



# Triple Jeopardy:

## The Community Risks of Inter-regional Water Sales

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## Dublin Statement on Water and Sustainable Development (1992)

*Water has an economic value in all its competing uses and should be recognized as an economic good.*

*Within this principle, it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price.*

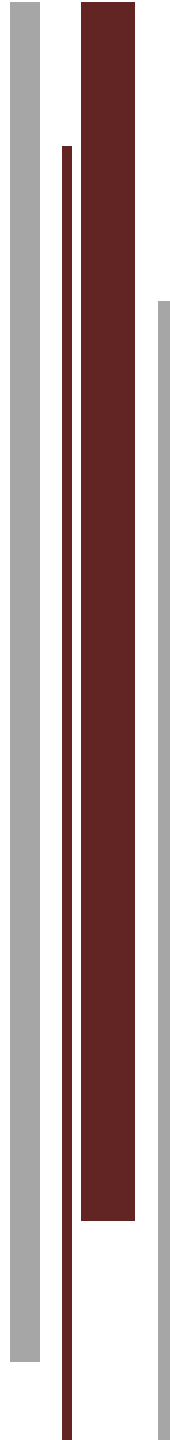
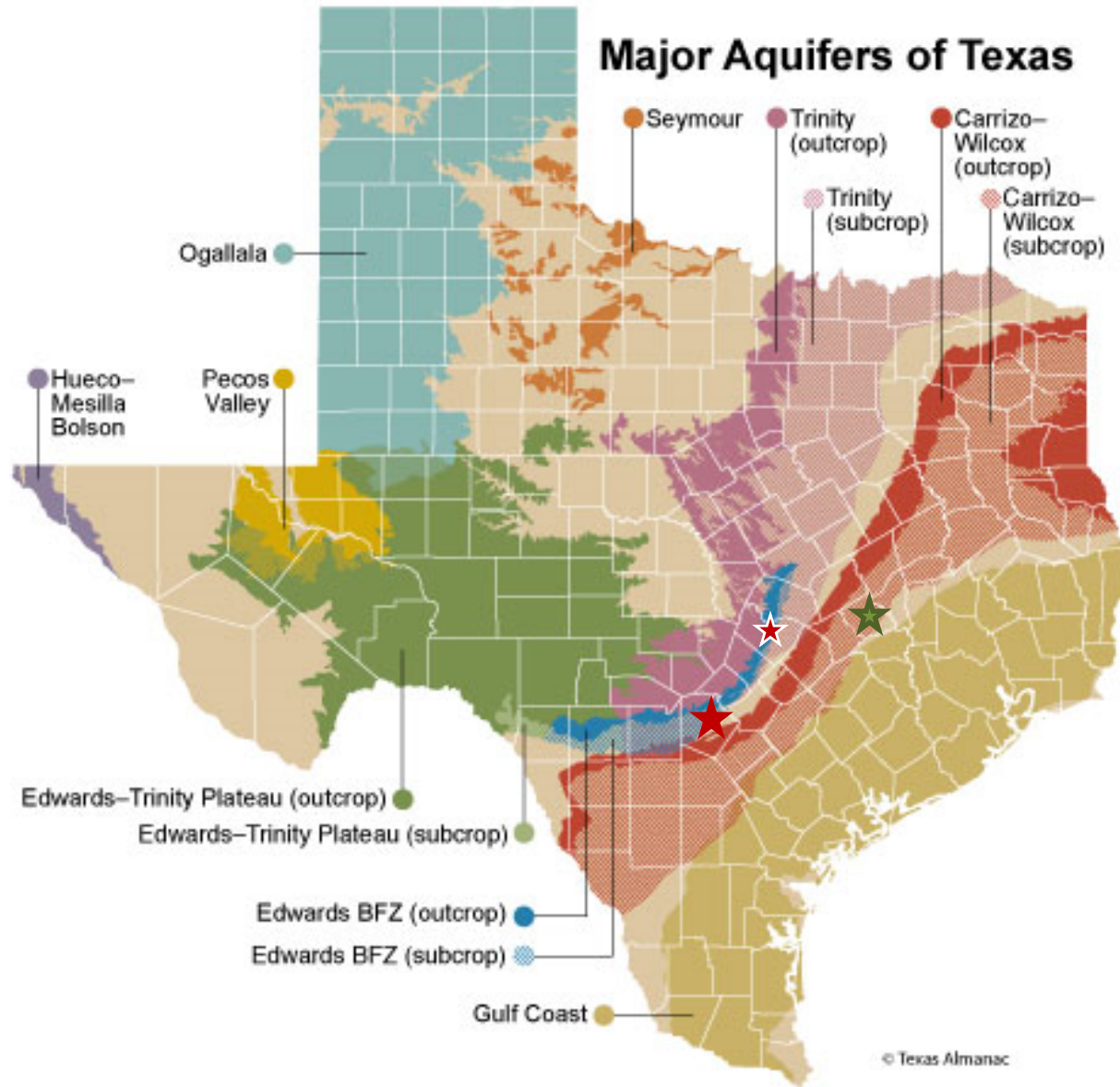
*Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.*

