

**DRAFT**

# **Kansas Water Plan Implementation**

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Fall Local Consult Meeting

# Key takeaways

Kansans want the state to **act now** by implementing a program that:

- Serves **ALL Kansans**
- Provides **proactive** strategies
- Is supported by **long-term funding**
- Is informed by **Local input**

# 1,000+ Kansans have provided input so far

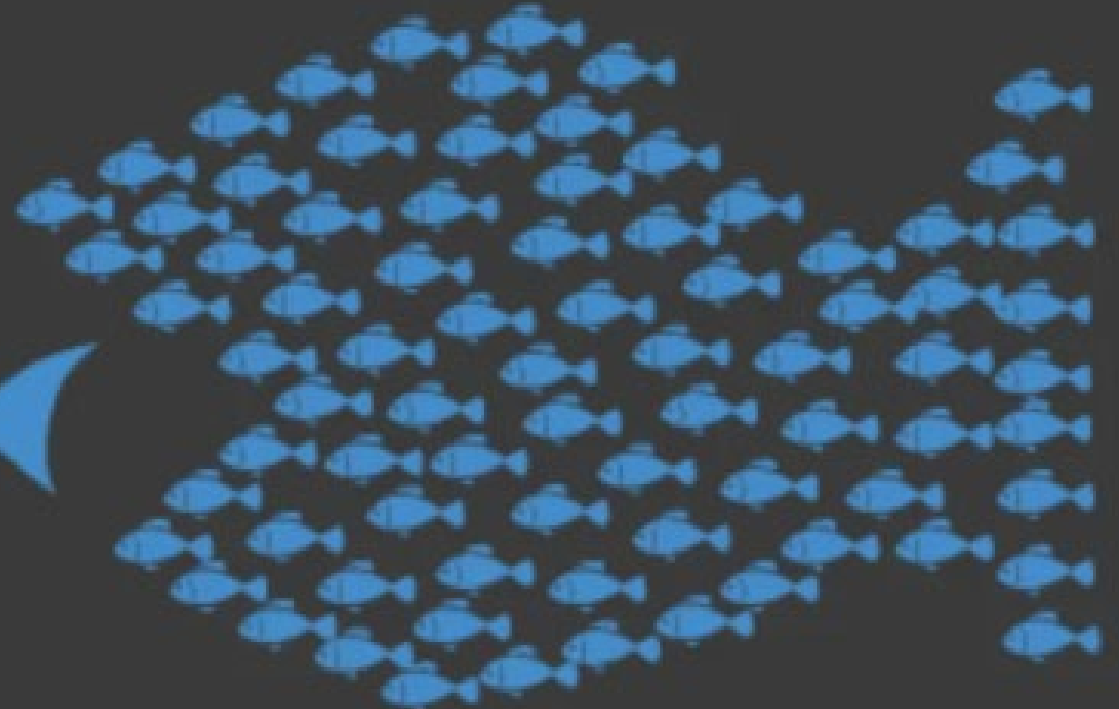


**How we  
build  
towards  
what  
Kansans  
want**

**Less of this...**



**More of this...**



# Kansas Water Plan Vision: 5 Guiding Principles



1. Conserve and Extend the High Plains **Aquifer**



2. Secure, Protect and Restore Our Kansas **Reservoirs**



3. Improve the State's **Water Quality**



4. Reduce Our Vulnerability to Extreme Events

5. Increased Awareness of Kansas Water Resources

**Embedded within these 3.**

**We are organizing around the big 3**

# Input sought in these 3 areas today

1. CRITERIA	2. REASONABILTY	3. REVENUES
<b>Why do you need us to set Shared Criteria?</b>	<b>Why do you need us to set Reasonable Standards?</b>	<b>Why do you need us to identify Revenue Sources?</b>
This allows us to build a dynamic program that can be responsive to fluctuations in revenue and changing needs over 10 years – while remaining true to stakeholder values.	This helps us understand where we have consensus on potential revenue increases and policy changes.	It's easy to say you want more things. We need your help identify potential ways to pay for it that seem fair/reasonable.

**All of these will be covered in your breakout room – no need to change rooms**

# 1<sup>st</sup> Portion of Breakout Session

## 1. CRITERIA

**Why do you need us to set Shared Criteria?**

This allows us to build a dynamic program that can be responsive to fluctuations in revenue and changing needs over 10 years – while remaining true to stakeholder values.

## REASONABILTY

**Why do you need us to set Reasonable Standards?**

This helps us understand where we have consensus on potential revenue increases and policy changes.

## REVENUES

**Why do you need us to identify Revenue Sources?**

It's easy to say you want more things. We need your help identify potential ways to pay for it that seem fair/reasonable.

# Examples of potential shared criteria

- Community Demographics
  - Cost-Effectiveness
  - Economic Impact
  - Environmental Impact
  - Geographic Balance
  - Human Health & Safety Impact
  - Leverage Federal Funds
  - Limited Assistance Elsewhere
- Local Contribution
  - Measurable Impact on Principle Progress
  - Number of Guiding Principles Impacted
  - Population Impacted
  - Public-Private Partnership
  - Regional Partnership/Impact
  - Resiliency
  - Stakeholder Input

Some/all of these can inform decision-making. We want to understand which of these/other criteria would be considered your “**deciding factor**”.

# Must be met before shared criteria comes into effect

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- ✓ Federal/state requirements (compliance)
- ✓ Funding obligations (pay bills)
- ✓ Serves Water Plan Guiding Principles



# Establishing shared criteria helps with tough decisions

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	Strategy A	Strategy B	Strategy C
Strategy Purpose	Conserve the aquifer	Restore a reservoir	Improve water quality
Cost	\$2M	\$2M	\$2M

**If you could only afford to invest in one of these strategies, what criteria would you use to help make the final decision?**

# What criteria would you want to choose between these?

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	Strategy D	Strategy E	Strategy F
Strategy Purpose	Improve water quality	Improve water quality	Improve water quality
Cost	\$1M	\$1M	\$1M

# How this will be applied

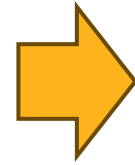
Shared criteria established through Local Consult:

Cost- Effectiveness

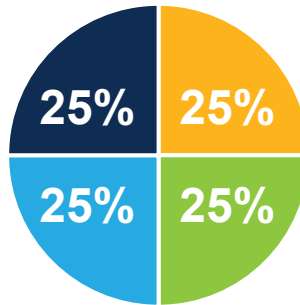
Economic Impact

Stakeholder Input

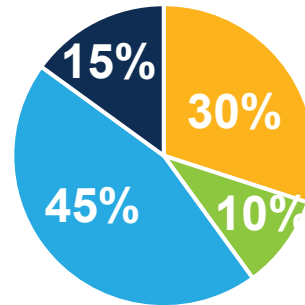
# Guiding Principles



Agencies tailor the weights of the criteria to fit specific programs/strategies



Program A



Program B



Some criteria will not be included for every program and additional criteria will be considered too



Program C



Program D

\*Criterion unique to that program

Goal: All programs/strategies use at least 1 of the shared criteria

# Breakout groups will prioritize criteria by going through a bracket



# Groups discuss each matchup; together choose which advances

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**Human Health/  
Safety Impact**

**Economic Impact**

# Groups discuss each matchup; together choose which advances

---

**Human Health/  
Safety Impact**

**Economic Impact**

**Economic Impact**

# Tips

- See your Shared Criteria handout for more context about each of the criteria
- Remember you're not eliminating any of these from being used in decision-making
- Rather, we are asking if all things are equal, which of these do you think are **most important to guide a 10-year program**



Examples of Shared Criteria Candidates for Kansas Water Plan Implementation – More work will be needed to develop these concepts (or others that may be suggested) into usable metrics.

Criterion Description: Why this may be helpful to consider in prioritizing investments.	Potential Metrics: How it could be measured/applied.
<b>Community Demographics:</b> Some communities have less resources available to address their water needs. This would give extra consideration for investments that serve disadvantaged communities, which could mean those with smaller populations or those with lower socioeconomic statuses.	<ul style="list-style-type: none"> <li>Points awarded for communities with populations below a certain number or those identified as disadvantaged communities as established by federal guidelines.</li> </ul>
<b>Cost-Effectiveness:</b> Local Consult (LC) participants wanted the State to have a sustainable long-term investment strategy and measuring how cost-effective strategies allows for making decisions that maximize the value of investments.	<ul style="list-style-type: none"> <li>Perceived or calculated benefit of the strategy divided by the total cost.</li> </ul>
<b>Economic Impact:</b> LC participants identified clean, secure, accessible water as an economic necessity. It's important to account for positive or negative economic impact an investment or policy change may have on a region or the state.	<ul style="list-style-type: none"> <li>Forecasting changes in income, GDP or employment to create an economic score.</li> </ul>
<b>Environmental Impact:</b> This would prioritize investments based on their ability to prevent or to address environmental impacts such as water, air or soil pollution and those that address ecosystem health, and wildlife/habitat needs	<ul style="list-style-type: none"> <li>Forecasting changes in ecosystem health, impaired surface/groundwater, carbon emissions or soil pollution.</li> </ul>
<b>Geographic Balance:</b> The Kansas Water Authority includes geographic balance as part of its budget recommendation guidelines. This could ensure that throughout the 10-year water plan program, water improvements/investments will occur in every region of the state.	<ul style="list-style-type: none"> <li>Establishing minimum investment levels to be received for each region throughout the 10-year program.</li> </ul>
<b>Human Health/Safety Impact:</b> LC participants encouraged greater emphasis on public health impacts. This would prioritize investments that prevent or address issues that can be harmful to human health.	<ul style="list-style-type: none"> <li>Forecasting reductions in contaminants to drinking water, or harmful algal blooms in lakes/reservoirs.</li> </ul>
<b>Leverage Federal Funds:</b> LC participants encouraged developing a funding strategy that was not too reliant on State funds only. This criterion would prioritize strategies or actions that can be paired with or unlock more federal funding to address more needs.	<ul style="list-style-type: none"> <li>Points awarded for the federal funding contribution.</li> </ul>

# Your break group will have the option to add criteria to the bracket

Write In

Economic Impact



Examples of Shared Criteria Candidates for Kansas Water Plan Implementation – More work will be needed to develop these concepts (or others that may be suggested) into usable metrics.

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- Shared Criteria handout has options that participants may want to consider for their write-in candidates.
- You can also add candidates not on the handout if your group chooses



# 2<sup>nd</sup> Portion of the Breakout Session

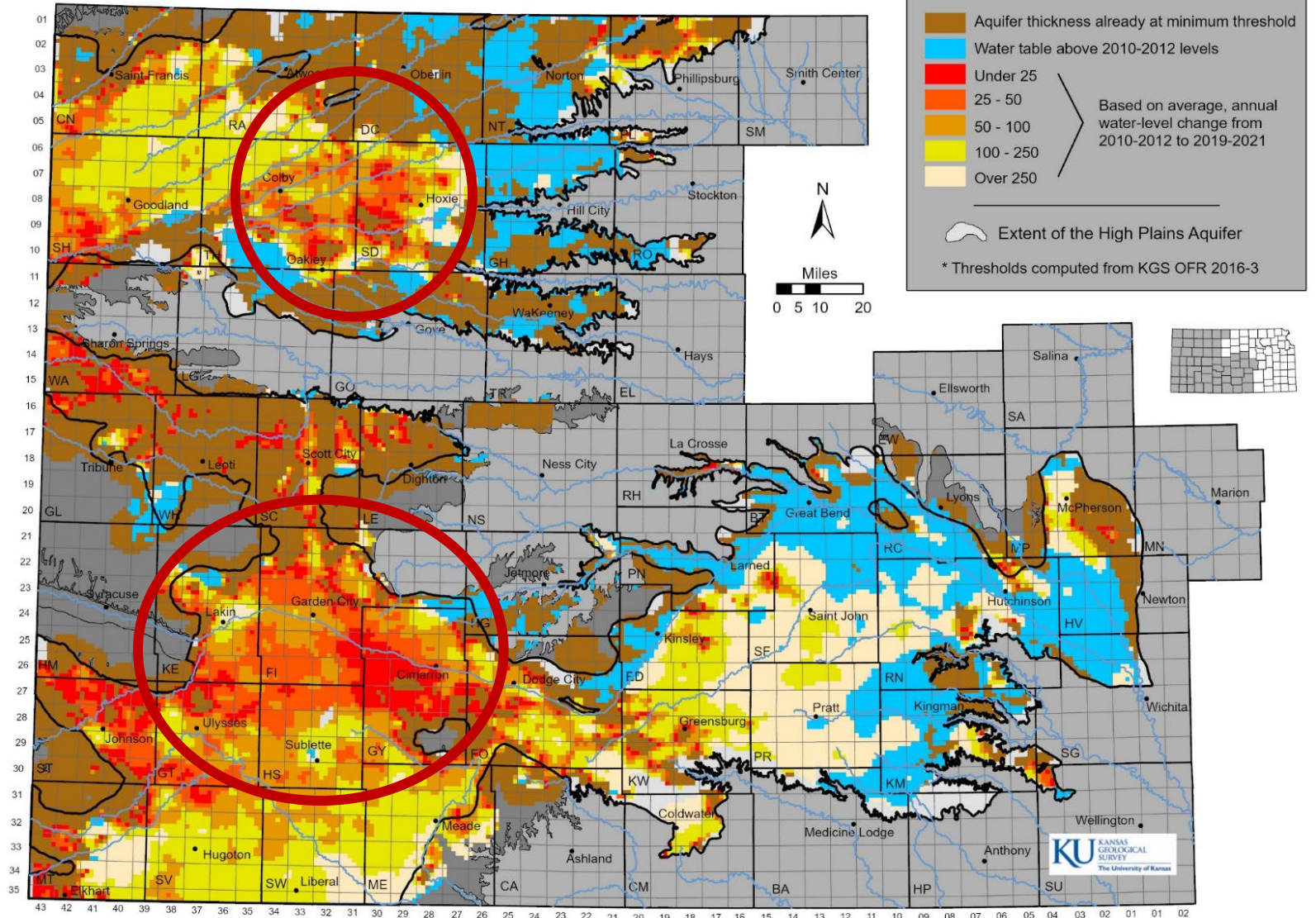
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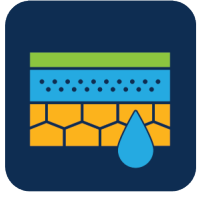


# Aquifer

## Useable life

- Estimated usable life varies across aquifer
- Without decreasing usage, **some communities could vanish within a generation or two.**





# Aquifer: How Example Investment Strategies Connect to Key Challenge

Challenge:	Invest. Strategies to Address:
<b>Need to conserve water for future generations</b>	<b>Make major water usages</b> (irrigation, feedlots, municipal systems) <b>more efficient</b> through <b>technology upgrades and reuse systems.</b>
	Grants to vulnerable communities for targeted water rights purchases to secure water sources.
	Enhanced <b>monitoring of water conditions</b> lets us track usage better and make effective decisions.

\*More strategies on the handout.



# Reservoir

66% of Kansans rely on Reservoirs for:

- Drinking water
- Water storage for droughts
- Flood protection

Newest Reservoir  
**Hillsdale**

**Lake**  
**42**  
Years

**Tuttle**  
**Creek Lake**  
**62**  
Years

Oldest Reservoir  
**Kanopolis**  
**Lake**  
**76**  
Years

-Projected sedimentation lifespan-

**1**

Year

**50**

Years

**100**

Years



# Reservoir: How Example Investment Strategies Connect to Key Challenges

Challenges:	Invest. Strategies to Address:
Need for <b>water storage</b> during droughts for <b>increased resiliency</b>	Sediment reduction <b>increasing storage capacity at reservoirs</b>
	Protecting watersheds <b>prevents sediment from reaching the reservoirs</b>
<b>Secure municipal water sources</b> through regionalization.	<b>Evaluate and implement regionalization projects</b> to connect water systems to each other or multiple sources.

\*More strategies on the handout.



## Reservoir



## Water Quality

- About a 100 communities vulnerable to similar event as Caney

# Caney Water Crisis: City seeks state of emergency declaration



The water crisis in Caney could lead to an official state of emergency declaration for the small southeastern Kansas town, its city administrator confirmed.



