

Producer Attitudes Toward Ogallala Aquifer Groundwater Conservation

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Summary of Key Findings

1. Producers overwhelmingly support groundwater conservation.

- **92% believe** that groundwater should be saved or conserved.

2. Producers' primary motivations for supporting conservation are supporting their community and future generations.

- **84% agree** that water should be conserved to secure a way of life for future generations; only 4% disagree.
- **68% agree** that water should be conserved to support local communities; only 8% disagree.
- **73% agree** that water should be conserved to prepare for future droughts; only 11% disagree.

3. Most producers believe they are already doing all they can individually to conserve groundwater.

- **72% believe** they already conserve as much as possible; only 7% believe they can conserve more.

4. Voluntary group efforts are effective at conserving groundwater and merit state support.

5. Producers involved in voluntary group efforts, such as LEMAs and WCAs in Kansas, are finding additional ways to conserve.

6. With support, voluntary group efforts have opportunity to grow.

- **84% of producers are open to the possibility** that voluntary group efforts can solve problems.
- **83% of producers believe** they might personally have something worthwhile to contribute.

7. Recommendations for voluntary group efforts include:

- Diverse stakeholder representation
- Early focus on teambuilding
- Hiring an outside facilitator
- Frequent and respectful community outreach
- Partnerships with state and local government

Research Methods

In 2016–2019, a **survey of 1,126 producers** was conducted across the Ogallala region along with **41 interviews with producers** in western Kansas. A **case study** was performed of the Wichita County Water Conservation Area (WCA), which is a voluntary group effort to conserve water in Kansas. A **literature review** was completed of earlier social science research findings.

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What do individual producers think about groundwater management and conservation?

Producers overwhelmingly support groundwater conservation.

- **92% believe** that groundwater should be saved or conserved.
- **59% believe** that groundwater decline is a “serious” or “very serious” problem.

“Should groundwater from the Ogallala be conserved or saved?”						
Overall	NE	CO	KS	OK	NM	TX
Yes 92%	Yes 83%	Yes 81%	Yes 90%	Yes 92%	Yes 94%	Yes 84%
No 8%	No 27%	No 19%	No 10%	No 8%	No 6%	No 16%
“Groundwater should be used. Groundwater does no good in the ground.”						
Overall	NE	CO	KS	OK	NM	TX
Yes 25%	Yes 27%	Yes 33%	Yes 14%	Yes 19%	Yes 24%	Yes 29%
No 47%	No 43%	No 44%	No 58%	No 47%	No 62%	No 37%

“I think about water all the time... We’re all doing our part to keep our families and traditions afloat, to maintain what we have and pass it on.”

Producer, Northwest Kansas

Aquifer depletion is seen by producers as primarily a community problem.

- A majority of producers in every state except Nebraska believe that a depleted aquifer would be a threat to their community.

“If we’re completely dry, we lose what’s the bulk of the economic driver in this community. And I think without that we’ll slowly lose the school and the hospital because we don’t have enough to support them. And so it really becomes a slow drying up of our community.”

Wichita WCA Team Member

State	Personal Problem	Community Problem	Gap in Perception Community vs. Personal
Overall	29% agree	47% agree	+18% difference
NE	23%	29%	+6%
CO	56%	67%	+11%
KS	37%	61%	+24%
OK	47%	55%	+8%
NM	61%	76%	+15%
TX	73%	80%	+9%

Producers’ primary motivations for conservation are:

1. **Securing a way of life for future generations**
 - **84% agree**; 4% disagree
2. **Supporting local communities**
 - **68% agree**; 8% disagree
3. **Preparing for droughts**
 - **73% agree**; 11% disagree

“I used to think that water was mine and I could do with it as I pleased. And I still think that water under my land is mine, but I also believe in a greater sense that it’s ours...and it would be extremely selfish for us to use that water up and not save it for future generations.”

Producer, West-Central Kansas

Most producers believe they are already doing all they can to individually conserve water:

- **72% believe** they already limit their groundwater use as much as possible.
- **Only 7%** believe they can conserve more water.

Key Finding: Survey findings suggest **limited room for additional conservation impacts from existing policies and activities oriented toward individual producers only.** However, producers involved with **voluntary group efforts** are finding more ways to conserve.

Why should voluntary group efforts to conserve groundwater be supported?

Producers involved with voluntary group efforts are finding more ways to conserve.

The Wichita County Water Conservation Area (WCA) in west-central Kansas and the Sheridan County 6 Local Enhanced Management Area (LEMA) in northwest Kansas are two examples of locally led community groups which have successfully achieved water conservation in their areas.