## Vista Ridge Project

- Piping 50,000 af of water to San Antonio annually from Carrizo-Wilcox
- 30 million af available
- Pumping limit is 2 af
- 25,000 acres
- Lessors about 2.5% of the population
- \$46/af royalty payment
- 20,000 af already goes to Austin

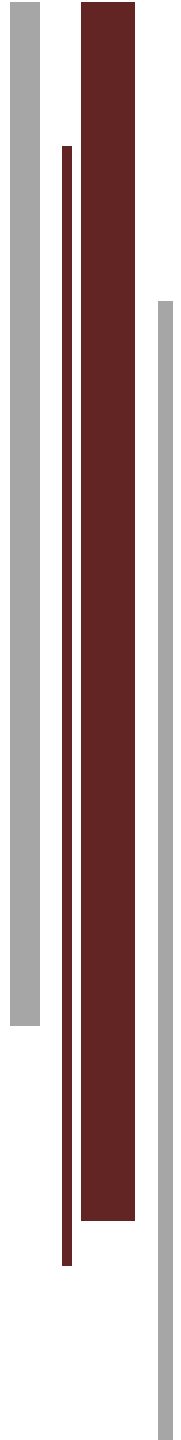


# Major Aquifers of Texas



## Concerns

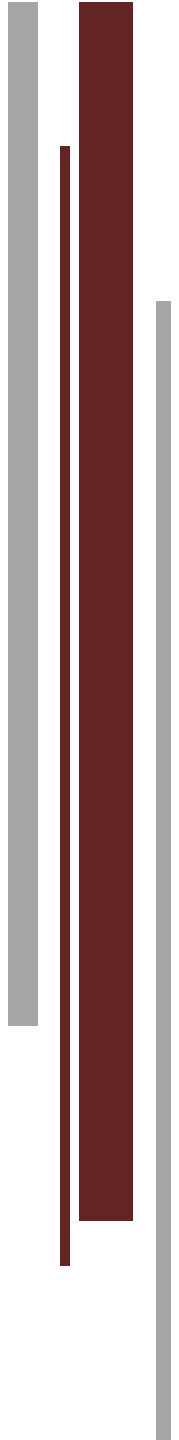
- Water availability
  - Who has first right?
  - Curtailments to 1.5 af result in only 37,500 af
  - Water table depths
- Fairness to local water users and landowners
- Economic, ecological, and social impacts



## Two perceptions

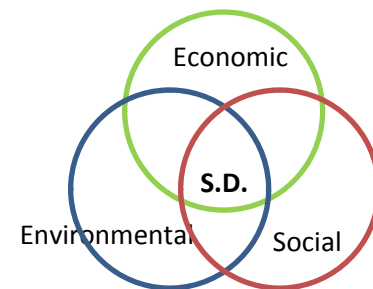
Water is for fighting.

Property rights are king.



