

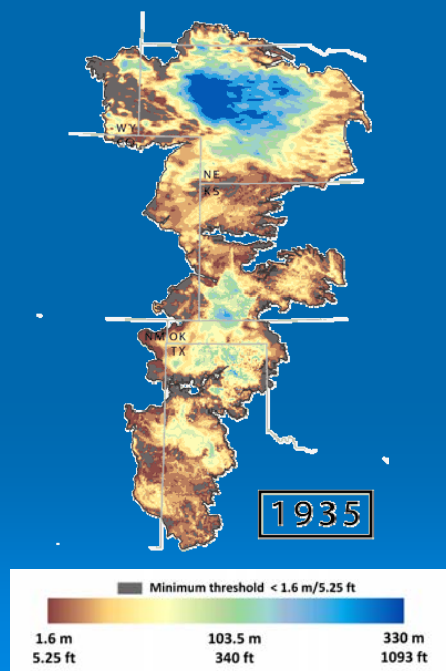
# Attitudes Toward Groundwater Use in the Ogallala Aquifer

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## The Ogallala Problem



## Ogallala Water Coordinated Agriculture Project

- The Ogallala Water Coordinated Agriculture Project is a multi-disciplinary collaborative effort funded by USDA-NIFA and is focused on developing and sharing practical, science-supported information relevant to best management practices for optimizing water use across the 8 state Ogallala region.
- <https://www.ogallalawater.org/>

## Ogallala Water Coordinated Agriculture Project - Survey

- The Survey was sent out in February 2018.
- The survey was sent to 7712 agriculture producers in 227 counties across 6 states.
- 1226 producers (15.9%) responded.

# Attitudes on the Current State of the Ogallala

How serious of a problem is groundwater decline?

State	Generally Not Serious	Generally Serious
Kansas	14.5%	74.4%
Nebraska	39.0%	42.1%
Colorado	23.1%	66.7%
Oklahoma	14.3%	79.6%
Texas	11.8%	83.5%
New Mexico	8.8%	85.3%

Question 18.

## Groundwater levels are a problem for my household/farm/family.

State	Generally Disagree	Generally Agree
Kansas	25.3%	46.9%
Nebraska	48.3%	23.1%
Colorado	18.3%	55.8%
Oklahoma	28.6%	46.9%
Texas	13.3%	73.3%
New Mexico	20.7%	62.1%

Survey question #16b. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## Groundwater is important for the profitability of my agricultural production business.

State	Generally Disagree	Generally Agree
All States	13.3%	71.1%

Survey question #20a. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## Groundwater levels are a problem for my community.

State	Generally Disagree	Generally Agree
Kansas	17.4%	60.8%
Nebraska	14.0%	28.5%
Colorado	14.0%	66.4%
Oklahoma	22.5%	55.1%
Texas	5.8%	79.3%
New Mexico	6.9%	75.9%

Survey question #16c. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## Groundwater is important for the profitability of other agricultural businesses in my area.

State	Generally Disagree	Generally Agree
All States	4.5%	84.4%

Survey question #20b. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Looking back, there was more groundwater available in the past.

State	Generally Disagree	Generally Agree
All States	18.5%	62.5%

Survey question #16d. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Looking to the future, there will be less groundwater available.

State	Generally Disagree	Generally Agree
All States	10.2%	68.5%

Survey question #16e. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

There will be less opportunity to get ahead in the future.

State	Generally Disagree	Generally Agree
All States	20.6%	45.9%

Survey question #16g. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

I feel personally responsible for groundwater depletion in my area.

State	Generally Disagree	Generally Agree
All States	64.6%	11.7%

Survey question #16h. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## Values of Groundwater

State	Current	Future	Change
Kansas	\$280	\$385	37.5%
Nebraska	\$203	\$264	30.0%
Colorado	\$377	\$530	40.6%
Oklahoma	\$83	\$133	60.2%
Texas	\$207	\$343	65.7%
New Mexico	\$261	\$372	42.5%

14 In your farming operation, what is the current value of groundwater? Q15 Think ahead 50 years. Assuming you have the same quantity of groundwater in 50 years, what do you think the value of groundwater will be for your farming operation?

## Attitudes on 'Should We Conserve' the Ogallala



In your opinion, should groundwater from the Ogallala Aquifer be conserved, or saved?

State	Yes	No
All States	92.4%	7.6%

Question 19

Groundwater should be conserved today so that my children and grandchildren can enjoy the benefits I have experienced

State	Generally Disagree	Generally Agree
All States	2.5%	85.0%

Survey question #21b. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Groundwater should be conserved today so that future generations in my area can enjoy the benefits I have experienced

State	Generally Disagree	Generally Agree
All States	2.7%	85.6%

Survey question #21a. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Groundwater should be conserved today so that jobs and business opportunities continue to be available in my community in the future.

State	Generally Disagree	Generally Agree
All States	5.9%	66.4%

Survey question #21be The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## Groundwater should be used. Groundwater does no good in the ground.