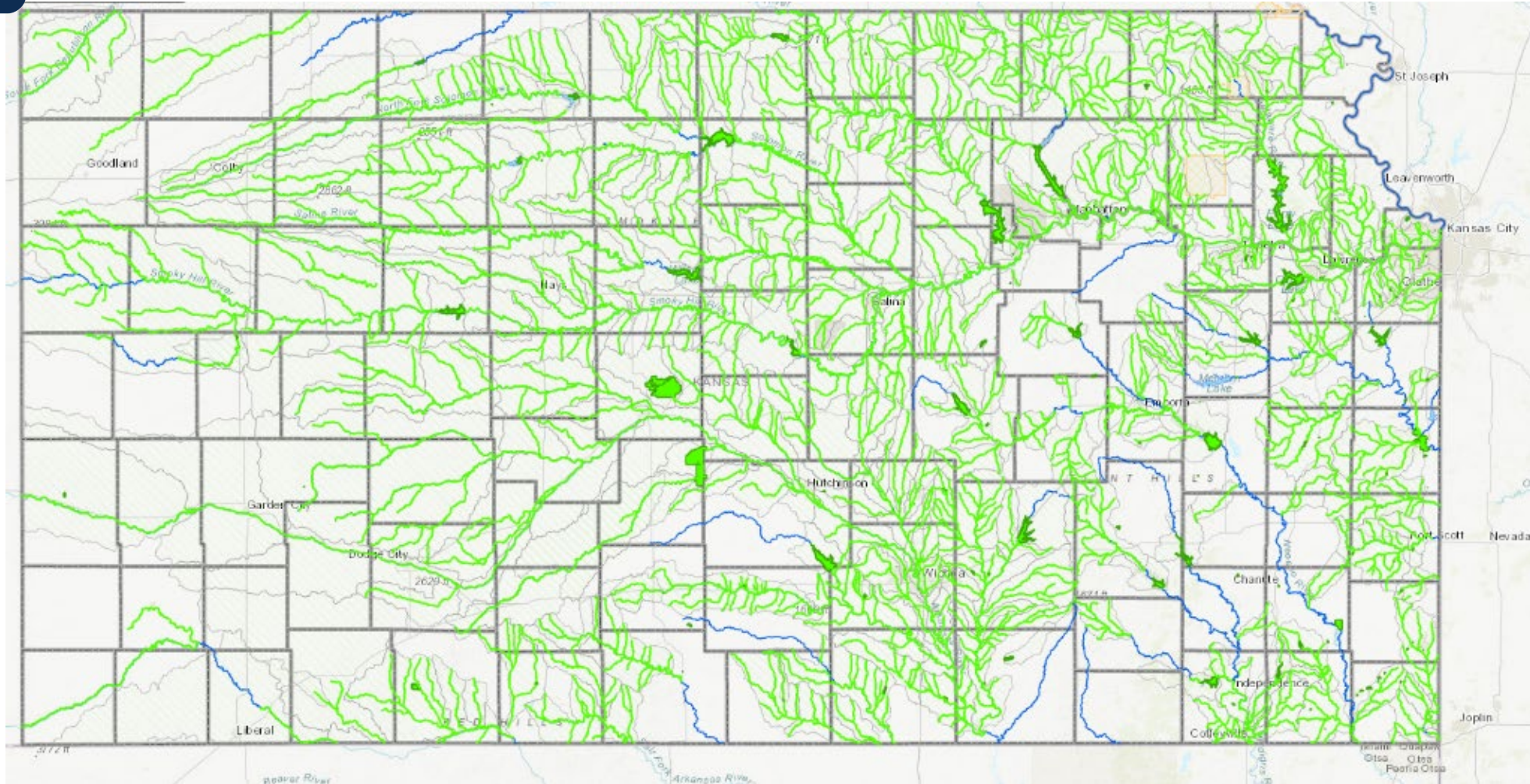
# Water Quality Challenge: Reacting to water contaminants is more costly than protecting waters from contamination

## Kansas Lakes & Reservoirs Drinking Water Conditions prior to Treatment





# Water Quality Challenge: Green are impaired streams







# Water Quality: How Example Investment Strategies Connect to Key Challenges

## Challenges:

Need to **fix leaky pipes in municipal water systems** to save water.

**Protecting our water sources from contaminants**




## Invest. Strategies to Address:

Infrastructure grants to communities to **improve water and sewer systems** to save water and meet health compliance standards

**Protecting watersheds from pollution and stormwater runoff**

**Addressing nitrates in drinking water**

# Input from round 1 informed new proposal

Average Annual Investment (includes admin.)			
			
Stand Pat	Move the Needle	Game Changer	<b>New Scenario</b>
<b>\$60M</b>	<b>\$120M</b>	<b>\$360M</b>	<b>\$140M</b>

# New Scenario breakdown

Investment Area	New Scenario
Aquifer	\$18M
Reservoir	\$56M
Water Quality	\$43M
Research & Education	\$6M
HB 2302 Technical Assistance Fund Grants (for communities)	\$5M
HB 2302 Water Projects Fund Grants (for communities)	\$12M
<b>Avg. Annual Funding Total</b>	<b>\$140M</b>

# Discussion Questions on Proposed Investment Levels

- Does these proposed investment levels and outcomes seem reasonable? Why or why not?
- Is anything missing?

See Handout for more info

Kansas Water Plan Implementation Investment Levels and Outcomes over 10 years

	Current Funding Level Outcomes Approximately \$60 Million/Year	Additional Investment Outcomes Approximately \$140 Million/Year
<b>Aquifer</b>	<b>\$13 M/year</b>	<b>\$18 M average/year</b>
Improve Irrigation System Efficiency	• Technology upgrades for <b>3,000 systems (15%)</b> and system audits for <b>1,500 systems (8%)</b> .	• Technology upgrades for <b>10,000 systems (50%)</b> and system audits for <b>15,000 systems (75%)</b> .
Secure Water Sources for Vulnerable Communities	• Purchase of <b>3,000 acre feet</b> of water rights through community block grants ( <b>approximately 20 community grants</b> ).	• Purchase of <b>8,250 acre feet</b> of water rights through community block grants ( <b>approximately 30 community grants</b> ).
Feedlot & Stockwater System Upgrades	• <b>20 feedlots/dairies (35%)</b>	
Monitoring & Modeling	<ul style="list-style-type: none"> <li>• Monitoring of <b>1,400 annual well measurements</b></li> <li>• Monitoring of <b>24 index wells</b></li> <li>• Groundwater model updates on a <b>10-year rotation</b></li> </ul>	
Management, Operations, and Partnerships	• Ongoing funding for interstate water compact issues, subbasin water resources management, state-local partnerships, water use studies, program evaluations etc.	
<b>Reservoir</b>	<b>\$8 M /year</b>	<b>\$52 M average/year</b>
Reduce Sedimentation	• Tuttle Creek Water Injection Dredging Pilot	<ul style="list-style-type: none"> <li>• <b>100% in-reservoir sediment managed at (benefits 1.7M Kansans):</b> <ul style="list-style-type: none"> <li>– Tuttle Creek Lake by 2030</li> <li>– John Redmond Reservoir and Kanopolis Lake by 2031</li> <li>– Council Grove Lake, Elk City Lake, and Perry Lake by 2032</li> </ul> </li> </ul>
Evaluate and Incentivize Regionalization	• Ongoing operation & maintenance costs for state-owned storage in US Army Corps of Engineers reservoirs.	• <b>Evaluate and secure water supply for up to 350,000 people</b> through <b>regional interconnection projects</b> for rural water districts, water assurance or access districts, and small to mid-sized cities to avoid water crises during times of drought and ensure capacity for economic development.
Watershed Protection	<ul style="list-style-type: none"> <li>• <b>Maintain targeted reservoir initiative</b> in Kanopolis, Fall River, John Redmond, Tuttle Creek, Perry, Pomona, and Hillsdale reservoirs.</li> <li>• <b>Maintain stabilization projects</b> around Perry, Tuttle Creek, John Redmond.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>220 streambanks stabilized (50% of need).</b></li> <li>• <b>Triple enrollment</b> in Best Management Practices (BMP) practices and expand to Eastern Kansas.</li> </ul>
Improve Dam Safety	• <b>120 dams (24%)</b> addressed	• <b>200 dams (40%)</b> addressed

# Top-level outcomes for each Guiding Principle



## Aquifer \$18M

- Provide irrigation system audits and **technology upgrades** for 50-75% of irrigation systems in Kansas, **saving 15% or more in water use** while maintaining profitability.
- Provide **grants for at least 30 communities to purchase water rights** to secure water sources in areas with 50 years or less of useable life.



## Reservoirs \$56M

- Establish **100% in-reservoir sediment managed** in Tuttle Creek by 2030, John Redmond and Kanopolis by 2031, and Council Grove, Elk City, and Perry by 2032.
- **Evaluate and secure water supply for up to 350,000 people through regional interconnection projects** for rural water districts, water assurance or access districts, and small to mid-sized cities to avoid water crises during times of drought and ensure capacity for economic development.



## Water Quality \$43M

- Ensure that **99% of all drinking water systems in Kansas** meet federal standards.
- Ensure that **95% of all wastewater discharges** meet federal standards.
- **35% of all orphan contaminated sites** will be closed and remediated.

# Discussion questions related to driving outcomes

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## Is it reasonable for the state to...

- Make an outcome be that all Kansas communities will have 50 years or more of water supply for their communities/economic base in 10 years.
- Require a community seeking grants or loans, to evaluate whether it's possible to connect its **water system to another water system in the region**; increasing the resiliency of its water supply. If it is possible, part of the project should include connecting those water systems.
- Require a community or region seeking grants or loans, undergo some **long-term water supply planning**, including evaluating its assets and projecting its water supply needs as it relates to future economic development.
- Require cost share programs that provide **funding for irrigation systems** can only receive funding if their farms are **in an area which has adopted a LEMA, WCA or IGUCA**. This means some conservation measures are in place – otherwise there is no guarantee that improved technology will result in less water usage.

**Example Only**

**Buffer Strip**



**The buffer strip is doing exactly what it needs to do but because the landowner on the right side of the stream didn't install buffer strips - too much sedimentation is still entering the stream to justify taxpayers paying for the buffer strip.**



**Example Only**



**If the stream was surrounded, then we would get maximum benefit. Today, we're going to ask you to weigh in on some strategies for how we can get maximum value from taxpayer investment.**





# Is it reasonable for the state to...

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## Discussion Question

- Require all programs be evaluated every 2 years based on their ability to make measurable progress on the state water plan goals. The results will be shared with stakeholders during the local consult process. Programs underperforming will be required to be revamped or discontinued based on stakeholder input and agency expertise/judgement.

## Buffer Strip program could be improved by:

- Establishing a threshold that at least X% of the landowners must opt-in for the state to provide funding
- Geographically focus funding only near certain high-risk reservoirs

If this approach were implemented, Kansans would weigh in on if they would like to see the program implement one of these requirements or discontinue it.

# 3rd Portion of the Breakout Session

CRITERIA	REASONABILTY	3. REVENUES
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# We need your help to identify ways to fill this gap

\$60M Avg Annual Funding

**\$80M Funding Gap**

- User Fees are the only “dedicated source” of funding for the Water Plan currently.
- Doubling fees would only raise about \$13M
- May need to consider new sources of revenue or financing

**\$140M Avg.  
Annual Total  
Proposed  
New  
Investment  
Level**

# Discussion about which you like/dislike and why

## • Existing Sources:

- User Fees
- Economic Development Initiatives Fund Transfer
- State General Fund Transfer

## • Potential New Sources:

- Bonding
- Ag Irrigation Use Fee
- General Tax Revenue
  - Dedicated Sales Tax
  - Dedicated Severance Tax
- Other sources?

**There are pros and cons for all of these revenue sources.  
See your revenue handout for more info about each one.**

# Example of how revenue input could be applied

	Current Funding	Example Funding
General Fund Transfer	\$41M	
Fees	\$13M	\$26M (double fees)
Eco. Dev. Initiatives Fund Transfer	\$2M	
Carry over funding	\$4M	
Ag Irrigation Use Fee		\$10M
Sales Tax		\$20M
Bonding		\$30M
Severance Tax Increase		\$4M
<b>Program Total</b>	<b>\$60M</b>	<b>\$140M</b>

This is an example not a recommendation.

# Tip: See Handouts to help with discussion

## Regional Water Profile



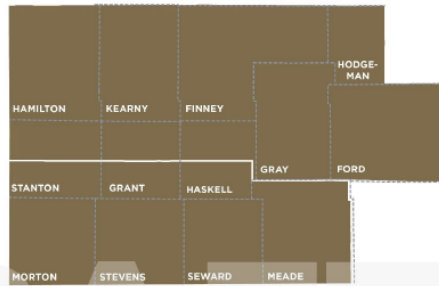
### KANSAS WATER PLAN IMPLEMENTATION Water Sources and Uses: Southwest Regional Profile

Region Population: 131,060  
Statewide Population: 2.9M

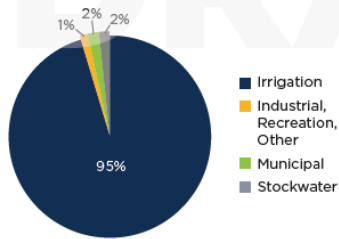
Region Annual GDP: \$8.5 Billion  
Statewide GDP: \$175 Billion

Major Economic Drivers:

- Beef Industry (ranches, feedlots, packing plants)
- Energy (oil & natural gas)
- Grain Production
- Manufacturing



Southwest Kansas Water Uses by Category

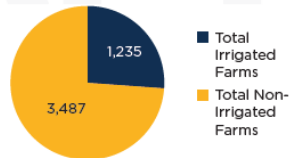


Irrigation Statewide in Kansas  
≈ 3 million acres irrigated  
≈ 14% of all cropland  
≈ 33% of crop production

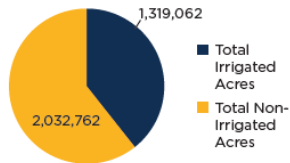
Source: K-State Research & Extension

More Info About the Region's Top Use of Water

Total Farms in Southwest Kansas



Total Cropland Acreage in Southwest Kansas



### INPUT NEEDED TODAY: Local Consult Round 2 Scenario and How to Pay for It

Kansans across the state emphasized the importance of water quality and availability during the first round of Water Local Consult meetings held in June 2024. They also weighed in on three investment scenario options that showed how state funding could be used to address aquifer, water quality and reservoir problems. Using that feedback and recognizing we cannot afford the combined 10-year, \$3.7B "Game Changer" scenarios that were presented, the Kansas Water Office along with the Kansas Department of Health and Environment and the Kansas Department of Agriculture have crafted a new 10-year \$1.4B investment scenario to address our most pressing water problems. Today, your input is specifically sought on the following issues which significantly impact Kansans' future:

- **All existing programs currently funded at \$60M per year remain in place**. However, evaluation of many of those programs is called for so that outcomes can be measured against investments and programs can be modified where needed. Questions about the approach to modifying programs will be presented during the breakout discussions. (\*Note, this is the "Stand Pat" scenario presented in June 2024).
- **Based on the first round of local consult input, an additional \$80M per year investment (on average) scenario is presented in the Investment Levels and Outcomes handout.** This represents \$140M average annual investment in addressing our most pressing aquifer, quality and reservoir problems (\$60M current + \$80M additional scenario) for a total of \$1.4B over 10 years.
- **How to pay for any additional investments** will also be discussed in the breakout sessions, and these discussions will inform future budget requests.
- Discussions in the breakout sessions will focus on **criteria that could be used to prioritize investments, regardless of investment levels.** A list of those criteria is included in a separate handout.
- **Today is not just about more money.** It's about data, education and transparency on water issues within communities (usable life, water quality, etc) and what part the State has in helping to address those issues so Kansans see results at a good pace. It's about measuring and sharing results and making changes so we've solved problems by the end of the 10-year program. It's about getting good value for taxpayer dollars, not just building programs. These aren't easy things to do or talk about, but they're important to tackle to make real progress in providing Kansans with access to clean, secure water supplies for generations to come.

#### TODAY'S DISCUSSION

In the breakout groups, you will be asked your thoughts on current and potential sources of funding and what mix of funding makes sense given the water problems we face in Kansas. This is not an exhaustive list of potential revenue sources and does NOT represent a recommendation of the state. We want to hear your feedback!

A thought starter example is provided that could generate \$140M per year, which is an increase of \$80M per year on average. This example revenue chart demonstrates a few of the options that could make up the increased investment.

In your breakout groups, you will discuss general support for the different types of revenue sources and whether they should be considered in creating a funding plan for future water investments.

