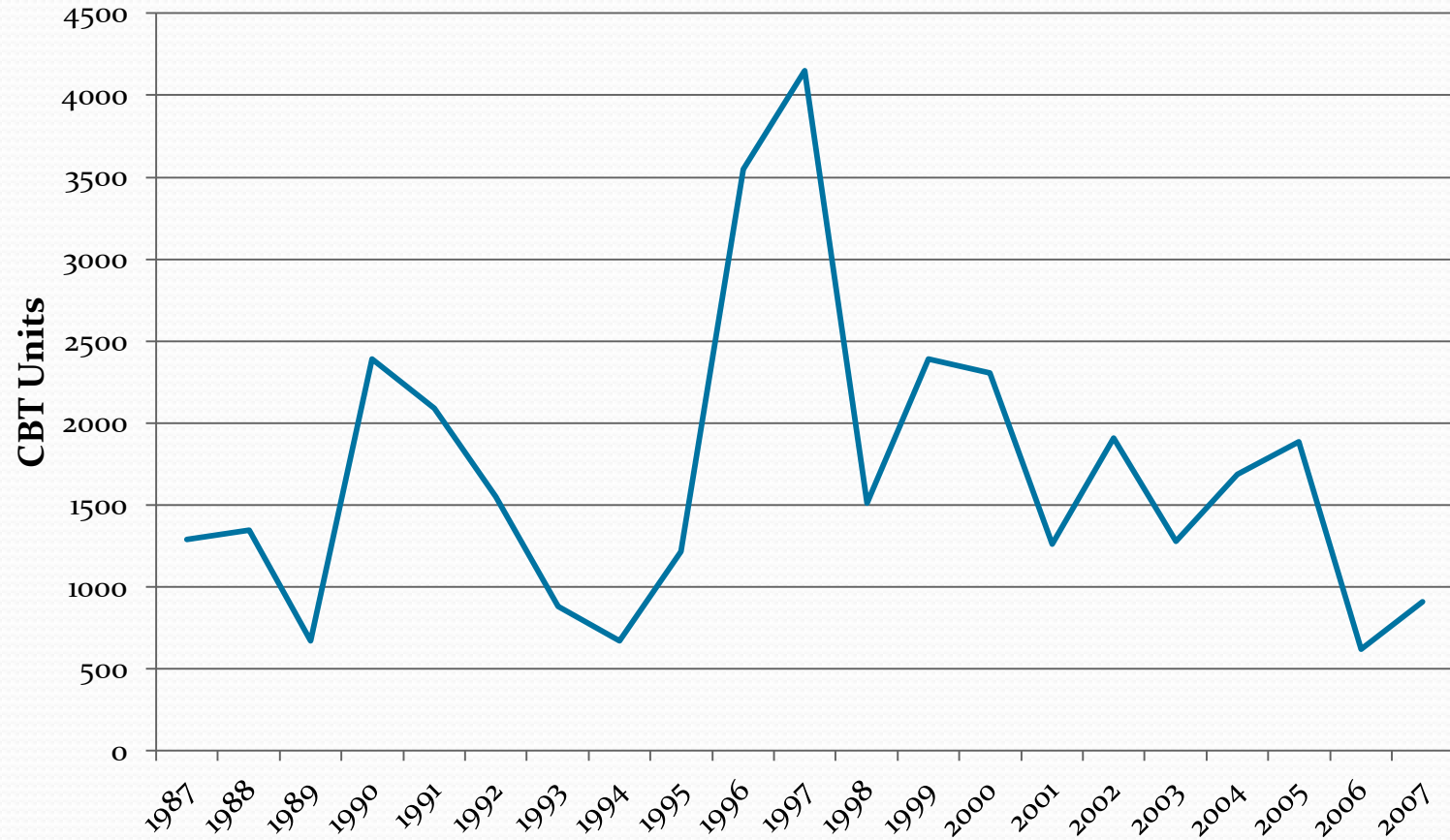
CBT Municipal Sales - Average Annual Price

CBT Weighted Average Price (2008 \$)



CBT Munic. Sales - Annual Volume Transacted

CBT- Annual Quantity Traded – Munic. Sales



What are transaction costs?