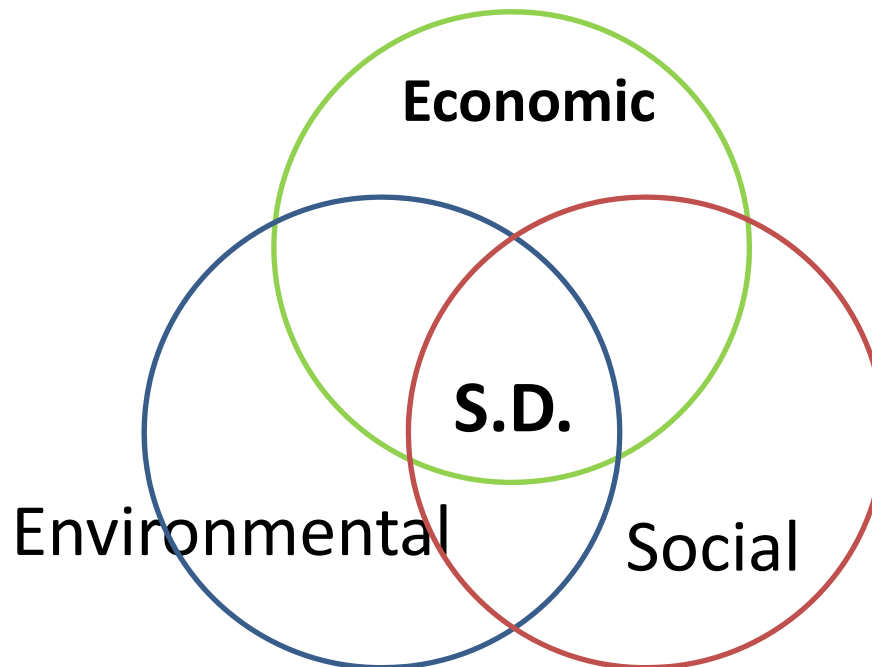
## Four facts

- Texas population is 80% urban.
- Urban population growth is outpacing rural growth.
- We already export water without charge.
- We have/may have excess capacity.

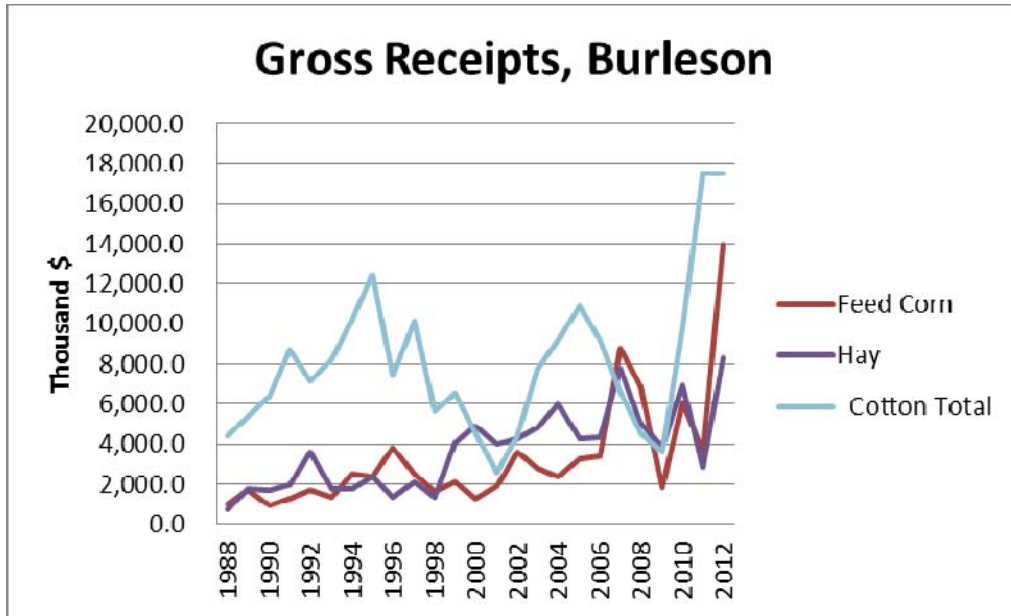


# Regional Development in Water Transfers

- People usually will act in their own self-interest, which favors water leases.
- There are secondary and tertiary effects on communities.