#### EXAMPLE FOR TODAY'S DISCUSSION

\$80 Million	Current Funding	Example Funding
General Fund Transfer	\$41M	
Fees	\$13M	\$26M (double fees)
Economic Development Initiatives Fund Transfer	\$2M	
Carry Over Funding	\$4M	
Agriculture Irrigation Water Use Fee		\$10M
Sales Tax (.025% Increase)		\$20M
Bonding		\$20M
Severance Tax Increase		\$4M
<b>Program Total</b>	<b>\$60M</b>	<b>\$140M</b>

# How to find your breakout group

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- Instructions to be inserted here

- Please join us back here after your breakout session wraps:
- Update on **planning/ research/education efforts related to community water supply challenges**
- Bracketology Medal rounds

# Main Session Wrap Up



# Your round 1 feedback and our response

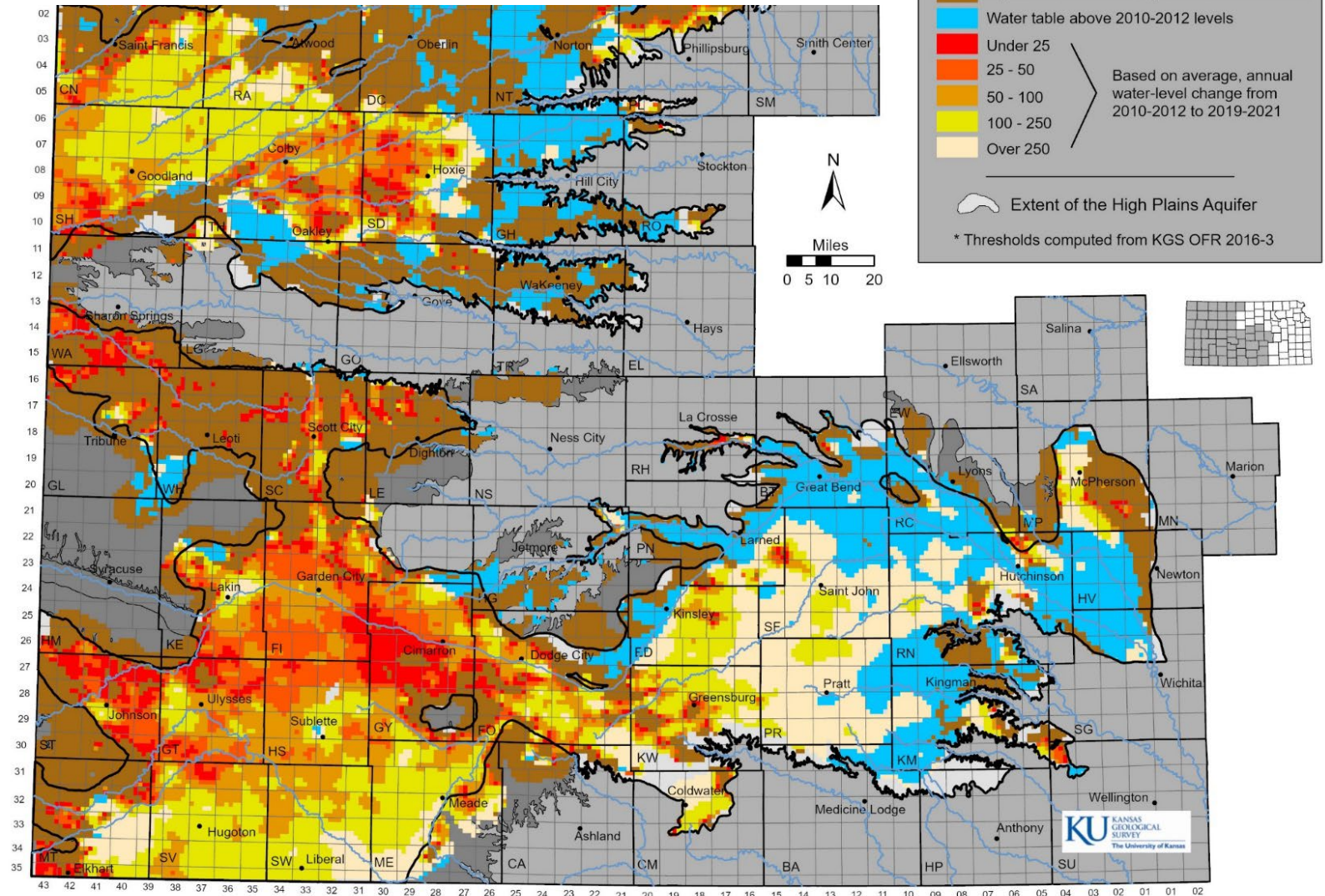
You asked for...	How we're addressing it
<p><b>Streamline</b> state agency water programs to make them easier to use and more efficient</p> <p>Create a <b>universal website</b> to find out about ALL water programs, grant opportunities.</p>	<p>Work underway to make these happen.</p>
<p><b>Increase awareness about the water supply challenges communities are facing</b> and actions needed to address them.</p>	<p><b>Previewing a new approach with you today</b> – info could eventual be posted on the universal water website.</p>

# Useable life



## Aquifer

- Estimated usable life varies across aquifer
- Counties reliant on the aquifer account for **\$57 billion in economic output** annually for Kansas



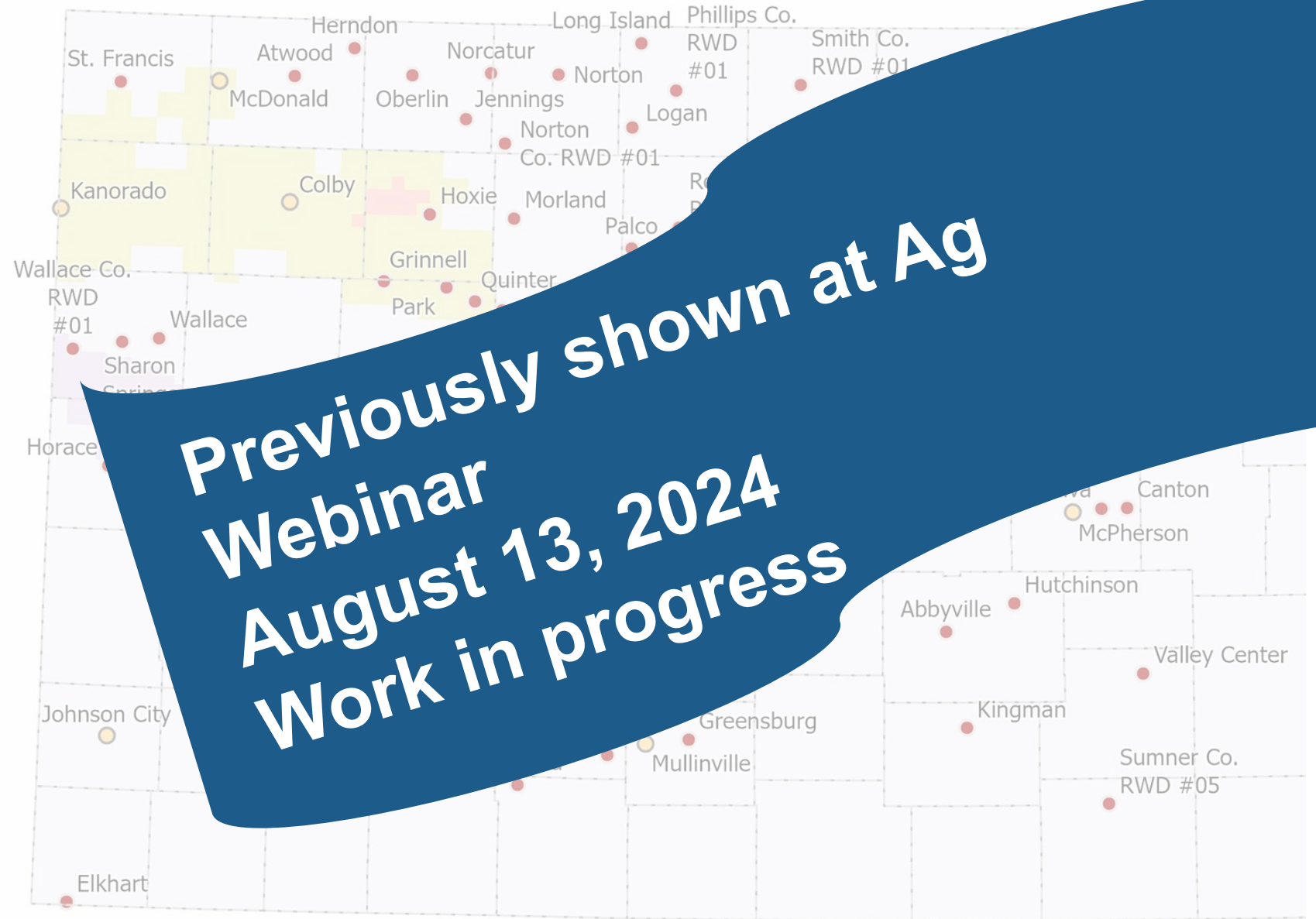
# ACTION NEEDED

GMD4

Sheridan 6

GMD1 Four County

Wichita County



# Improve decision making and investments

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- KDOT economic impact analysis as a new factor
- Evaluate rural and urban separately / task force
- Accept/encourage other data
- Jobs and then time delay

Map to help discussions and problem solving;  
improve decision-making and investments

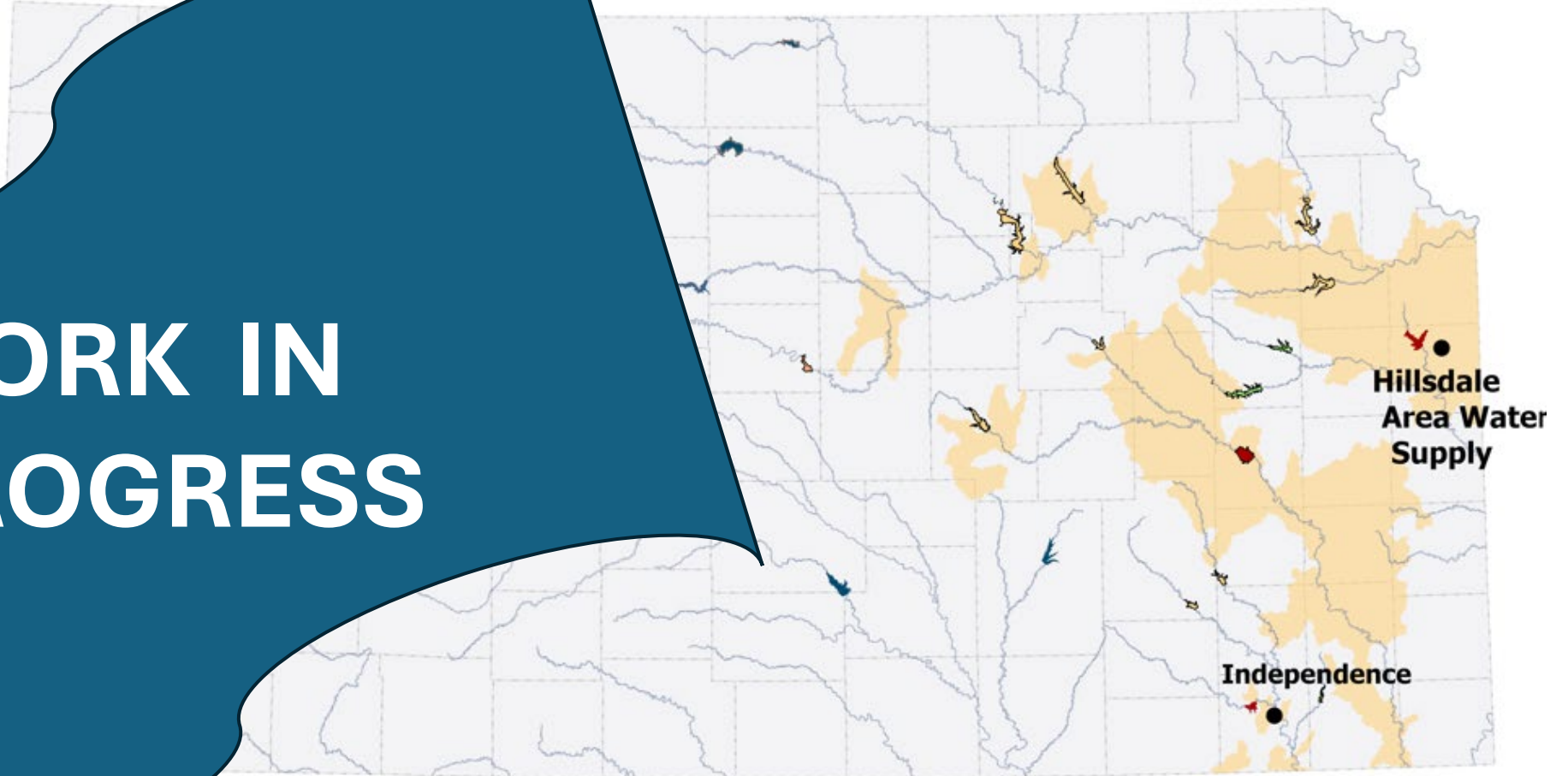
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**WORK IN  
PROGRESS**

# Map to help discussions and problem solving; improve decision-making and investments

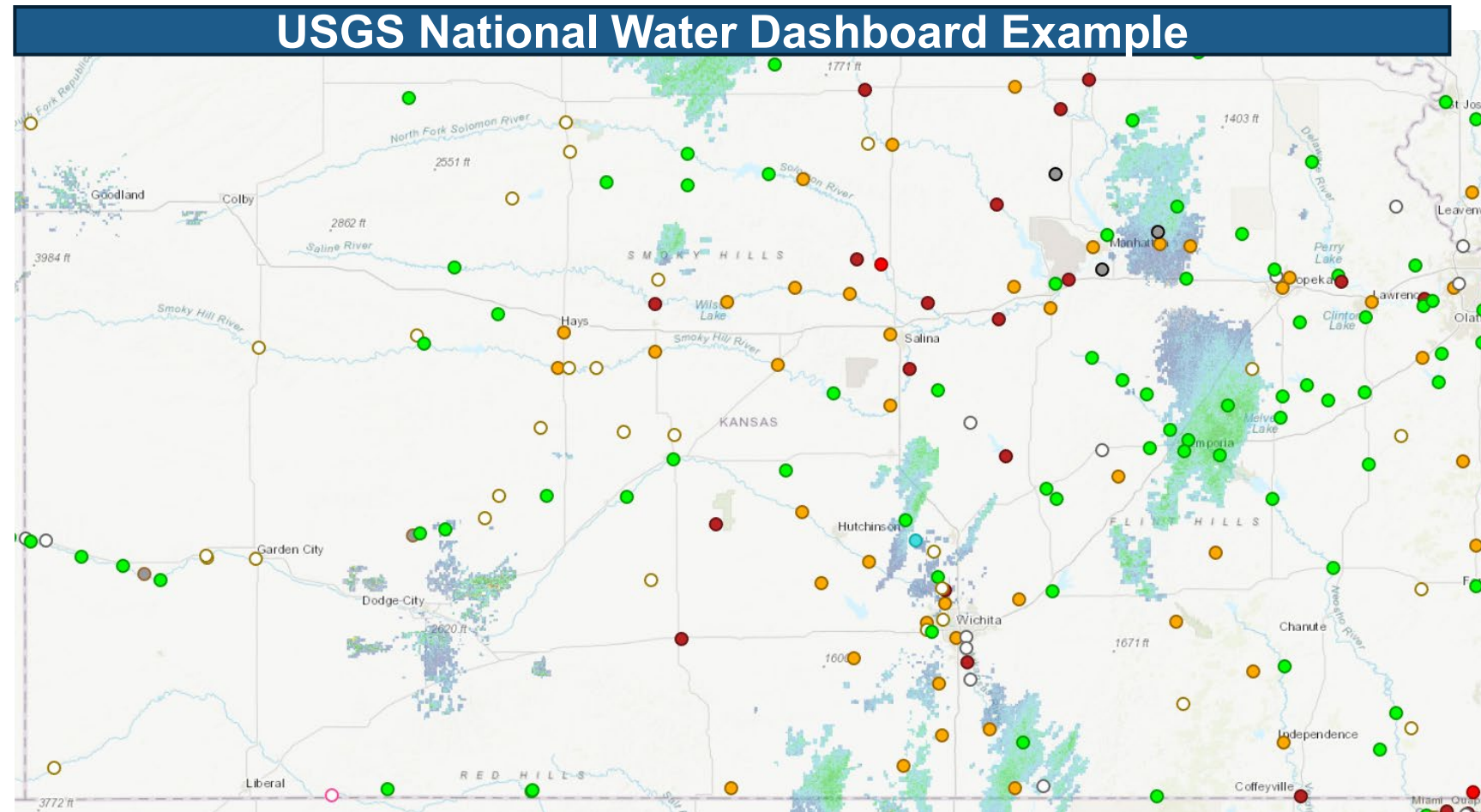
**WORK IN  
PROGRESS**



Reservoir  
Supplied Areas  
Drought  
Vulnerable  
Within 50 Years

# Eventually a Kansas dashboard could be developed

- Tool for cities, counties and state
- Provides information on water usage
- Connects to resources to address challenges





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## Shared Criterial Bracketology Medal Rounds



# How Final Four seeding was determined

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- **3 points** for each **breakout group** that identified it as a **top priority**
- **2 points** for **each group** that identified it as the **runner up**
- **1 point** for each group that had it in its **final four**
- **Points totaled across all groups and criteria seeding according to scores**