- Costs of engaging in transfer of water entitlements, beyond price paid to seller/lessee
 - hydrologic and engineering studies
 - verifying title/ownership
 - identifying suitable entitlements/owners
- **Policy induced transaction costs** – costs of satisfying state/federal procedural requirements for transfer approval and implementation

Change of Water Right Process

change of application submitted



reviewed by state agency; modifications, supporting materials are requested and submitted



change of application filed



public notice provided



protests filed



no protest filed



private resolution



hearing



state agency rules on change application approving, modifying, or denying the application



agency ruling appealed



no appeal of ruling



judicial review of agency ruling



change in water use implemented and certified

TRANSACTIONS COSTS:

COMPARISON AMONG STATES

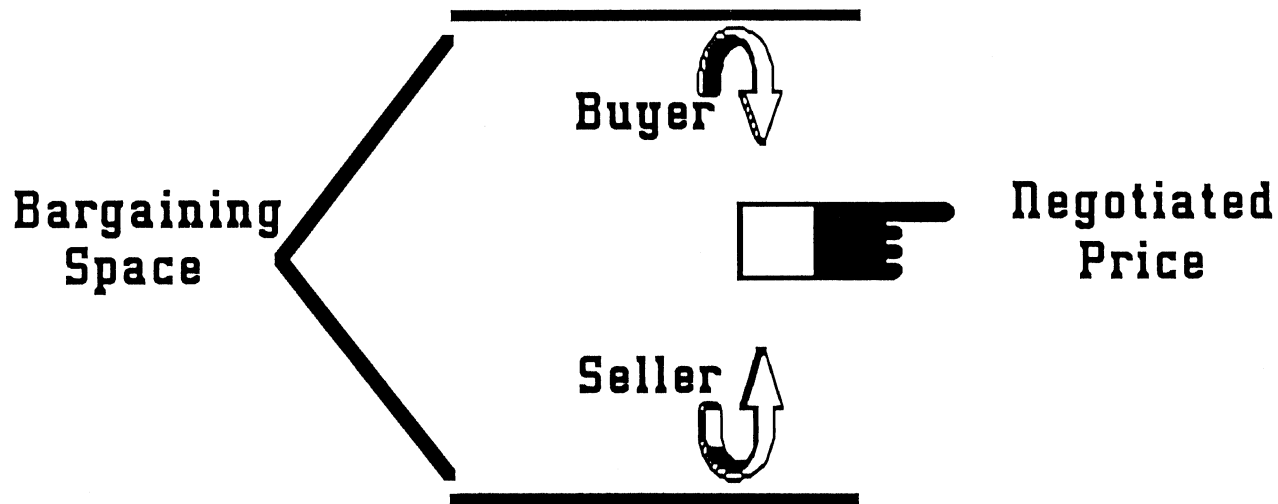
From data collected in the 1980s, no recent studies available

	%	%	Months to	Applicants' TC/Af	TC/ Water Price
	Protest	Approved	Approval		
Colorado	60	80	21	\$187	.12
New Mexico	5	95	6	\$54	.06
Utah	15	90	9	\$66	.06

Why do transaction costs matter?

How transaction costs affect water transfers

UPPER BOUND -- What is the most the buyer could reasonably pay?