State	Generally Disagree	Generally Agree
Kansas	57.6%	13.4%
Nebraska	43.3%	27.6%
Colorado	44.0%	33.0%
Oklahoma	46.8%	19.2%
Texas	36.8%	29.1%
New Mexico	62.1%	24.1%

Survey question #16a. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## I should reduce or minimize my groundwater use.

State	Generally Disagree	Generally Agree
Kansas	29.8%	28.1%
Nebraska	44.2%	17.2%
Colorado	39.2%	21.6%
Oklahoma	48.9%	27.7%
Texas	34.2%	27.5%
New Mexico	48.3%	31.0%

Survey question #16i. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

# Attitudes on 'Why We Do Not Conserve' the Ogallala

I already limit my groundwater use as much as possible.

State	Generally Disagree	Generally Agree
All States	6.5%	72.7%

Survey question #16j. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## How certain are you that you could reduce groundwater use beyond what you are using now?

State	Probably Cannot Do	Probably Can Do
Kansas	70.0%	18.4%
Nebraska	65.5%	15.5%
Colorado	72.8%	14.6%
Oklahoma	73.2%	14.6%
Texas	78.1%	8.8%
New Mexico	79.3%	6.9%

Survey question #12. The original answers to this question were based on a 7 point scale with 1 being 'Cannot Do It At All' and 7 being 'Very Certain I Can't All'. 'Probably Cannot Do' combines categories 1, 2, & 3. 'Probably Can Do' combines categories 5, 6, & 7.

## Most people do not save more groundwater because it would decrease their production.

State	Generally Disagree	Generally Agree
All States	9.9%	75.8%

Survey question #17a. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Most people do not save more groundwater because they do not want to change their irrigation practices.

State	Generally Disagree	Generally Agree
All States	12.9%	64.7%

Survey question #17h. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Most people do not save more groundwater because it takes too much effort to conserve groundwater.

State	Generally Disagree	Generally Agree
All States	48.7%	21.1%

Survey question #17g. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Most people do not save more groundwater because it takes too much effort to conserve groundwater.

State	Generally Disagree	Generally Agree
All States	48.7%	21.1%

Survey question #17g. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Most people do not save more groundwater because if they do not pump the water, someone else will.

State	Generally Disagree	Generally Agree
All States	21.9%	48.6%

Survey question #17f. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

Most people do not save more groundwater because they are self-interested/greedy.

State	Generally Disagree	Generally Agree
All States	16.6%	52.3%

Survey question #17e. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

If you had a 25% decline in the quantity of water that you could apply to your crops –  
What would you do?

- Follow a portion of land previously irrigated

State	NO	Yes
Kansas	77.2%	22.8%
Nebraska	92.4%	7.6%
Colorado	81.0%	19.0%
Oklahoma	68.4%	31.6%
Texas	69.1%	30.9%
New Mexico	85.7%	14.3%



If you had a 25% decline in the quantity of water that you could apply to your crops – What would you do?

- Plant dryland crops on a portion of the land previously irrigated

State	NO	Yes
Kansas	56.1%	43.9%
Nebraska	76.0%	24.0%
Colorado	65.1%	34.9%
Oklahoma	68.4%	31.6%
Texas	44.4%	55.6%
New Mexico	85.7%	14.3%

If you had a 25% decline in the quantity of water that you could apply to your crops – What would you do?

- Utilize new technologies to improve efficiency

State	NO	Yes
Kansas	58.8%	41.2%
Nebraska	52.4%	47.6%
Colorado	61.9%	38.1%
Oklahoma	89.5%	10.5%
Texas	65.4%	34.6%
New Mexico	78.6%	21.4%

If you had a 25% decline in the quantity of water that you could apply to your crops – What would you do?

- Apply less water per acre of land planted in a given crop

State	NO	Yes
Kansas	62.3%	37.7%
Nebraska	56.8%	43.2%
Colorado	54.0%	46.0%
Oklahoma	89.5%	10.5%
Texas	74.1%	25.9%
New Mexico	64.3%	35.7%

If you had a 25% decline in the quantity of water that you could apply to your crops – What would you do?

- Change crop mix to crops requiring less water

State	NO	Yes
Kansas	55.3%	44.7%
Nebraska	59.5%	40.5%
Colorado	44.4%	55.6%
Oklahoma	68.4%	31.6%
Texas	56.8%	43.2%
New Mexico	78.6%	21.4%

Most people do not save more groundwater because water use regulations are not strict enough

State	Generally Disagree	Generally Agree
Kansas	18.5%	42.0%
Nebraska	31.0%	33.0%
Colorado	29.0%	38.3%
Oklahoma	10.9%	41.3%
Texas	16.0%	37.8%
New Mexico	26.7%	36.7%

Survey question #17d. The original answers to this question were based on a 5 point scale with 1 being 'Strongly Disagree' and 5 being 'Strongly Agree'. 'Generally Disagree' combines categories 1 & 2. 'Generally Agree' combines categories 4 & 5.

## Questions