# Region Final Four

Scan QR  
Code to  
VOTE

Code Here

Facilitators  
speak about  
your group's  
top choice

# Guiding Principles

A

Economic Impact

B

Stakeholder Input

C

Cost-Effectiveness

D

# Championship



# Guiding Principles



# Guiding Principles

F

Stakeholder Input



Cost-Effectiveness

G

# Gold Medal Winner for Your Region

---

# Guiding Principles

Economic Impact

Stakeholder Input

Cost-Effectiveness

# Guiding Principles

Cost-Effectiveness

**Cost-Effectiveness**

**Gold Medal Winner**

# **Reasonability & Revenue Range of Comments**

## Next Steps

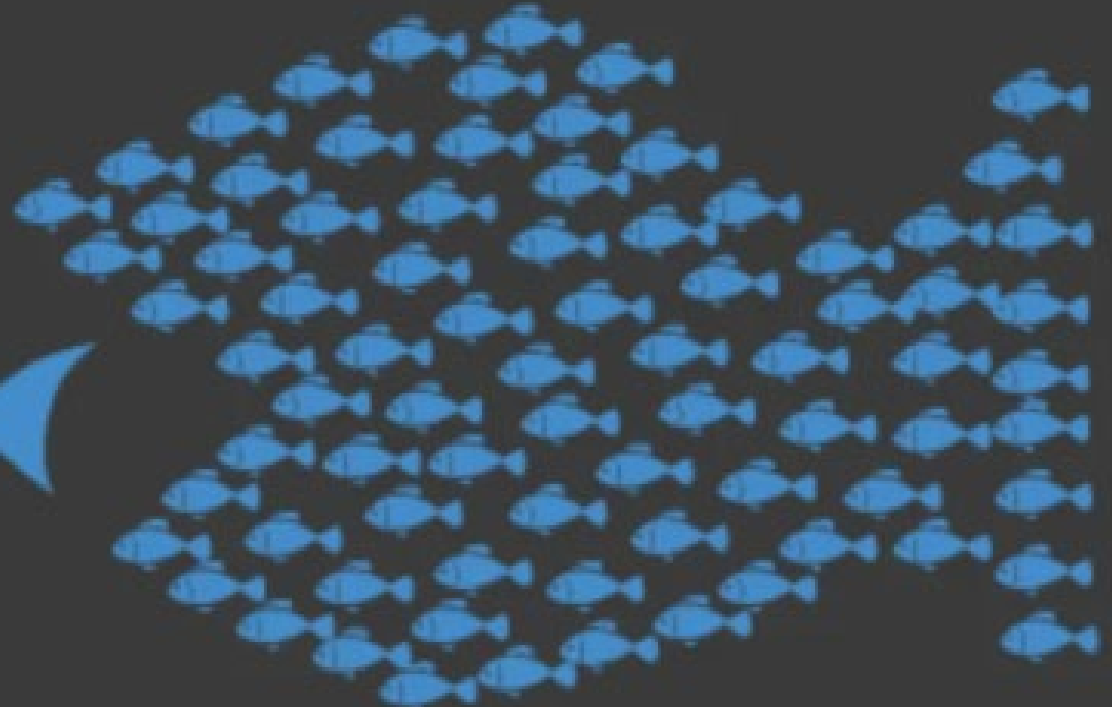
Summary of all the meetings will be distributed in October

Visit [kwo.ks.gov](http://kwo.ks.gov) (Strategic Implementation Planning Tab) to engaged in our process

Less of this...



More of this...



# How this region's priorities compares to others

	NW	NC	NE	SW	SC	SE	W	KC
Cost Effective	B	S	G	G	TBD			
Economic Impact	S			S				
Stakeholder Input		G		B				
# Guiding Principles	G	B	S	B				
Population Impacted			B					
Replicability	S							
Local Match	B		B					
Leverage Previous Invest.		B						

**Gold = 1<sup>st</sup>**

**Silver = 2<sup>nd</sup>**

**Bronze = 3<sup>rd</sup> (Tie)**

## OTHER POTENTIAL SOURCES OF FUNDING/FINANCING THAT COULD BE CONSIDERED



Bonding has been used by the State of Kansas to finance investments in long-term infrastructure projects like highways, college buildings and even reservoir actions, such as the dredging of John Redmond Reservoir. Just like a personal budget, you would not want to take out a mortgage to go to the grocery store. You would only want to use a mortgage for an asset that will have a long life.

For the purposes of infrastructure investment, bonds are like a mortgage. Bond funds should only be used for infrastructure that will last beyond the repayment schedule. Many of the needed state water investments would qualify as long-term infrastructure investments that future generations will benefit from.

Funding major water infrastructure projects through annual budget appropriations as we currently do limits the State's ability to be proactive and systematically address large water infrastructure needs. By using bond proceeds to fund water related infrastructure projects, the State could move to a cashflow model similar to how transportation projects are funded.

Expensive and ongoing projects like sediment reduction in reservoirs, dam reconstruction, interconnection projects, and replacing water/sewer systems for communities could be paid for through this cashflow model. This approach would be strengthened by explicitly outlining the selection criteria for these projects so that development and construction pipelines (again, similar to transportation) could be established and the regular cadence of work could become an expectation of stakeholders.

Bond payments would need to be accounted for through available revenues and appropriations. Using a similar approach as the KDOT cash-flow approach, the State can issue bonds for the water program to finance the design and construction of infrastructure projects.

Kansas could consider charging an agriculture irrigation water use fee to support additional technology upgrades for irrigation systems, technical assistance, conservation incentives, and grants to communities running out of water to purchase water rights and/or connect to regional water systems where available.

- It should be noted that while irrigators do not pay use fees to the State, those irrigators located in Groundwater Management Districts (GMDs) pay water use fees at the local level ranging from \$14 per acre-foot to up to \$2.00 per-acre foot depending on where they are located. Those fees are set by, collected by and invested in local projects and programs by the GMDs. There is no proposal or discussion about changing the GMD's fee assessment role. Additionally, irrigators do pay other existing statewide fees like the pesticide registration fee and the fertilizer registration fee. For example, a \$1.00 per acre-foot state fee on irrigated water use would raise roughly \$3.8M given that roughly 3.8M acre-feet was diverted for irrigation use in 2022 (a \$2 per acre-foot state fee would generate \$7.6M, etc.).
- There are many kinds of fee structures that could be considered for a potential irrigation use fee, and fees could be lowered or capped. Another approach could be to assess a \$200 fee on each water right; with about 34,000 active rights, that would generate approximately \$6.8M a year.
- Utah and other states use irrigation use fees, similar to Kansas fees for industrial users and stock water users, on programs to improve efficiency for those users to preserve the resource for future generations. Utah charges a flat fee based on the acre-foot use. For example, if a Utah water right uses between 4,000-4,500 acre-feet, they would pay a \$550 fee.



The severance tax is assessed for all oil or gas that is severed from the earth or water in Kansas. The rate has not been increased since its enactment in 1983. The statutory tax rate is 8%, but with various exemptions, the current effective rate of 4.33%. In 2023, the severance tax raised approximately \$58M per year. Remediation or other types of water quality projects could be funded with this sort of tax.



## INPUT NEEDED TODAY: Local Consult Round 2 Scenario and How to Pay for It

Kansans across the state emphasized the importance of water quality and availability during the first round of Water Local Consult meetings held in June 2024. They also weighed in on three investment scenario options that showed how state funding could be used to address aquifer, water quality and reservoir problems. Using that feedback and recognizing we cannot afford the combined 10-year, \$3.7B "Game Changer" scenarios that were presented, the Kansas Water Office along with the Kansas Department of Health and Environment and the Kansas Department of Agriculture have crafted a new 10-year \$1.4B investment scenario to address our most pressing water problems. Today, your input is specifically sought on the following issues which significantly impact Kansans' future:

- **All existing programs currently funded at \$60M per year remain in place\***. However, evaluation of many of those programs is called for so that outcomes can be measured against investments and programs can be modified where needed. Questions about the approach to modifying programs will be presented during the breakout discussions. (\*Note, this is the "Stand Pat" scenario presented in June 2024).
- **Based on the first round of local consult input, an additional \$80M per year investment (on average) scenario is presented in the Investment Levels and Outcomes handout.** This represents \$140M average annual investment in addressing our most pressing aquifer, quality and reservoir problems (\$60M current + \$80M additional scenario) for a total of \$1.4B over 10 years.
- **How to pay for any additional investments** will also be discussed in the breakout sessions, and these discussions will inform future budget requests.
- Discussions in the breakout sessions will focus on **criteria that could be used to prioritize investments, regardless of investment levels.** A list of those criteria is included in a separate handout.
- **Today is not just about more money.** It's about data, education and transparency on water issues within communities (usable life, water quality, etc) and what part the State has in helping to address those issues so Kansans see results at a good pace. It's about measuring and sharing results and making changes so we've solved problems by the end of the 10-year program. It's about getting good value for taxpayer dollars, not just building programs. These aren't easy things to do or talk about, but they're important to tackle to make real progress in providing Kansans with access to clean, secure water supplies for generations to come.

### TODAY'S DISCUSSION

In the breakout groups, you will be asked your thoughts on current and potential sources of funding and what mix of funding makes sense given the water problems we face in Kansas. This is not an exhaustive list of potential revenue sources and does NOT represent a recommendation of the state. We want to hear your feedback!

A thought starter example is provided that could generate \$140M per year, which is an increase of \$80M per year on average. This example revenue chart demonstrates a few of the options that could make up the increased investment.

In your breakout groups, you will discuss general support for the different types of revenue sources and whether they should be considered in creating a funding plan for future water investments.

### EXAMPLE FOR TODAY'S DISCUSSION

\$80 Million	Current Funding	Example Funding
General Fund Transfer	\$41M	
Fees	\$13M	\$26M (double fees)
Economic Development Initiatives Fund Transfer	\$2M	
Carry Over Funding	\$4M	
User Fees		\$10M
Sales Tax		\$20M
Bonding		\$20M
Severance Tax Increase		\$4M
<b>Program Total</b>	<b>\$60M</b>	<b>\$140M</b>



## HOW TO PAY FOR IT

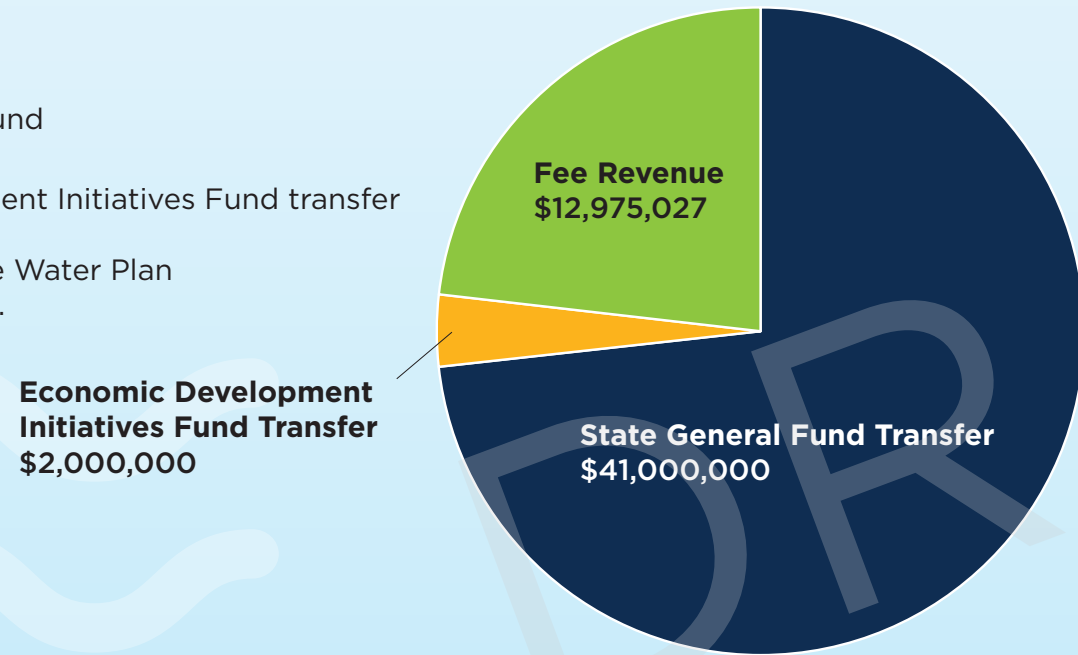
### Current funding sources

Investments in the water programs being discussed today currently come from three primary sources:

- 1 User Fees
- 2 The State General Fund
- 3 Economic Development Initiatives Fund transfer

All flow through the State Water Plan Fund and are shown here.

**State Water Plan Fund (SWPF) Revenue**



### 1 User Fees: Approx \$13M per year

Fees are assessed on most Kansas water users and industries that use our water resources.

#### State Water Usage Fees = \$7.39M/year

	Recreational	Stockwater	Industrial	Municipal Water	Irrigation
<b>102 billion gallons of water used annually</b>	1%	1%	3%	11%	83%
<b>Fee amount</b>	No fee	\$.03 / 1,000 gallons =	\$.03 / 1,000 gallons =	\$.03 / 1,000 gallons for bulk water purchase =	No fee
<b>Total paid FY25</b>		<b>\$440,000</b>	<b>\$850,000</b>	<b>\$3.2M</b>	
<b>Fee amount</b>				\$.03 / 1,000 gallons for drinking water =	
<b>Total paid FY25</b>				<b>\$2.9M</b>	

- The rates for stockwater, industrial and municipal drinking water water fees were initially established in 1989.
  - Anecdotally, these current fees cost the average family between 18 and 41 cents on their monthly water bills.

#### Water Impact Fees = \$5.6M

	Pesticide registration fee	Fertilizer registration fee	Pollution fines & penalties	Sand Royalties
<b>Fee amount</b>	\$100/per product registration	\$1.40/per ton of product	Varies	\$.15/per ton of material
<b>Total paid FY25</b>	<b>\$1.5M</b>	<b>\$4M</b>	<b>\$70,000</b>	<b>\$15,000</b>

### 2 State General Fund: Approx \$41M per year

The State General Fund (SGF) is primarily made up of individual and corporate income taxes along with sales tax. The SGF is the largest unrestricted source of funding for the overall state budget and funds many competing priorities. Each year these priorities are weighed by the Governor and the State Legislature to balance needs with limited resources. Examples of statewide needs that are funded through the SGF are shown in the chart below:

	SGF Expenditure
State Water Plan Fund	\$41M
General Kansas State Government	\$582M
Human Services (health, children)	\$2.95B
K-12 Education	\$4.98B
Higher Education	\$1.34B

Although SGF has been the source for a significant portion of water investments over the last few years, water will continue to compete annually with the many other state priorities shown to the left, like education, health, public safety, and more. This competition for SGF funding will only continue to grow in the coming years as the recently passed tax cuts are implemented and one-time federal funds from pandemic-era programs, the Inflation Reduction Act, and Bipartisan Infrastructure Law are phased out. And because SGF is unrestricted, allocations are not guaranteed and can be decreased in any given year, especially in the event of economic downturns.

Because of inherent vulnerability of current water funding to these factors, it's important to discuss raising revenues and dedicating those increases to water projects and programs. Having a dedicated funding source enables the State to make consistent, significant progress toward our water goals over a 10-year period. For example, a case could be made for increasing the current sales tax rate and dedicating a portion of that revenue to water, because every Kansan and every Kansas business needs clean water. A .1% increase in the state sales tax, from 6.5% to 6.6%, would raise enough money to increase state water funding by an additional approximate \$80M while keeping other state investments constant. Without an increase in tax revenue, the state would need to "carve off" approximately 2% of its existing state revenue (and associated spending on other priorities) to achieve the same approximate \$80M increase to water investments.

### 3 Economic Development Initiatives Fund Transfer: Up to \$2M

By current statute (KSA 79-4804), \$2 million is to be transferred annually from the State's Economic Development Initiatives Fund (EDIF) to the State Water Plan Fund, though the Legislature may choose to transfer a lower amount in any given year. EDIF was created to support and enhance the existing economic foundation of the State, foster growth through the expansion of current businesses, and establish or attract new businesses.