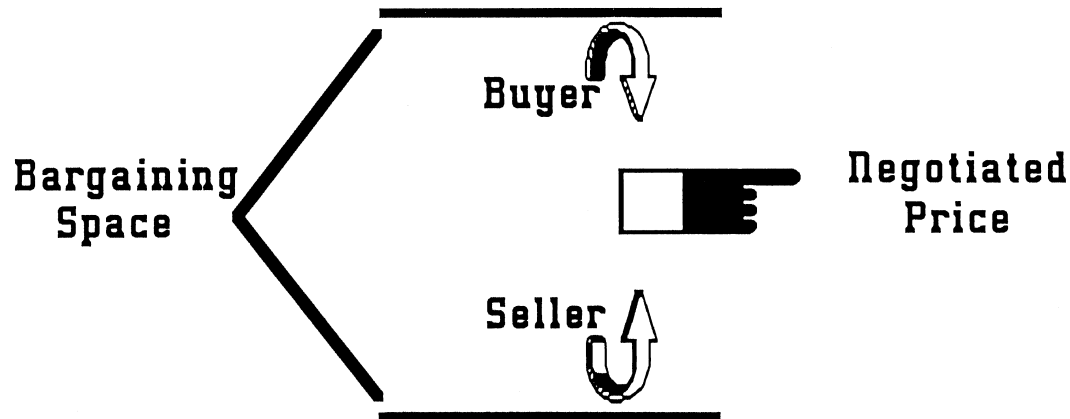


LOWER BOUND -- What is the least the seller could reasonably accept?

How transaction costs affect water transfers

UPPER BOUND -- What is the most the buyer could reasonably pay?

**\$100 per acre foot CU,
new development**



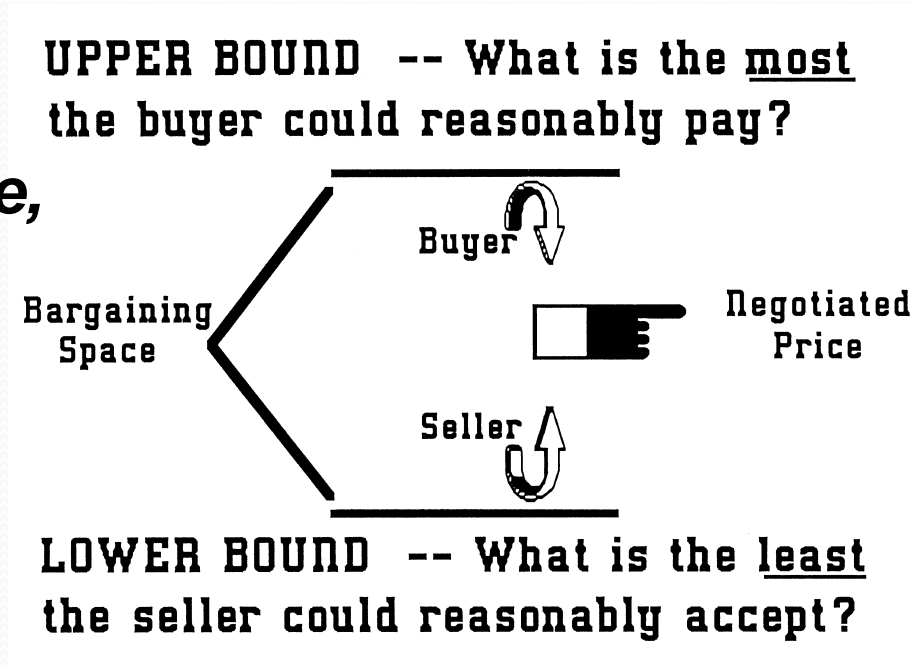
LOWER BOUND -- What is the least the seller could reasonably accept?