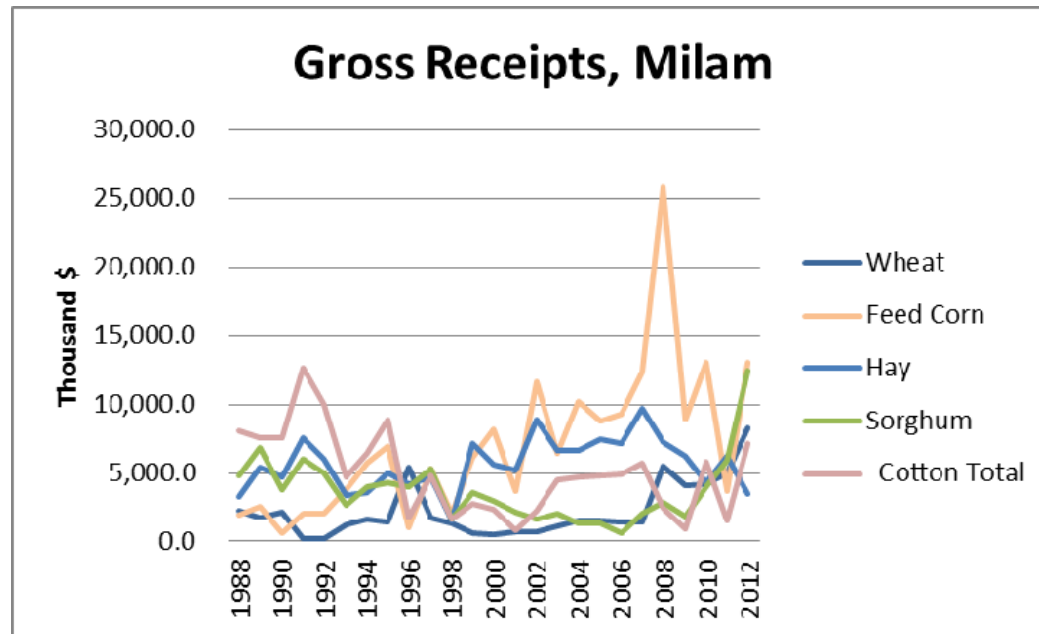






19,598 irrigated acres (5.8%)  
 --up from 47,603 (4.0%) in 2007

2,486 irrigated acres (0.5%)

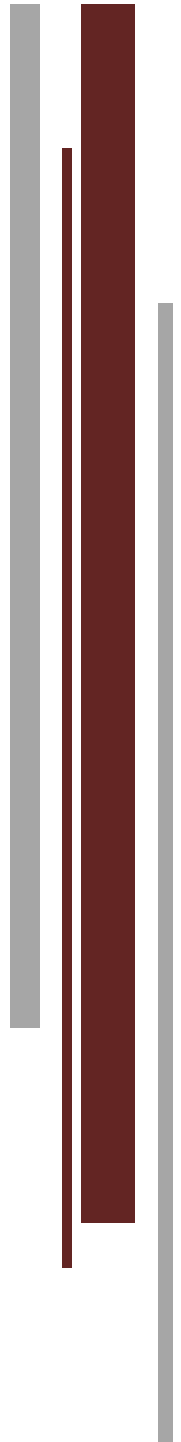
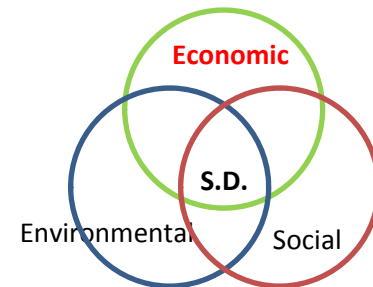