# Kansas Water Plan Implementation Investment Levels and Outcomes over 10 years

DRAFT

	Current Funding Level Outcomes Approximately \$60 Million/Year	Additional Investment Outcomes Approximately \$140 Million/Year
Aquifer	\$13M/year	\$18M average/year
Improve Irrigation System Efficiency	<ul style="list-style-type: none"> <li>Technology upgrades for <b>3,000 systems (15%)</b> and system audits for <b>1,500 systems (8%)</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Technology upgrades for <b>10,000 systems (50%)</b> and system audits for <b>15,000 systems (75%)</b>.</li> </ul>
Secure Water Sources for Vulnerable Communities	<ul style="list-style-type: none"> <li>Purchase of <b>3,000 acre feet</b> of water rights through community block grants (<b>approximately 20 community grants</b>).</li> </ul>	<ul style="list-style-type: none"> <li>Purchase of <b>8,250 acre feet</b> of water rights through community block grants (<b>approximately 30 community grants</b>).</li> </ul>
Feedlot & Stockwater System Upgrades	<ul style="list-style-type: none"> <li><b>20 feedlots/dairies (35%)</b></li> </ul>	
Monitoring & Modeling	<ul style="list-style-type: none"> <li>Monitoring of <b>1,400 annual well measurements</b></li> <li>Monitoring of <b>24 index wells</b></li> <li>Groundwater model updates on a <b>10-year rotation</b></li> </ul>	
Aquifer Management, Operations, and Partnerships	<ul style="list-style-type: none"> <li>Ongoing funding for interstate water compact issues, subbasin water resources management, state-local partnerships, water use studies, program evaluations etc.</li> </ul>	
Reservoir	\$11M/year	\$56M average/year
Reduce Sedimentation Rate	<ul style="list-style-type: none"> <li>Tuttle Creek Water Injection Dredging Pilot</li> </ul>	<ul style="list-style-type: none"> <li><b>100% in-reservoir sediment managed at (benefits 1.7M Kansans):</b> <ul style="list-style-type: none"> <li>Tuttle Creek Lake by 2030</li> <li>John Redmond Reservoir and Kanopolis Lake by 2031</li> <li>Council Grove Lake, Elk City Lake, and Perry Lake by 2032</li> </ul> </li> </ul>
Evaluate and Incentivize Regionalization	<ul style="list-style-type: none"> <li>Ongoing operation &amp; maintenance costs for state-owned storage in US Army Corps of Engineers reservoirs.</li> </ul>	<ul style="list-style-type: none"> <li><b>Evaluate and secure water supply for up to 350,000 people</b> through <b>regional interconnection projects</b> for rural water districts, water assurance or access districts, and small to mid-sized cities to avoid water crises during times of drought and ensure capacity for economic development.</li> </ul>
Watershed Protection	<ul style="list-style-type: none"> <li><b>Maintain targeted reservoir initiative</b> in Kanopolis, Fall River, John Redmond, Tuttle Creek, Perry, Pomona, and Hillsdale reservoirs.</li> <li><b>Maintain stabilization projects</b> around Perry, Tuttle Creek, John Redmond.</li> </ul>	<ul style="list-style-type: none"> <li><b>220 streambanks stabilized (50% of need).</b></li> <li><b>Triple enrollment</b> in Best Management Practices (BMP) practices and expand to Eastern Kansas.</li> </ul>
Improve Dam Safety	<ul style="list-style-type: none"> <li><b>120 dams (24%)</b> addressed</li> </ul>	<ul style="list-style-type: none"> <li><b>200 dams (40%)</b> addressed</li> </ul>

# DRAFT

Water Quality	\$15M /year	\$43M average/year
Groundwater Quality Protection	<ul style="list-style-type: none"> <li>• <b>500 recharge well systems</b></li> <li>• Annual groundwater quality sampling</li> <li>• Build publicly accessible groundwater quality database</li> <li>• Conduct regional groundwater quality studies</li> </ul>	<ul style="list-style-type: none"> <li>• Remediate <b>50 contamination sites</b> (35% orphan sites closed)</li> </ul>
Improve Drinking Water and Sewer Infrastructure	<ul style="list-style-type: none"> <li>• Funding for <b>200 communities</b> through infrastructure grants</li> </ul>	
		<ul style="list-style-type: none"> <li>• Create a State revolving loan program to fund water infrastructure improvements in communities with populations under 10,000.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>91% drinking water systems</b> will meet federal standards</li> <li>• <b>84% wastewater systems</b> will meet permit limits</li> </ul>	<ul style="list-style-type: none"> <li>• <b>99% drinking water systems</b> will meet federal standards</li> <li>• <b>95% wastewater systems</b> will meet permit limits</li> </ul>
	<ul style="list-style-type: none"> <li>• Perform <b>3,000 PFAS contamination tests</b> annually</li> </ul>	
	<ul style="list-style-type: none"> <li>• Provide funding for <b>650 repairs/replacements</b> to residential septic systems and/or private drinking water well testing.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform <b>50,000 home water quality tests</b> for drinking water wells.</li> <li>• Provide funding for <b>2,800 repairs/replacements</b> to residential septic systems and/or private drinking water well testing.</li> </ul>
	<ul style="list-style-type: none"> <li>• Provide funding to address nitrates in <b>40 communities</b>.</li> </ul>	
Lake, River, Stream. And Wetland Protection	<ul style="list-style-type: none"> <li>• Return <b>150 water segments</b> to “clean for all uses” status</li> <li>• Provide conservation grants for <b>1.5 million acres</b> annually                             <ul style="list-style-type: none"> <li>• Perform water sampling at <b>14 protected watersheds</b></li> </ul> </li> <li>• Perform harmful algal bloom monitoring and treatment to protect <b>3 smaller lakes/reservoirs</b> annually</li> </ul>	
Research and Education	\$4M /year	\$6M average/year
Research, Outreach, Education, Studies, and Program Evaluations	<ul style="list-style-type: none"> <li>• Studies on emergent and ongoing water issues.</li> <li>• Research initiatives to assess water quantity and quality concerns</li> <li>• Outreach and education on Kansas Water Plan for communities</li> </ul>	<ul style="list-style-type: none"> <li>• Additional research evaluation of existing programs/ initiatives to assess effectiveness and impact</li> <li>• Additional engagement with K-12 education system to expand learning on water issues in schools</li> <li>• Adoption of new data and monitoring technologies to improve understanding of ground and surface water sources</li> </ul>
HB2302 Technical Assistance Fund Grants	\$5M /year	\$5M average/year
HB 2302 Water Projects Fund Grants	\$12M /year	\$12M average/year



**Examples of Shared Criteria Candidates for Kansas Water Plan Implementation – More work will be needed to develop these concepts (or others that may be suggested) into usable metrics.**

<b>Criterion Description: Why this may be helpful to consider in prioritizing investments.</b>	<b>Potential Metrics: How it could be measured/applied.</b>
<p><b>Community Demographics:</b> Some communities have less resources available to address their water needs. This would give extra consideration for investments that serve disadvantage communities, which could mean those with smaller populations or those with lower socioeconomic statuses.</p>	<ul style="list-style-type: none"> <li>• Points awarded for communities with populations below a certain number or those identified as disadvantaged communities as established by federal guidelines.</li> </ul>
<p><b>Cost-Effectiveness:</b> Local Consult (LC) participants wanted the State to have a sustainable long-term investment strategy and measuring how cost-effective strategies allows for making decisions that maximize the value of investments.</p>	<ul style="list-style-type: none"> <li>• Perceived or calculated benefit of the strategy divided by the total cost.</li> </ul>
<p><b>Economic Impact:</b> LC participants identified clean, secure, accessible water as an economic necessity. It's important to account for positive or negative economic impact an investment or policy change may have on a region or the state.</p>	<ul style="list-style-type: none"> <li>• Forecasting changes in income, GDP or employment to create an economic score.</li> </ul>
<p><b>Environmental Impact:</b> This would prioritize investments based on their ability to prevent or to address environmental impacts such as water, air or soil pollution and those that address ecosystem health, and wildlife/habitat needs</p>	<ul style="list-style-type: none"> <li>• Forecasting changes in ecosystem health, impaired surface/groundwater, carbon emissions or soil pollution.</li> </ul>
<p><b>Geographic Balance:</b> The Kansas Water Authority includes geographic balance as part of its budget recommendation guidelines. This could ensure that throughout the 10-year water plan program, water improvements/investments will occur in every region of the state.</p>	<ul style="list-style-type: none"> <li>• Establishing minimum investment levels to be received for each region throughout the 10-year program.</li> </ul>
<p><b>Human Health/Safety Impact:</b> LC participants encouraged greater emphasis on public health impacts. This would prioritize investments that prevent or address issues that can be harmful to human health.</p>	<ul style="list-style-type: none"> <li>• Forecasting reductions in contaminants to drinking water, or harmful algal blooms in lakes/reservoirs.</li> </ul>
<p><b>Leverage Federal Funds:</b> LC participants encouraged developing a funding strategy that was not too reliant on State funds only. This criterion would prioritize strategies or actions that can be paired with or unlock more federal funding to address more needs.</p>	<ul style="list-style-type: none"> <li>• Points awarded for the federal funding contribution.</li> </ul>

<b>Criterion Description: Why this may be helpful to consider in prioritizing investments.</b>	<b>Potential Metrics: How it could be measured/applied.</b>
<p><b>Limited Assistance Elsewhere:</b> One of the advantages of a statewide program is it can account for service gaps at the local or federal level. This would consider addressing water needs or investing in areas which have no dedicated local or federal resources.</p>	<ul style="list-style-type: none"> <li>• Points awarded for investments where no existing resources are available.</li> </ul>
<p><b>Local Contribution:</b> Braiding local, state and federal funding can increase the amount of water needs addressed. Additionally, there are some issues that can be improved through changes in behavior. This would prioritize investment areas where local governments are able to contribute funds, resources or make meaningful changes to conserve water or improve water quality.</p>	<ul style="list-style-type: none"> <li>• Points applied for local funding contribution.</li> </ul>
<p><b>Measurable Impact on Principle Progress:</b> This would prioritize investments based on the amount of measurable progress can be achieved on a principle(s).</p>	<ul style="list-style-type: none"> <li>• Metrics tailored to each principle to determine whether it's a high, medium or low impact. More points given to "high impact" projects.</li> </ul>
<p><b>Number of Guiding Principles Impacted:</b> LC participants asked for more "stackable programs," which include investments that serve more than one guiding principle. This would emphasize getting more bang for our buck by prioritizing investments that serve more than one principle.</p>	<ul style="list-style-type: none"> <li>• Points based on the number of how many guiding principles the strategy significantly impacts.</li> </ul>
<p><b>Population Impacted:</b> This would prioritize investments based on the number of Kansans who would benefit from them.</p>	<ul style="list-style-type: none"> <li>• Points based on size of population served.</li> </ul>
<p><b>Public-Private-Partnership:</b> This would prioritize investments or strategies that leverage private sector or nonprofit contributions (financial/resources/actions.)</p>	<ul style="list-style-type: none"> <li>• Points applied for the private sector or nonprofit contribution.</li> </ul>
<p><b>Regional Partnership/Impact:</b> This would incentivize communities and conservation districts working together to address more needs efficiently by prioritizing investments that strengthen regional resiliency by connecting water sources, addressing needs in multiple communities or providing more resources through partnerships.</p>	<ul style="list-style-type: none"> <li>• Points based on the number of communities or conservation districts served by an investment.</li> </ul>
<p><b>Resiliency:</b> This would prioritize investments that will help the state withstand droughts, floods, or other threats and secure its water sources for future generations of Kansans.</p>	<ul style="list-style-type: none"> <li>• Points based on the expected life cycle of the investment.</li> </ul>
<p><b>Stakeholder Input:</b> LC participants emphasized that local input needed to play a role in decision-making. It's helpful to have the people most impacted by decision have a role in shaping it. This would prioritize investments based on stakeholder support.</p>	<ul style="list-style-type: none"> <li>• Points for strategies identified as regional priorities at Local Consult, or Regional Advisory Committee (RAC input).</li> </ul>



# KANSAS WATER PLAN IMPLEMENTATION

## Water Sources and Uses: Northwest Regional Profile

**Region Population:** 43,292

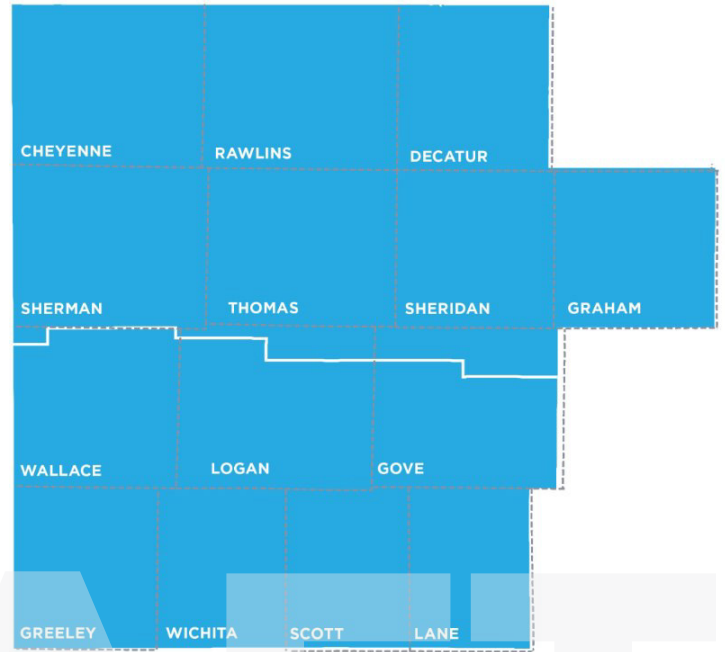
**Statewide Population:** 2.9M

**Region Annual GDP:** \$2.8 Billion

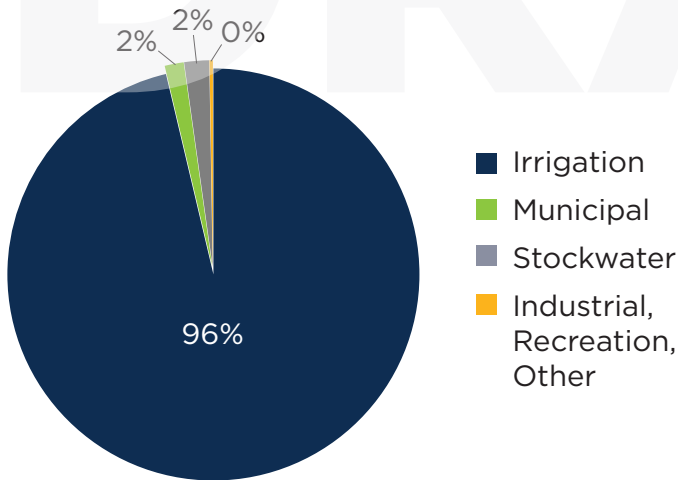
**Statewide GDP:** \$175 Billion

### Major Economic Drivers:

- Beef Industry (ranches, feedlots, dairies)
- Energy (oil & natural gas)
- Grain Production
- Manufacturing

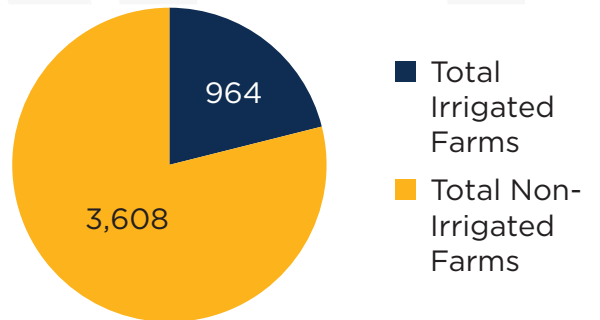


### Northwest Kansas Water Uses by Category

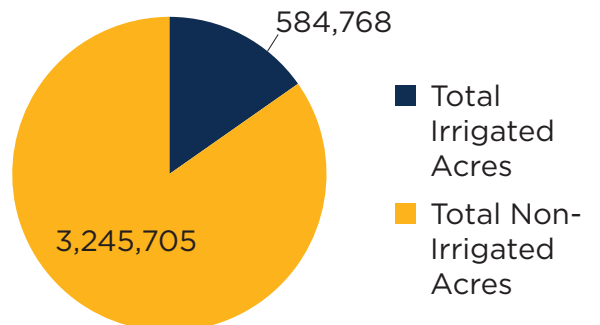


### More Info About the Region's Top Use of Water

#### Total Farms in Northwest Kansas



#### Total Cropland Acreage in Northwest Kansas



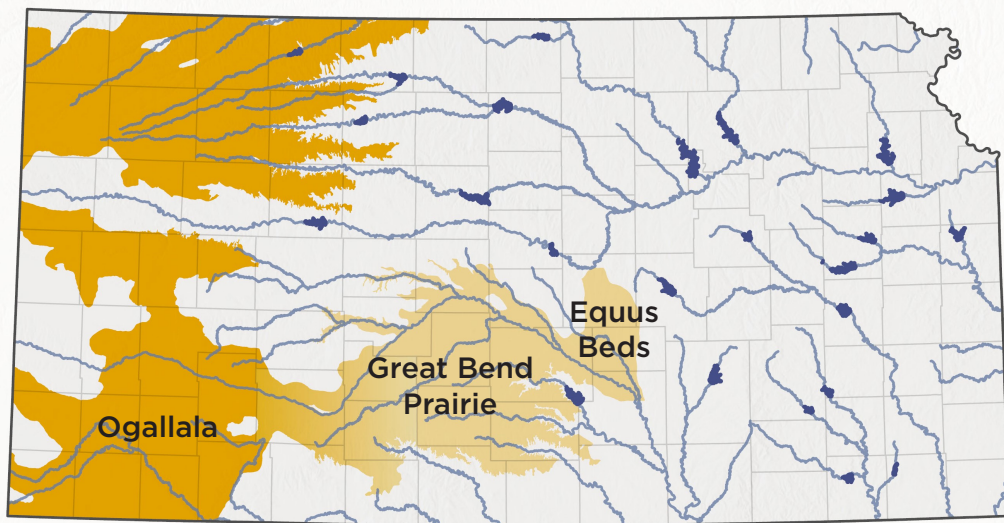
### Irrigation Statewide in Kansas

≈ 3 million acres irrigated  
 ≈ 14% of all cropland  
 ≈ 33% of crop production

Source: K-State Research & Extension

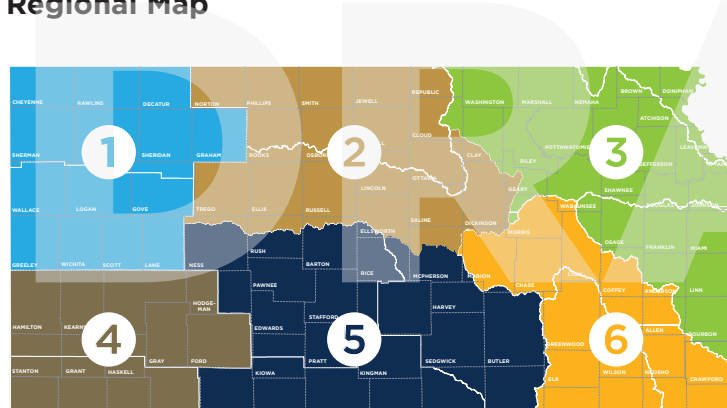


## Water Sources for Our State



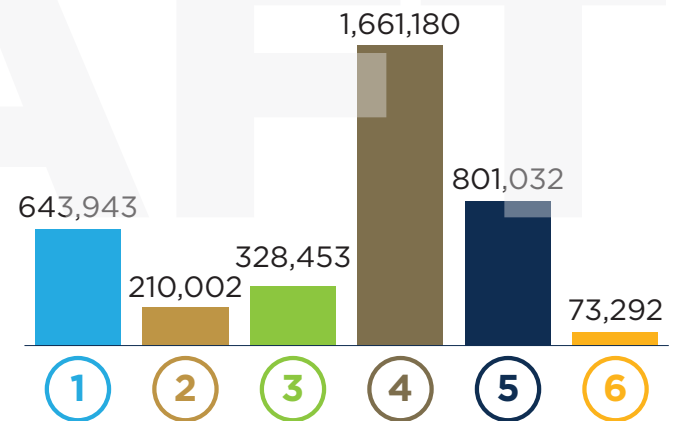
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## Regional Map