**\$15 per acre foot CU,
pasture irrigation**

How transaction costs affect water transfers

\$100/af CU,
new development

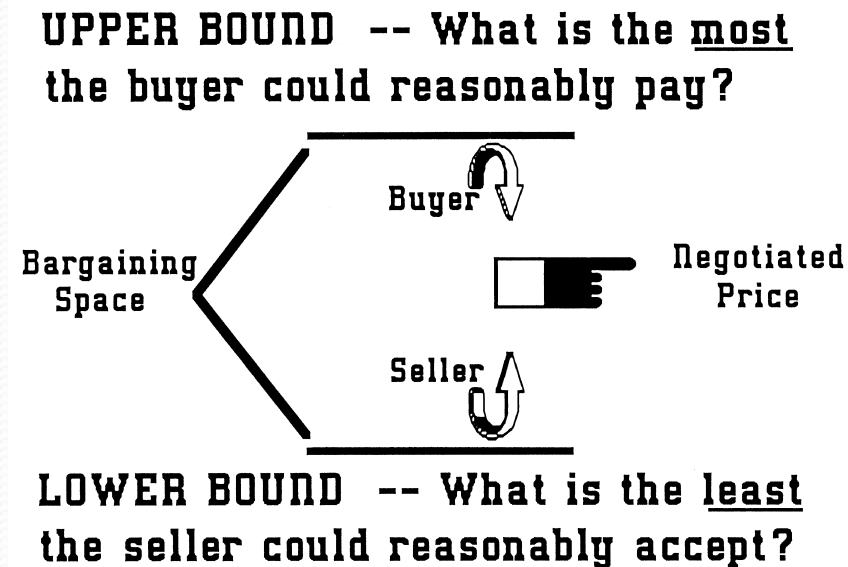
*Difference in value,
\$85/af CU,
motivates
transaction*



\$15/af CU,
pasture irrigation

How transaction costs affect water transfers

Transaction costs “erode” bargaining space -- reducing motivation to engage in transfers



Transaction costs – policy dilemma

- Incomplete consideration of transfer consequences reduces TC, but allows third-party econ and environ impacts
- Thorough review of proposed transfers increases TC, may reduce third-party impacts
- We want transfer review procedures that encourage “desirable transfers” and screen out “undesirable transfers”

Effective transfer review procedures

- all steps in review process evaluated for effectiveness in screening third-party impacts
- policies clearly identify third-party impacts to be screened in review process
- policies clearly identify who can participate in review process – file objections, testify at hearings, etc.

Review procedures – temporary transfers

Temporary transfers essential for adapting to hydrologic extremes

- Seasonal transfers to maintain fish flows, water quality
- Dry year transfers for urban supply reliability

Temporary transfers particularly dampened by transaction costs! Need streamlined procedures.

Transfer review procedures – 3 recommendations

- 1) Rebuttable presumption for transferable quantity, varies by sub basin
- 2) Rebuttable presumption for third-party economic impacts and compensation, varies by county
- 3) 0.5% admin. fee on price paid to buy/lease water (half of one percent)

Transfer review procedures – recommendations

Example:

1) Transferable quantity for water used to irrigate pasture in Sub-basin X = 5.3 af/year

2) County-of-origin econ impacts for transfer of water used to irrigate pasture in County Z = \$20 af/year, payable to County Z Economic Impacts Fund

(County IMPLAN model used to determine standardized econ impact)

3) 500 af acquired at \$4,000/af = \$2 million total.

Admin fee = 0.5%, \$10,000

Transfer review procedures – recommendations

Final points: “burden of proof” and price info really matters in economics of water transactions!

Rebuttable presumption approach places burden of proof of those objecting to standardized calculations

Reduces transaction costs while still accounting for important transfer consequences

Admin fee based on price paid to buy/lease:

- funding for superb water admin
- public info on water prices helps develop market

Six Guidebooks on Water Transfers

- ***Measurement, Monitoring and Enforcement of Temporary and Seasonal Irrigation Forbearance Agreements***, forthcoming, December, 2011
- ***Understanding the Value of Water in Agriculture***, August, 2011
- ***Entendiendo el Valor del Agua en la Agricultura***, October, 2011
- ***Water Banks: A Tool for Enhancing Water Supply Reliability***, 2010
- ***Dry-Year Water Supply Reliability Contracts: A Tool for Water Managers***, 2009
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<http://ag.arizona.edu/people/profiles/colby/html>

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