# Impacts

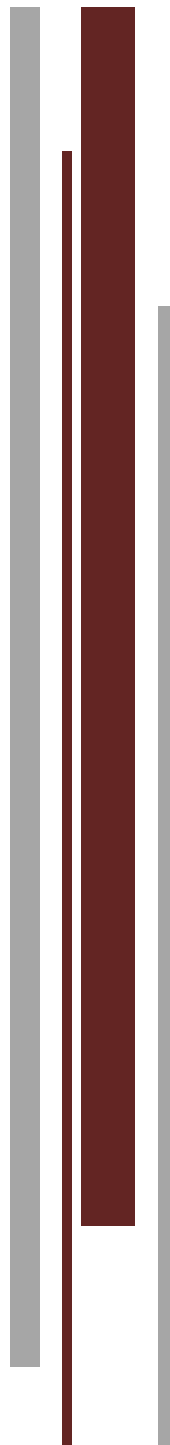
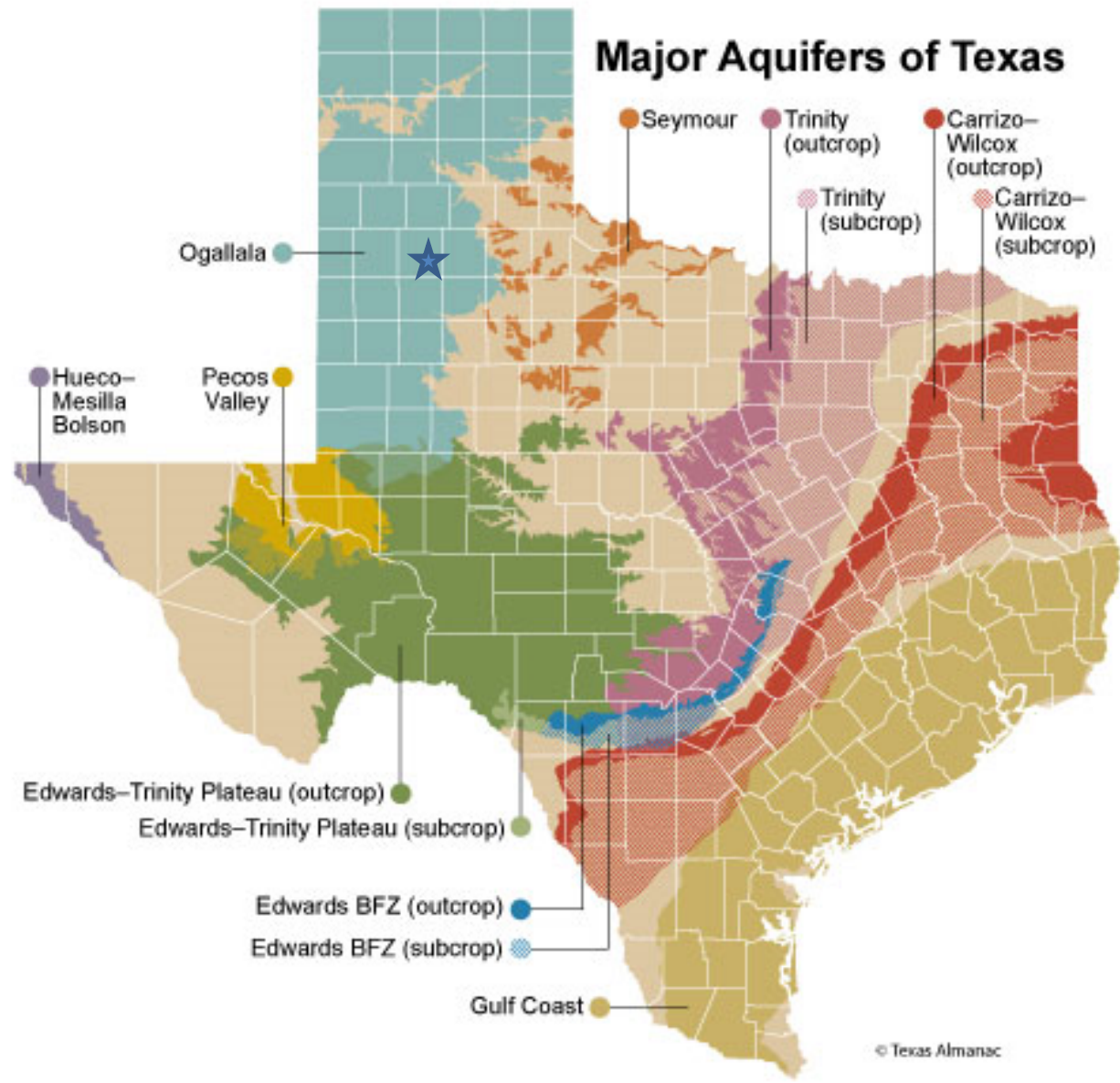
- Water royalties are essentially “mineral” payments and do not significantly damage production agriculture.