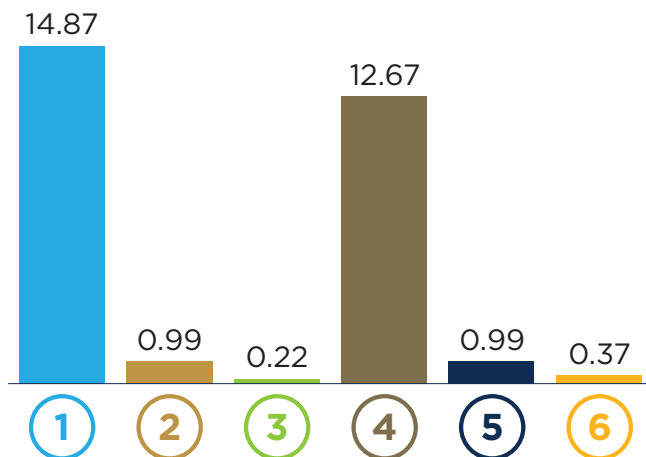
## Total Water Use by Region

Average Annual Water Use in Acre-Feet

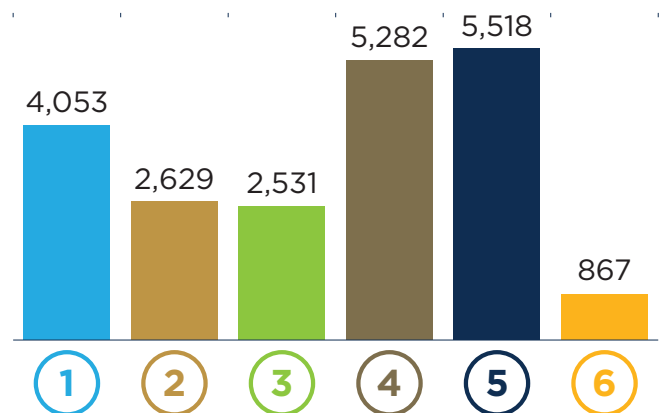


## Regional Average Annual Water Use Per Capita

Average Annual Water Use in Acre-Feet Per Capita



## Number of Water Rights Owners By Region



Water rights are required for any purpose other than domestic use, such as for municipal, irrigation farming, or industrial use.



# KANSAS WATER PLAN IMPLEMENTATION

## Water Sources and Uses: Southwest Regional Profile

**Region Population:** 131,060

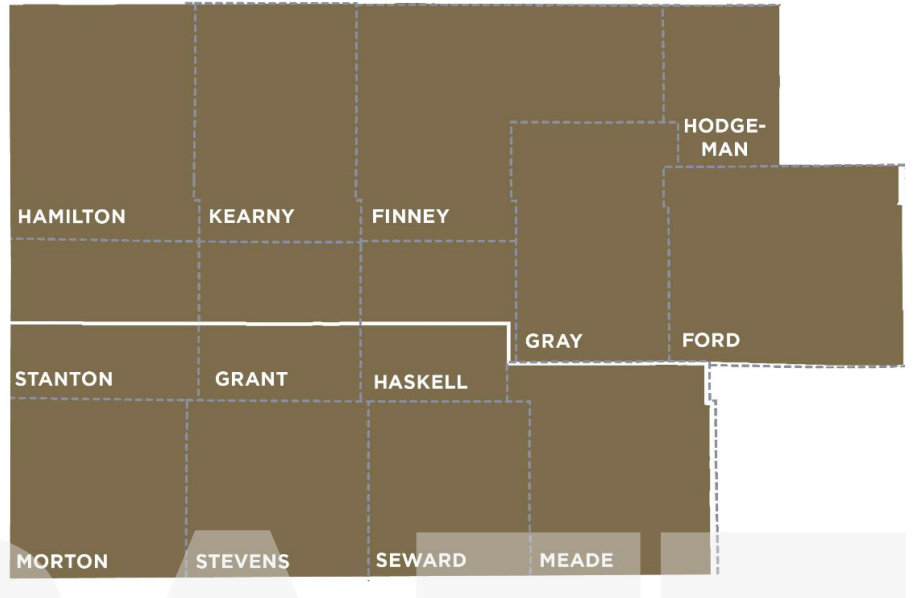
**Statewide Population:** 2.9M

**Region Annual GDP:** \$8.5 Billion

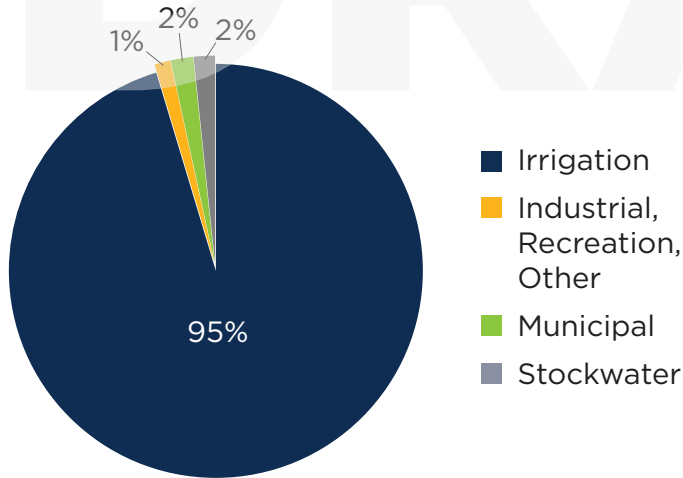
**Statewide GDP:** \$175 Billion

**Major Economic Drivers:**

- Beef Industry (ranches, feedlots, packing plants)
- Energy (oil & natural gas)
- Grain Production
- Manufacturing

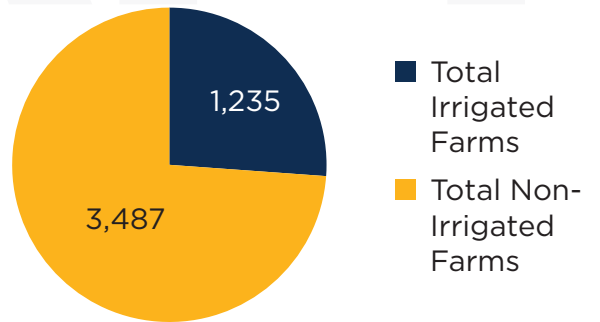


**Southwest Kansas Water Uses by Category**

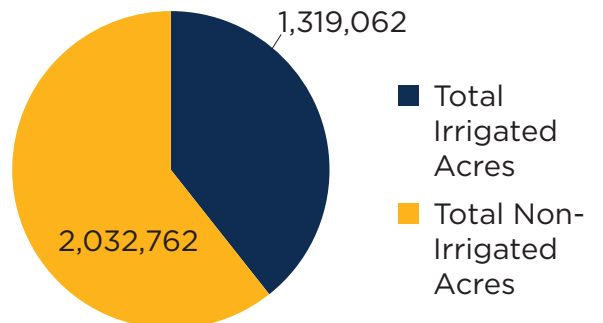


**More Info About the Region's Top Use of Water**

**Total Farms in Southwest Kansas**



**Total Cropland Acreage in Southwest Kansas**



**Irrigation Statewide in Kansas**

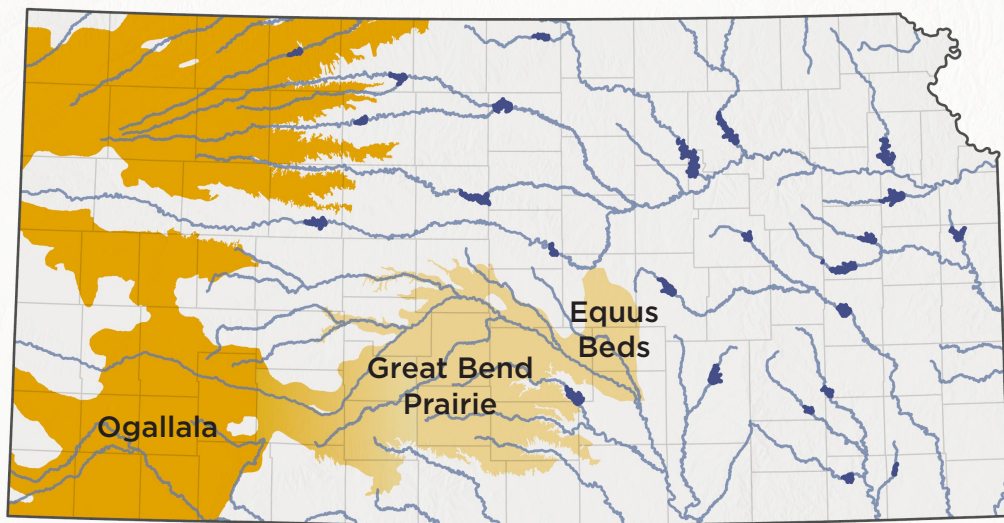
≈ 3 million acres irrigated  
 ≈ 14% of all cropland  
 ≈ 33% of crop production

Source: K-State Research & Extension



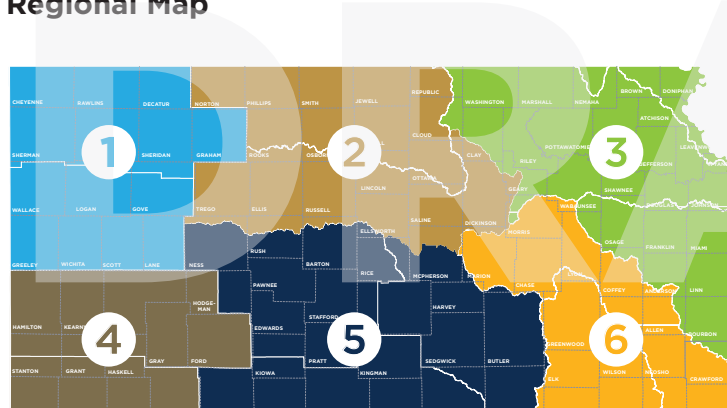


## Water Sources for Our State



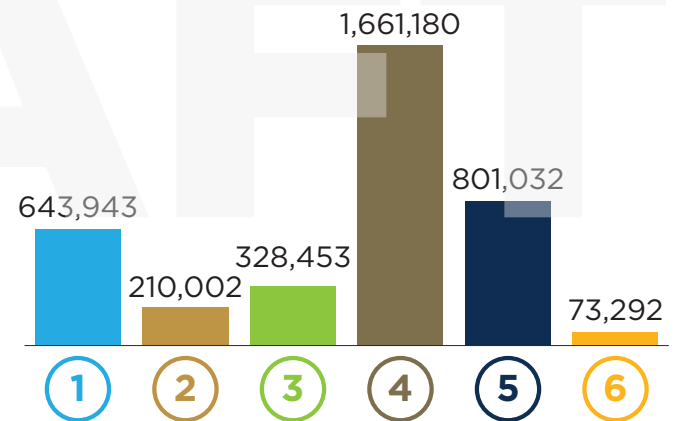
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## Regional Map



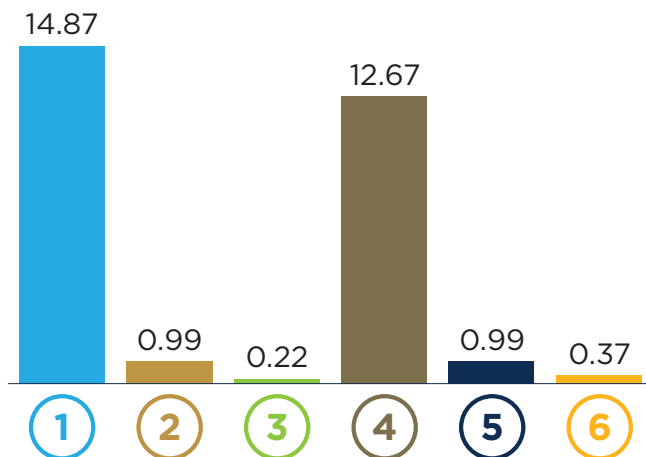
## Total Water Use by Region

Average Annual Water Use in Acre-Feet

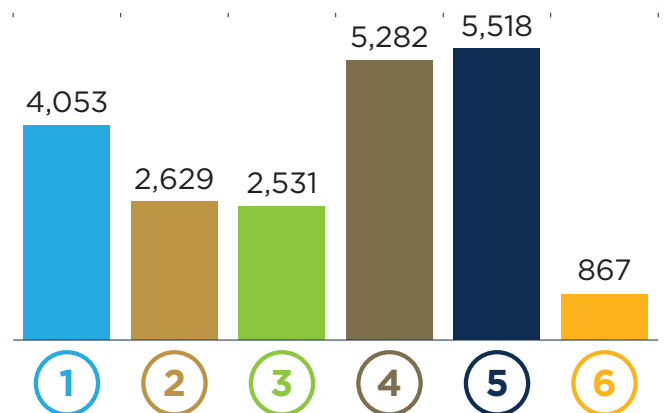


## Regional Average Annual Water Use Per Capita

Average Annual Water Use in Acre-Feet Per Capita



## Number of Water Rights Owners By Region



Water rights are required for any purpose other than domestic use, such as for municipal, irrigation farming, or industrial use.