“The things we hear today in this public meeting say that **these guys just don’t know what they don’t know yet**. They don’t have all the data we have. Also, just the communication part of: **‘I’m not sayin’ you’re not conserving water. I’m saying that we can do better.’** And once we get past that then people begin to open their minds to, ‘Okay, this might have some merit to it.’” *Wichita WCA Team Member*

“**Since the LEMA** [Local Enhanced Management Area], **we’ve become better managers of water, more focused on return**. We’re better off in the LEMA even with lower commodity prices because we’re managing to get a higher return.” *Producer, Northwest Kansas*

“**I think more water has been conserved after the LEMA talks have started than was ever conserved before**. And I don’t think it has much to do with soil probes and some of this technology. I think it’s more of a state of mind. I shut my wells off when it rains and then I go back and probe and check and see. **And it just seems like more people are more aware of the situation.**” *Producer, Southwest Kansas*

With support, voluntary group efforts have room to grow.

- **84% of producers are open to the possibility** that voluntary group efforts can solve problems.
- **83% of producers believe** that they might personally have something worthwhile to contribute.
- **Only 7% of producers are currently involved** in organizing voluntary group efforts.

Voluntary group efforts face significant challenges.

- **Much time and effort** is required to organize group efforts.
- **There are no easy answers** to the questions these group efforts must tackle.

“Everybody on that committee that tried to start this, **we’ve put in hundreds of hours**. I mean it was incredible to see the motivation that they had, too!” *Wichita WCA Team Member*

“We’re trying to make it so that everybody takes an equal cut without being unfair to one side or the other. So it’s an impossible situation. That’s why **we’re moving ahead slowly** [with the LEMA], **because we don’t know the right answer. And I don’t think anybody can tell us what is the right answer.**” *Producer, Southwest Kansas*

Key Finding: With widespread community-minded motivations for conservation, it could be **possible to see meaningful gains from voluntary group efforts** that reduce costs and increase benefits of conservation.

What should be considered when organizing voluntary group efforts?

Recommendations for voluntary group efforts include the following:

1. **Invite diverse stakeholder representation.** Include young and old, male and female, small and large farms, feedlots, and other local stakeholders.
2. **Focus early on teambuilding.** Find common values to fall back on when conversations become heated.
3. **Hire an outside facilitator.** A skilled, neutral third party can manage conversations and keep the group on track.
4. **Engage in frequent and respectful community outreach.** If you don't tell your story to your community, someone else will.
5. **Partner with state and local government.** Thus far, every effort in Kansas has received free information and technical and legal expertise from state agencies.
6. **Contact your state university land grant extension office for more information.**

"Over the years I've come to realize that in every issue there's content and there's process. **You gotta have a credible process that engages all stakeholders who are gonna be affected by the change.**"

Wichita WCA Team Member

"My faith keeps me going. I am hopeful, no matter what. I do believe that **when you get rid of the old, and you're willing to go through the grief of letting go, it's amazing what may be resurrected out of that grave.**"

Wichita WCA Team Member

"I want to be able to say to my kids. **'Yep. We worked hard to save the water here so that we know we have a way of life that we can sustain for years to come.'**"

Wichita WCA Team Member

What else can social science research tell us about values and groundwater management?

A research editorial study (Lauer et al, 2018) reviewed 60 years of social scientific research into human values and groundwater management in the Ogallala aquifer region. Key findings include:

1. **People follow the groundwater.** Since 1960, population grew in counties with access to abundant Ogallala groundwater and declined elsewhere. Overall population in the High Plains region remained constant.
2. **Benefits for profitability vary by location.** Economic models show that groundwater conservation policies increase long-term agricultural profits in local areas with low saturated thickness. Outside of these local areas, conservation policies have a smaller impact on long-term agricultural profits.
3. **Cultural and moral values are important.** Research into successful groundwater management efforts in other locations shows that cultural and moral values are threatened by a depleted aquifer. Groundwater management goals must align with people's feelings about fairness and respect farming as a way of life in the affected region.
4. **Cultural and moral values are under-studied in the Ogallala region.** Despite some research indicating that cultural and moral values are relevant for the Ogallala aquifer, little research has been done to characterize and identify these values and their importance in comparison to other values, such as agricultural profit.

Conclusions

- Producers overwhelmingly support groundwater conservation.
- Primary motivations are supporting the local community and future generations.
- Most producers believe they are already doing all they can individually to conserve groundwater.
- Producers involved in voluntary group efforts are finding additional ways to conserve.
- With support, voluntary group efforts have opportunity to grow.

Recommendations for voluntary group efforts include diverse stakeholder representation, an early focus on teambuilding, hiring an outside facilitator, frequent and respectful community outreach, and partnering with state and local government.

Key Findings

1. **Research, policy, and management of Ogallala groundwater can be more effective if each is able to address the role of values and attitudes.**
2. **Voluntary group efforts are effective at conserving groundwater and merit support.**

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