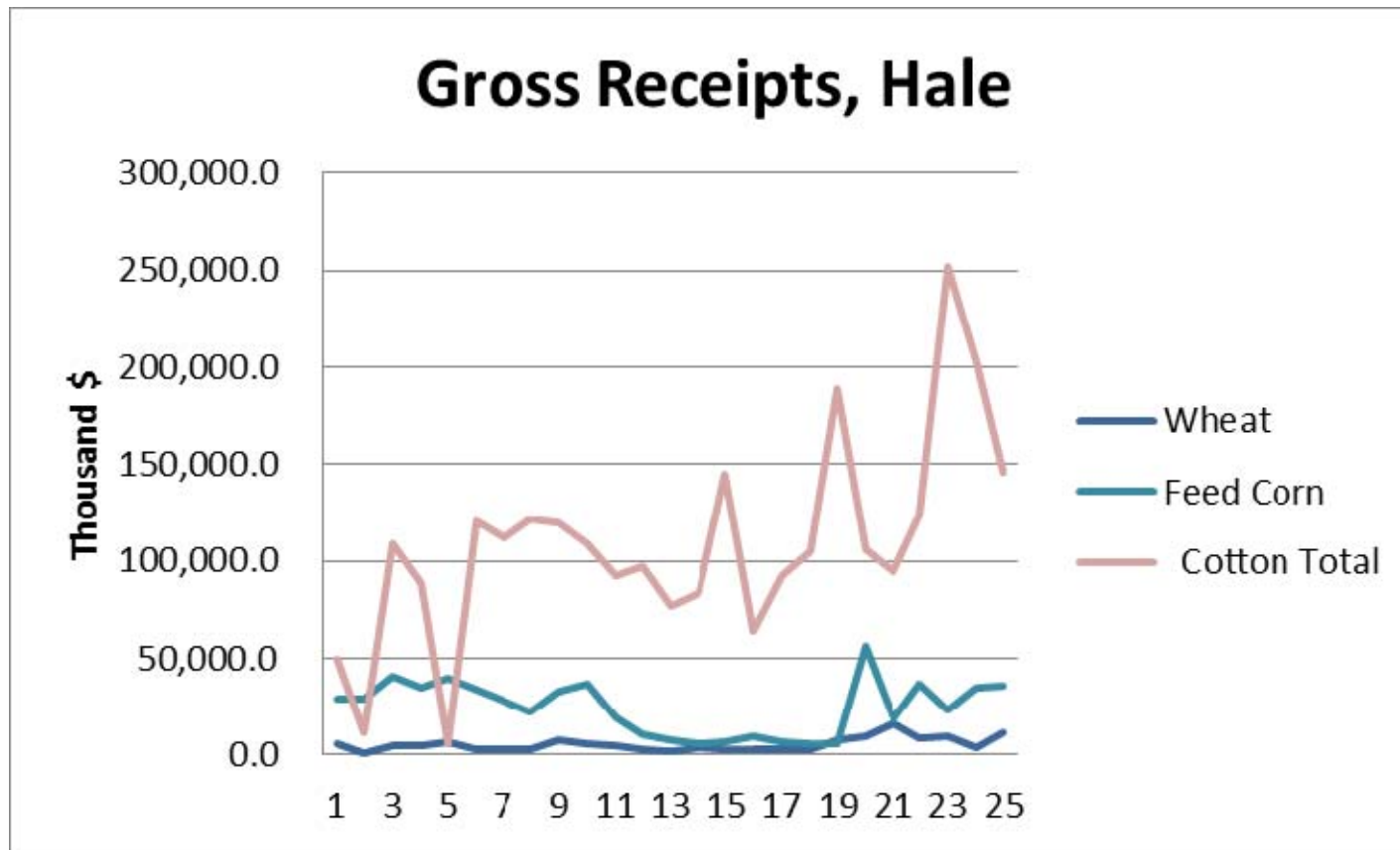
<b>Impact Type</b>	<b>Output</b>	<b>Value Added</b>	<b>Labor Income</b>	<b>Jobs</b>
Induced Effect	\$1,160,500	\$681,500	\$328,600	9.8

- Property taxes ???