# KANSAS WATER PLAN IMPLEMENTATION

## Water Sources and Uses: North Central Regional Profile

**Region Population:** 212,680

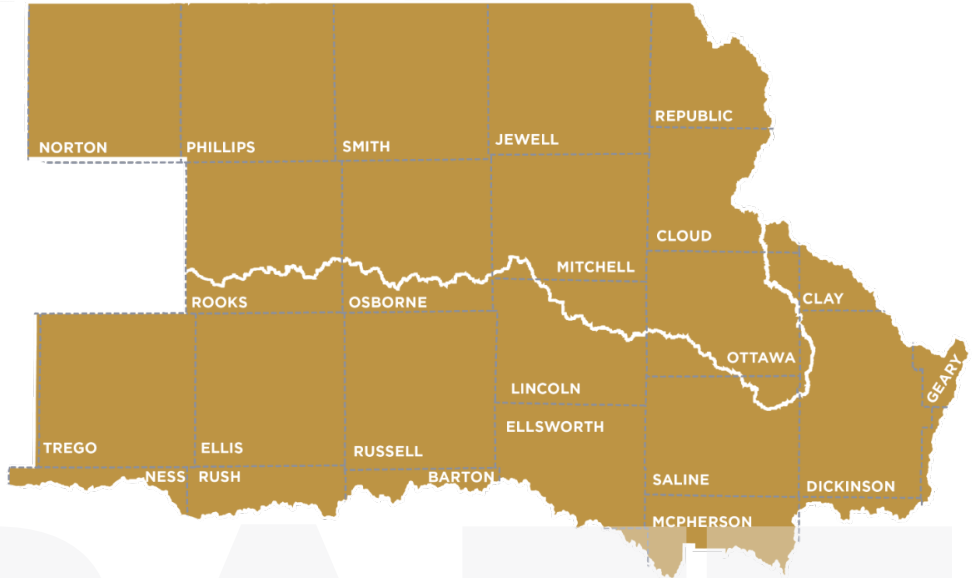
**Statewide Population:** 2.9M

**Region Annual GDP:** \$11.2 Billion

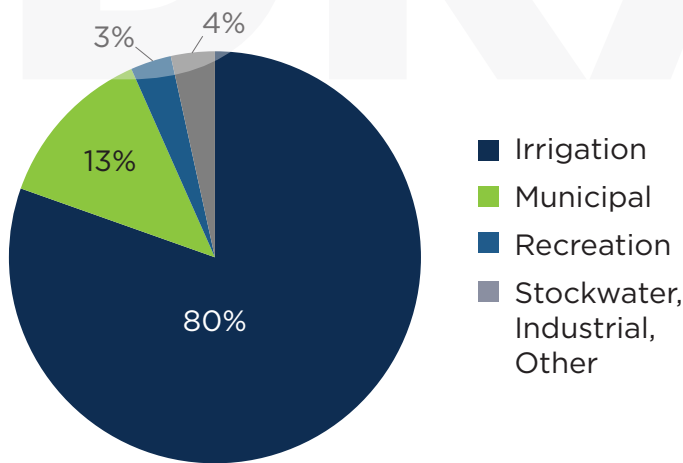
**Statewide GDP:** \$175 Billion

**Major Economic Drivers:**

- Beef Industry (ranches, feedlots)
- Energy (oil & natural gas)
- Grain Production
- Food processing
- Manufacturing

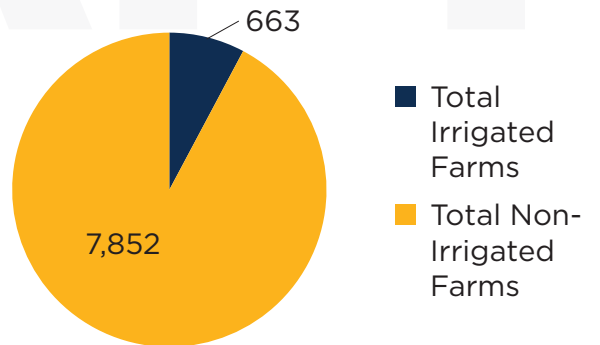


**North Central Kansas Water Uses by Category**

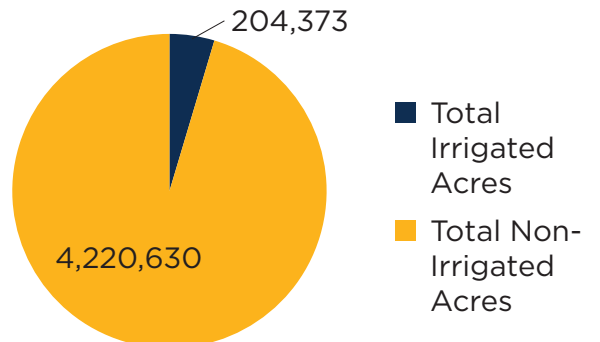


**More Info About the Region's Top Use of Water**

**Total Farms in North Central Kansas**



**Total Cropland Acreage in North Central Kansas**



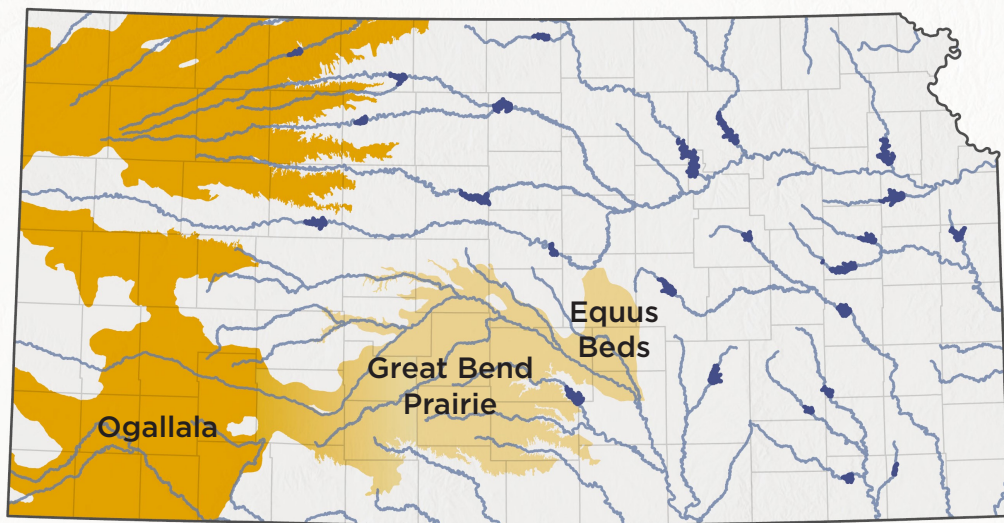
**Irrigation Statewide in Kansas**

≈ 3 million acres irrigated  
 ≈ 14% of all cropland  
 ≈ 33% of crop production

Source: K-State Research & Extension

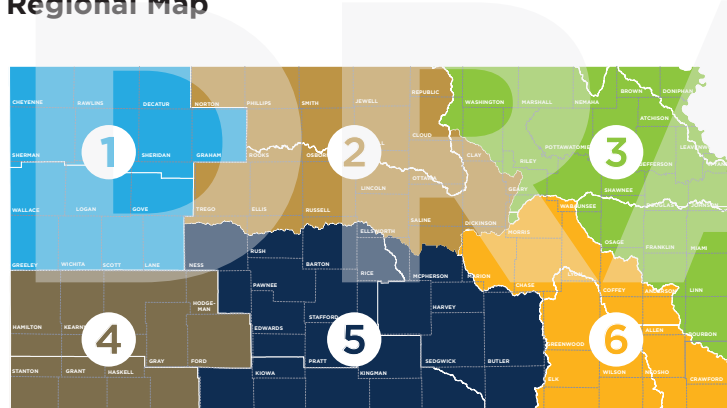


## Water Sources for Our State



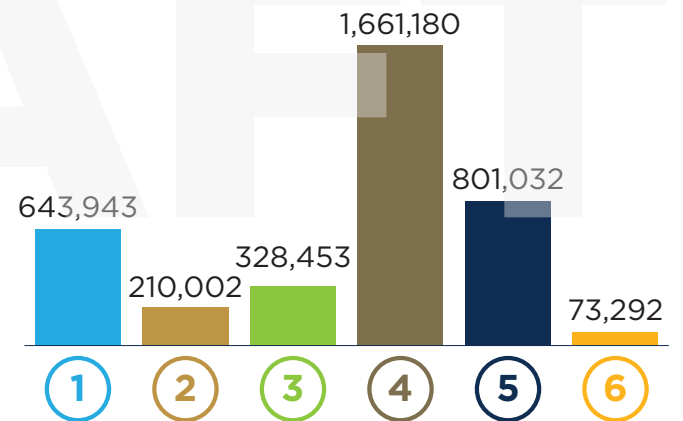
There are two sources of water - groundwater found in an aquifer and surface water, such as rivers, lakes and reservoirs. The High Plains Aquifer contains multiple connected aquifers, including the largest, the Ogallala, which is found in the western portion of the state and the Great Bend Prairie and Equus Beds aquifers found in south central Kansas. The 24 reservoirs in the state as well as lakes and rivers provide water for the remaining areas of the state.

## Regional Map



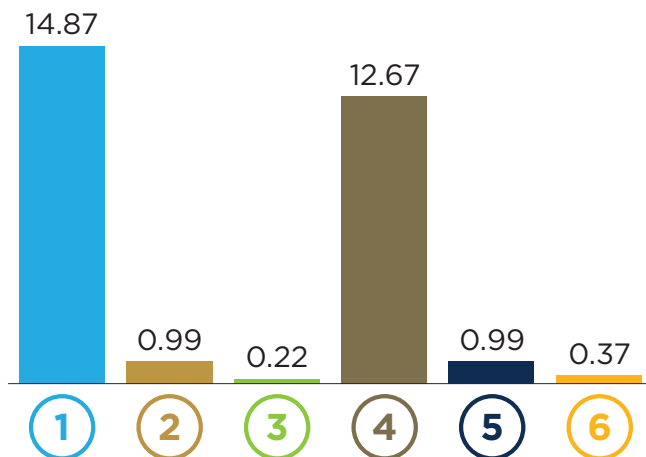
## Total Water Use by Region

Average Annual Water Use in Acre-Feet

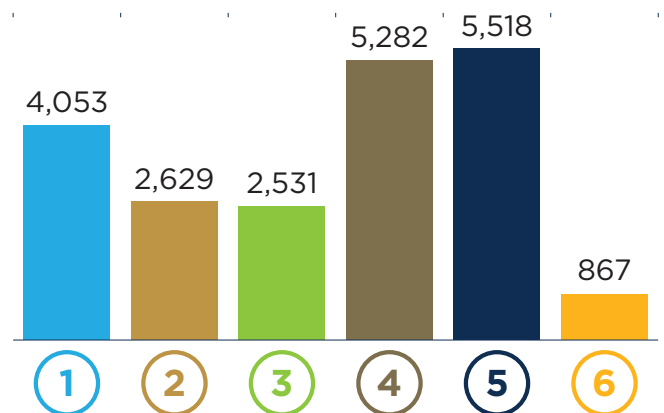


## Regional Average Annual Water Use Per Capita

Average Annual Water Use in Acre-Feet Per Capita



## Number of Water Rights Owners By Region



Water rights are required for any purpose other than domestic use, such as for municipal, irrigation farming, or industrial use.



# KANSAS WATER PLAN IMPLEMENTATION

## Water Sources and Uses: South Central Regional Profile

**Region Population:** 809,699

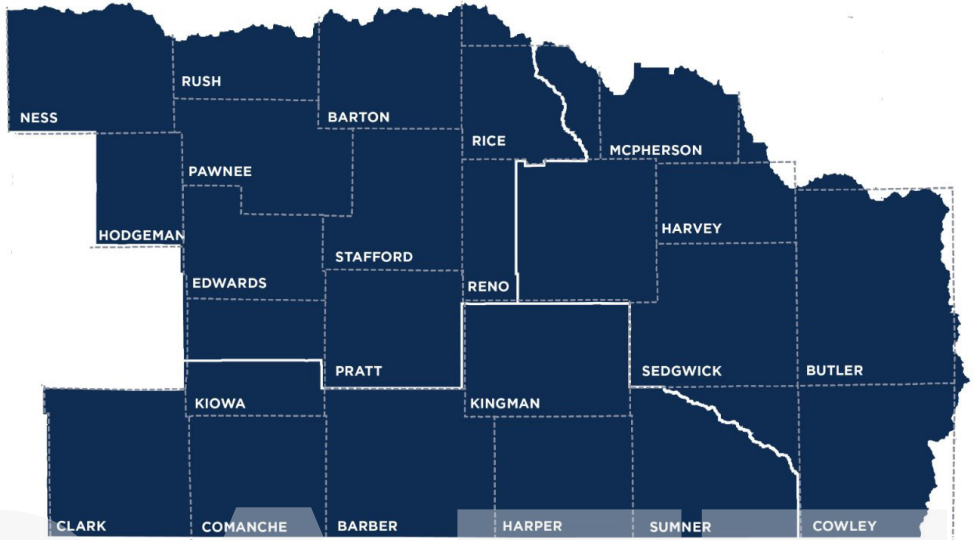
**Statewide Population:** 2.9M

**Region Annual GDP:** \$45 Billion

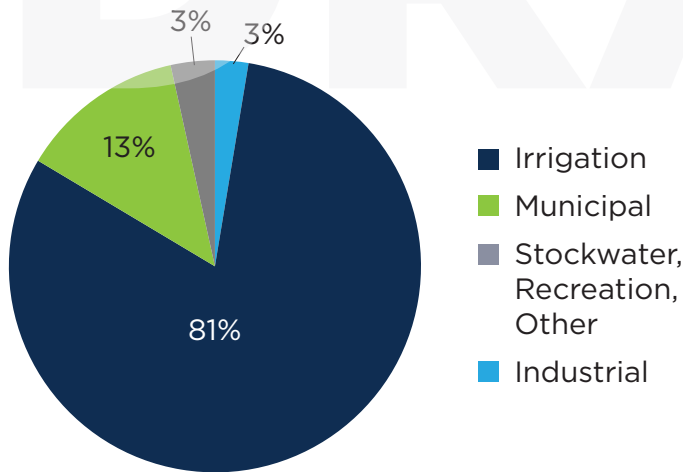
**Statewide GDP:** \$175 Billion

### Major Economic Drivers:

- Agriculture
- Energy (oil & natural gas)
- Manufacturing
- Healthcare Services

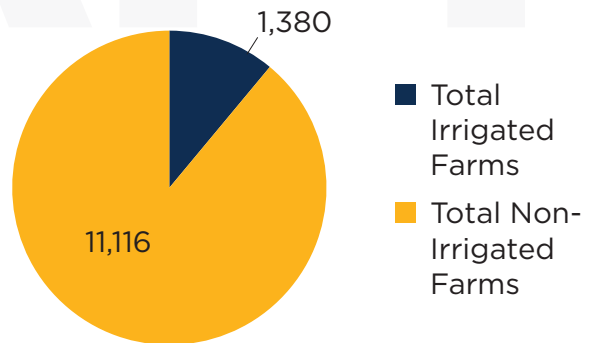


### South Central Kansas Water Uses by Category

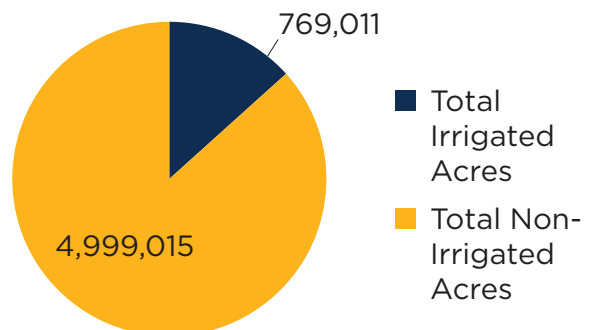


### More Info About the Region's Top Use of Water

#### Total Farms in South Central Kansas



#### Total Cropland Acreage in South Central Kansas



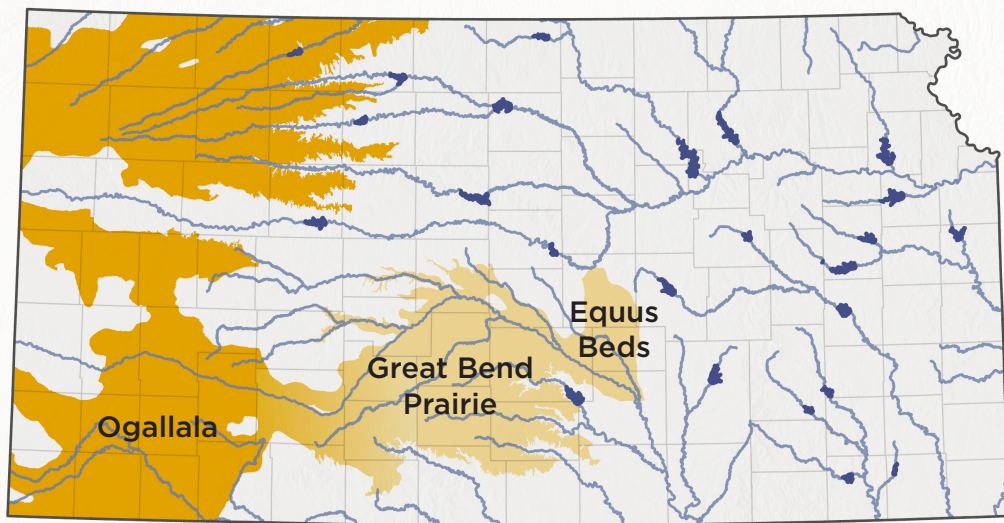
### Irrigation Statewide in Kansas

- ≈ 3 million acres irrigated
- ≈ 14% of all cropland
- ≈ 33% of crop production

Source: K-State Research & Extension

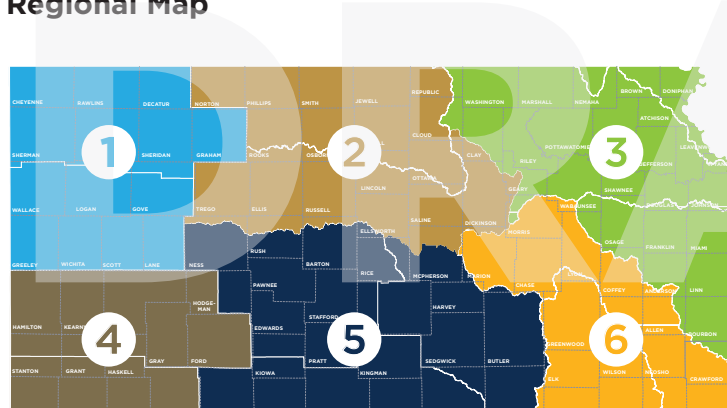


## Water Sources for Our State



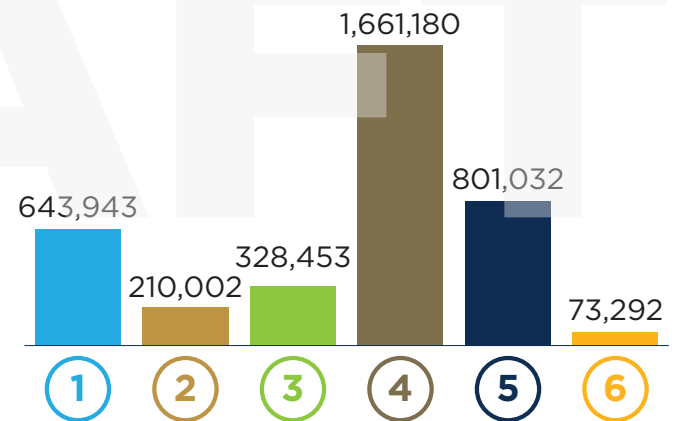
There are two sources of water - groundwater found in an aquifer and surface water, such as rivers, lakes and reservoirs. The High Plains Aquifer contains multiple connected aquifers, including the largest, the Ogallala, which is found in the western portion of the state and the Great Bend Prairie and Equus Beds aquifers found in south central Kansas. The 24 reservoirs in the state as well as lakes and rivers provide water for the remaining areas of the state.