# Major Aquifers of Texas



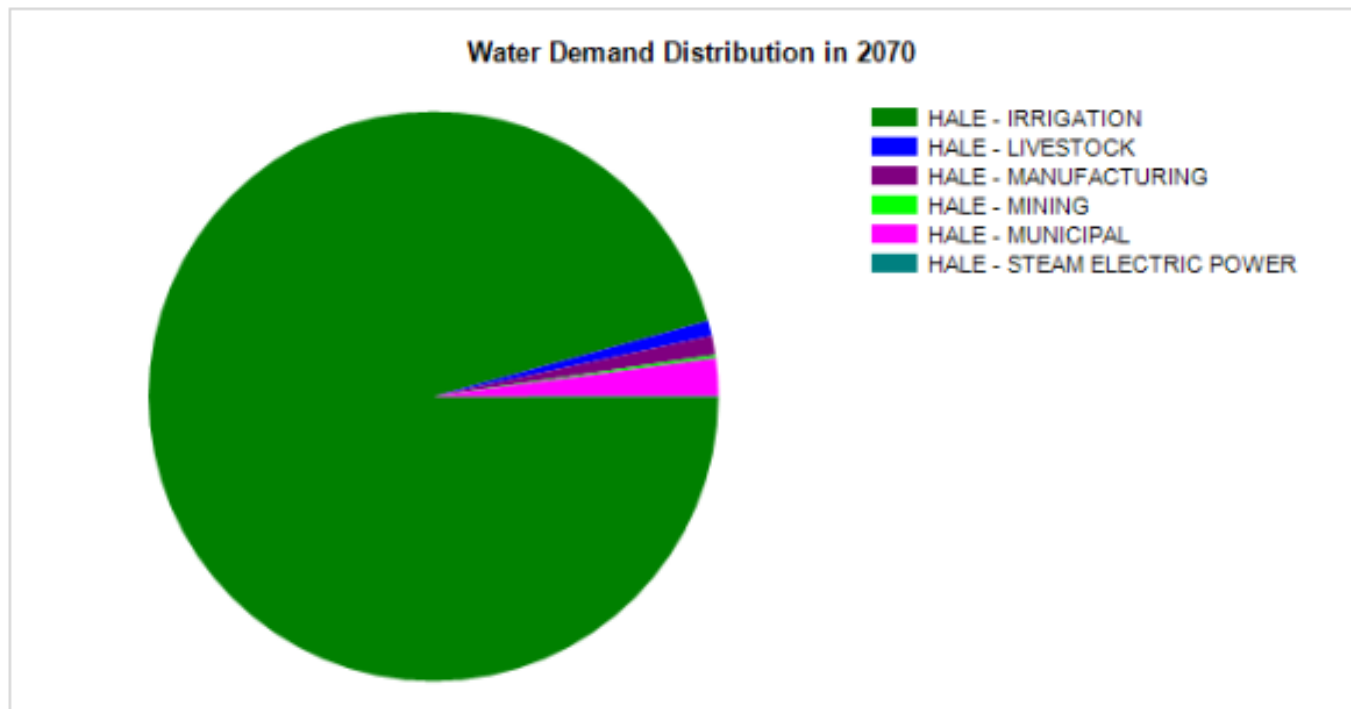


202,238 irrigated acres (31.6%)  
 --down from 243,491 (41.4%) in 2007



## HALE County

County	Demand Category	2020	2030	2040	2050	2060	2070
HALE	IRRIGATION	369,812	357,560	345,713	334,258	323,183	313,161
HALE	LIVESTOCK	2,045	2,660	2,697	2,736	2,778	2,821
HALE	MANUFACTURING	2,830	2,944	3,052	3,144	3,322	3,510
HALE	MINING	1,168	1,152	1,022	886	766	662
HALE	MUNICIPAL	6,691	6,790	6,760	6,630	6,789	6,860
HALE	STEAM ELECTRIC POWER	60	71	83	98	117	139
<b>County Total</b>		<b>382,606</b>	<b>371,177</b>	<b>359,327</b>	<b>347,752</b>	<b>336,955</b>	<b>327,153</b>



Texas Water Development Board, 2015

## Value of Water

- Range of pricing methods and values
- Location and crop dependent
- EPA, 2012 \$12-\$119/af
- \$139.80/acre for pivot variable costs + \$55/acre fixed equipment costs
- \$75-\$90/af for cotton in this region based on returns above variable costs

# Cotton Conversion

Impact Type	Output	Value Added	Labor Income	Jobs
Direct Effect	(\$16,375,500)	(\$10,330,900)	(\$6,325,800)	-86.2
Indirect Effect	(\$2,940,400)	(\$1,744,600)	(\$1,358,300)	-36.1
Induced Effect	(\$3,079,200)	(\$1,760,700)	(\$863,700)	-26.8
<b>Total Effect</b>	<b>(\$22,395,200)</b>	<b>(\$13,836,200)</b>	<b>(\$8,547,700)</b>	<b>-149.1</b>

# Cotton and Wheat Conversion

Impact Type	Output	Value Added	Labor Income	Jobs
Direct Effect	(\$11,500,300)	(\$5,162,100)	(\$3,270,800)	-55.1
Indirect Effect	(\$2,800,900)	(\$1,673,400)	(\$1,254,300)	-33.6
Induced Effect	(\$1,808,600)	(\$1,034,100)	(\$507,300)	-15.7
<b>Total Effect</b>	<b>(\$16,109,700)</b>	<b>(\$7,869,600)</b>	<b>(\$5,032,300)</b>	<b>-104.5</b>



## Cotton Conversion

- Ag Support -\$1.2 million
- Maintenance/Repair -\$398,000
- Restaurants -\$189,000
- General and Food Retail -\$175,000

# Water Royalties

<b>Impact Type</b>	<b>Output</b>	<b>Value Added</b>	<b>Labor Income</b>	<b>Jobs</b>
Induced Effect	\$1,203,100	\$689,900	\$332,000	10.3

- Restaurants \$76,000
- Food/General Retail \$60,000
- Nursing Homes \$24,000

# Cotton Conversion and Water Royalties

## --Hale County

Impact Type	Output	Value Added	Labor Income	Jobs
Direct Effect	(\$14,075,500)	(\$8,030,900)	(\$6,325,800)	-86.2
Indirect Effect	(\$2,940,400)	(\$1,744,600)	(\$1,358,300)	-36.1
Induced Effect	(\$1,876,200)	(\$1,070,800)	(\$531,700)	-16.5
<b>Total Effect</b>	<b>(\$18,892,100)</b>	<b>(\$10,846,300)</b>	<b>(\$8,215,700)</b>	<b>-138.8</b>

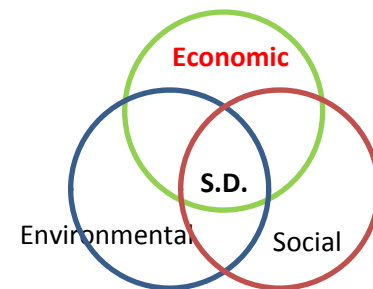
# Cotton Conversion and Water Royalties

## --Lubbock County

Impact Type	Output	Value Added	Labor Income	Jobs
Direct Effect	\$0	\$0	\$0	0
Indirect Effect	(\$1,266,100)	(\$656,000)	(\$436,600)	-9.1
Induced Effect	(\$696,800)	(\$376,800)	(\$209,500)	-5.5
Total Effect	(\$1,963,000)	(\$1,032,800)	(\$646,100)	-14.6

# Impacts

- Water royalties are essentially “mineral” payments but may significantly damage production agriculture. (Place matters.)
- Property taxes ???
- Water availability
- Fairness to local water users and landowners
- Fairness to those outside the landowner class
- Environmental concerns



# Thank you!

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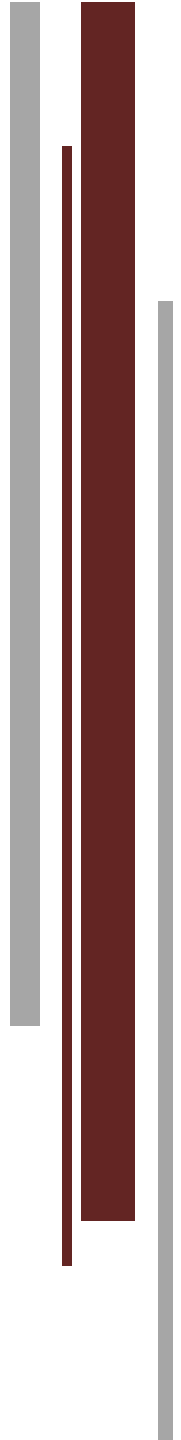
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*Water has an economic value in all its competing uses and should be recognized as an economic good. Within this principle, it is vital to recognize first the basic right of all human beings to have access to clean water and sanitation at an affordable price. Past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.*

## **Ministerial Declaration of the 2nd World Water Forum (The Hague, 2000)**

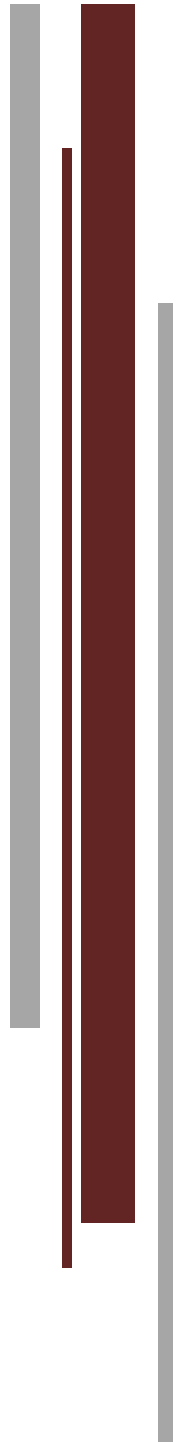
*To manage water in a way that reflects its economic, social, environmental and cultural values for all its uses, and to move towards pricing water services to reflect the cost of their provision. This approach should take account of the need for equity and the basic needs of the poor and the vulnerable.*





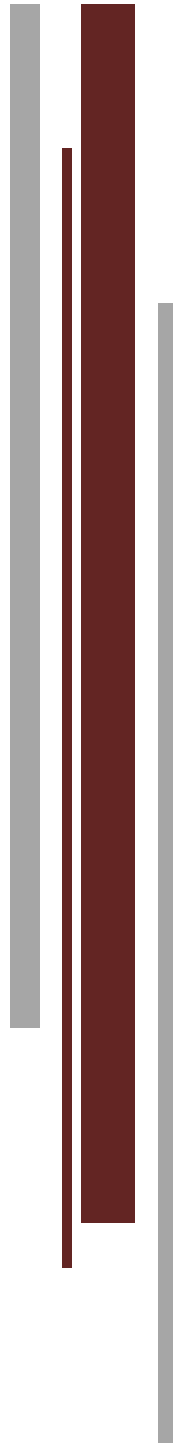
# The Economist's Role in Water Policy

- Put \$ values on water
- Apply lessons from other sectors
- Assess risk to other parties
- Calculate property tax scenarios
- Consider perspectives of multiple jurisdictions



Summary

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Summary

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