## Regional Map



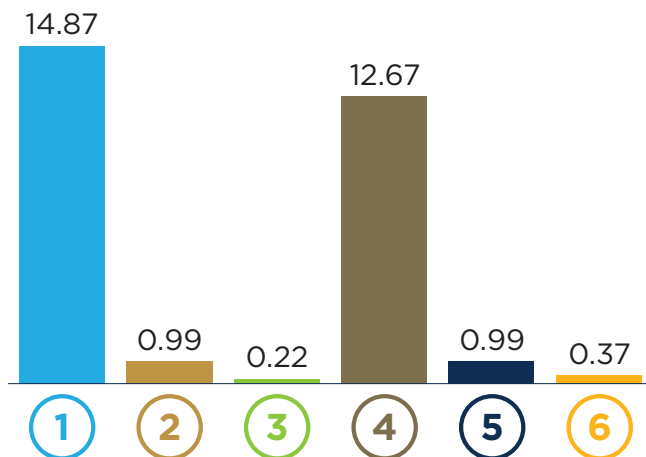
## Total Water Use by Region

Average Annual Water Use in Acre-Feet

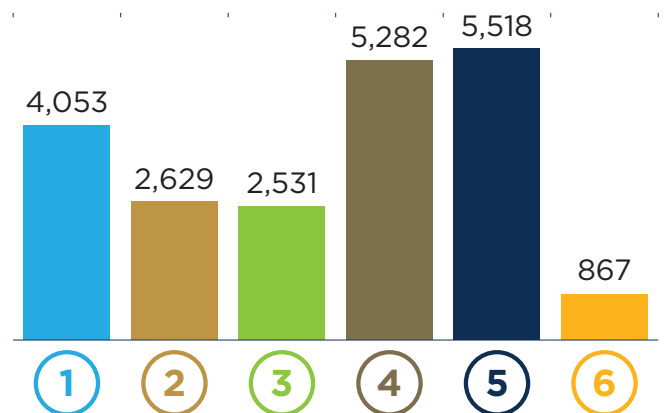


## Regional Average Annual Water Use Per Capita

Average Annual Water Use in Acre-Feet Per Capita



## Number of Water Rights Owners By Region

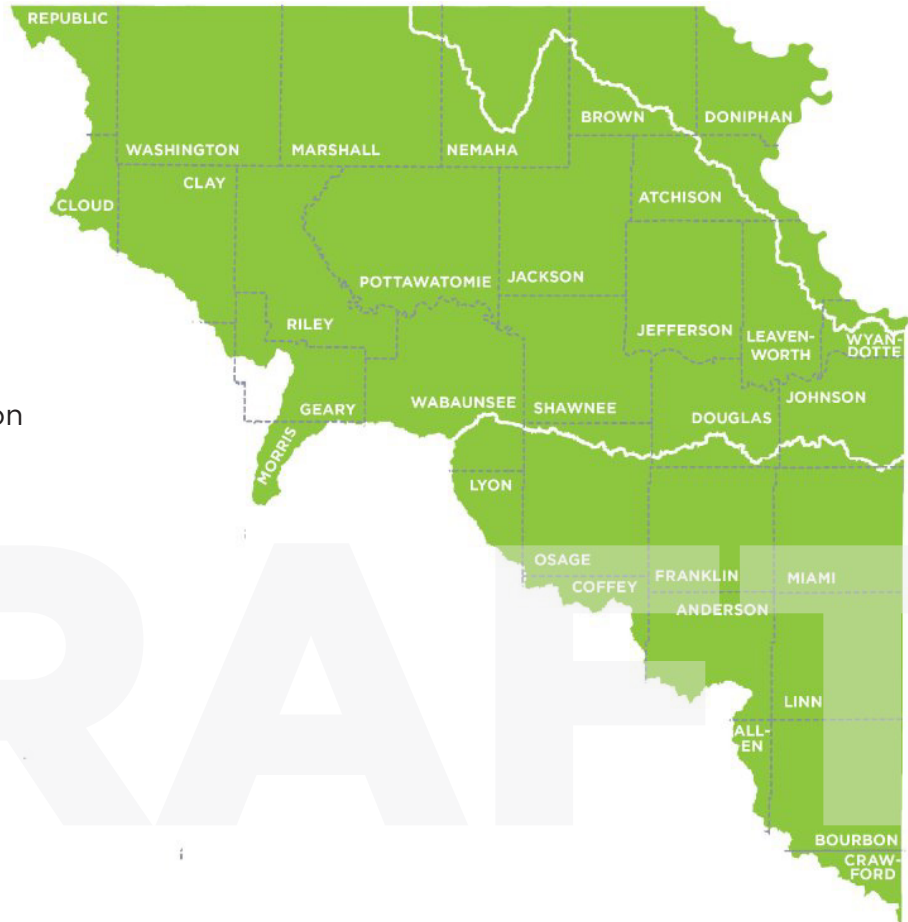


Water rights are required for any purpose other than domestic use, such as for municipal, irrigation farming, or industrial use.



# KANSAS WATER PLAN IMPLEMENTATION

## Water Sources and Uses: Northeast Regional Profile



**Region Population:** 1,515,720

**Statewide Population:** 2.9M

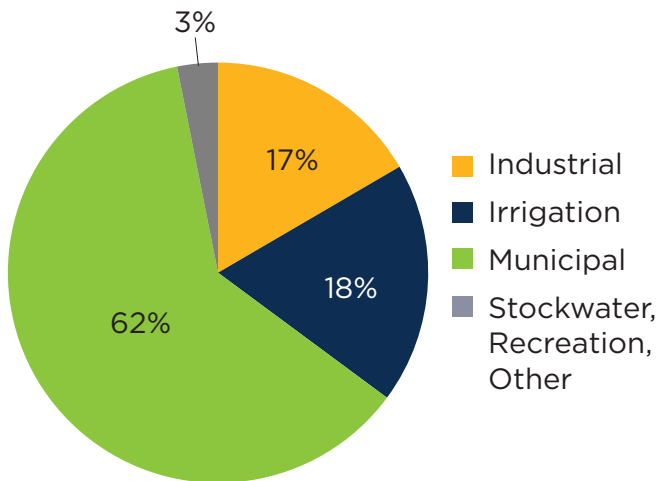
**Region Annual GDP:** \$99 Billion

**Statewide GDP:** \$175 Billion

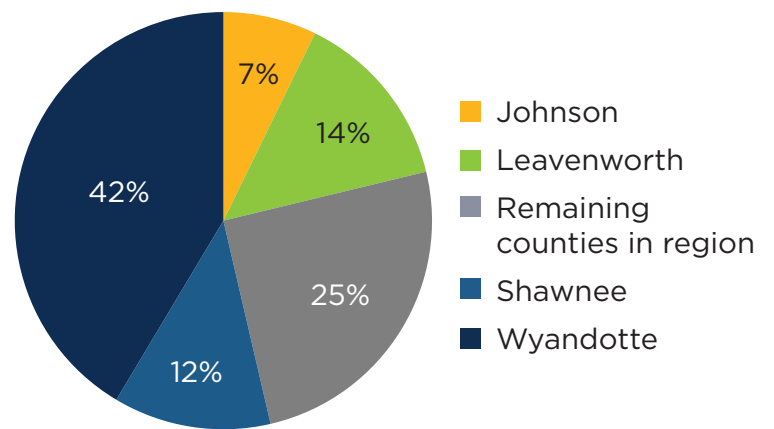
**Major Economic Drivers:**

- Retail
- Health Care Services
- Professional, Scientific & Technical Services
- Manufacturing
- Universities

**Northeast Kansas Water Uses by Category**

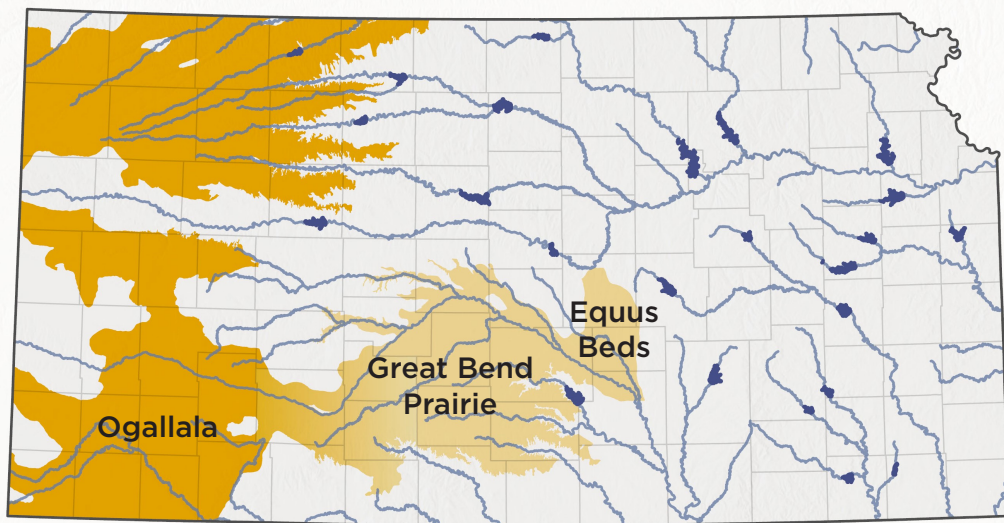


**Top Municipal Water Use by County**



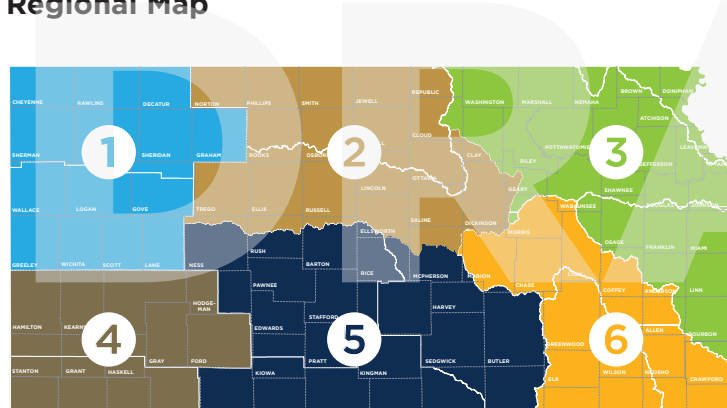
**51%** of Kansans live in this region of the state. Not surprising – household use accounts for the top water usage all categories in this region.

## Water Sources for Our State



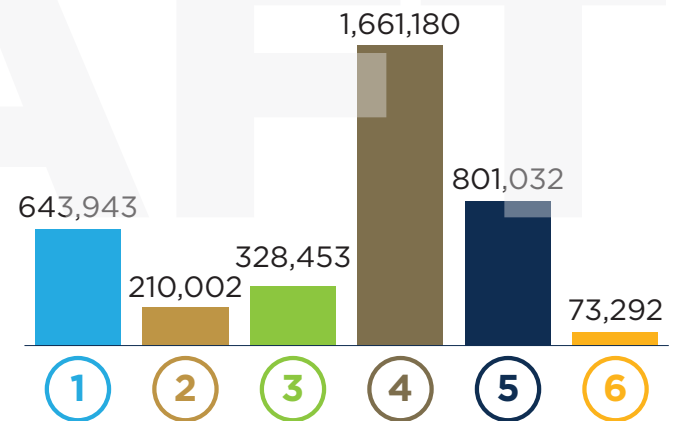
There are two sources of water - groundwater found in an aquifer and surface water, such as rivers, lakes and reservoirs. The High Plains Aquifer contains multiple connected aquifers, including the largest, the Ogallala, which is found in the western portion of the state and the Great Bend Prairie and Equus Beds aquifers found in south central Kansas. The 24 reservoirs in the state as well as lakes and rivers provide water for the remaining areas of the state.

## Regional Map



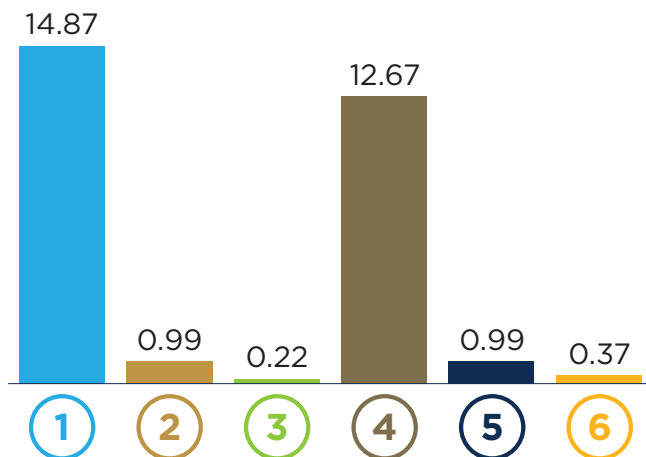
## Total Water Use by Region

Average Annual Water Use in Acre-Feet

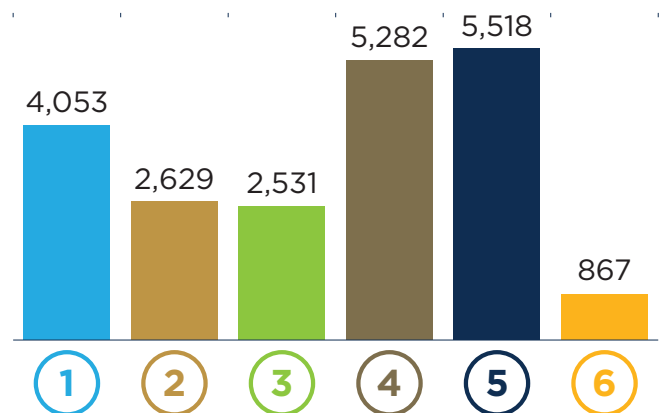


## Regional Average Annual Water Use Per Capita

Average Annual Water Use in Acre-Feet Per Capita



## Number of Water Rights Owners By Region



Water rights are required for any purpose other than domestic use, such as for municipal, irrigation farming, or industrial use.



# KANSAS WATER PLAN IMPLEMENTATION

## Water Sources and Uses: Southeast Regional Profile

**Region Population:** 200,169

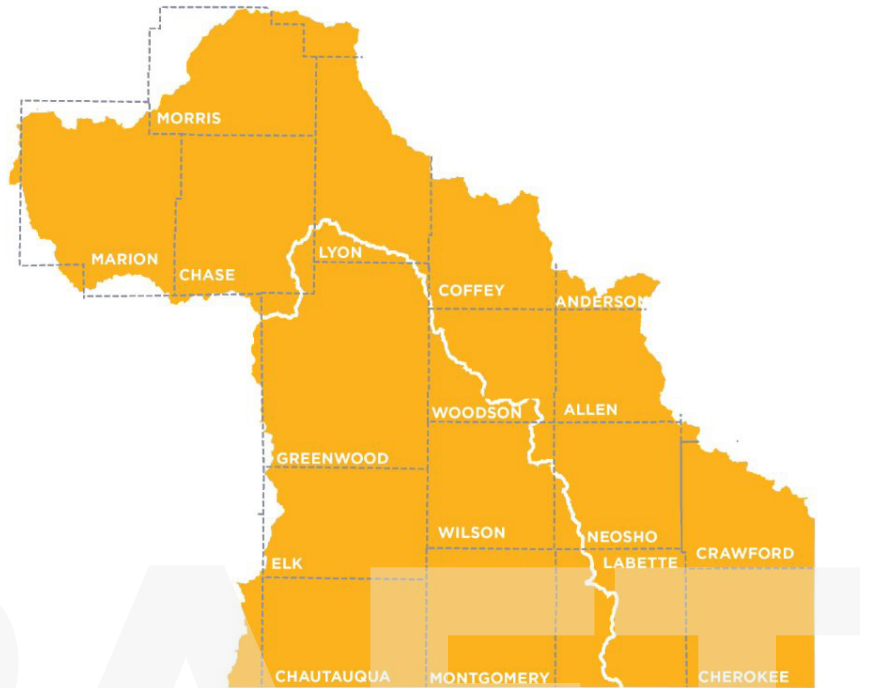
**Statewide Population:** 2.9M

**Region Annual GDP:** \$8.2 Billion

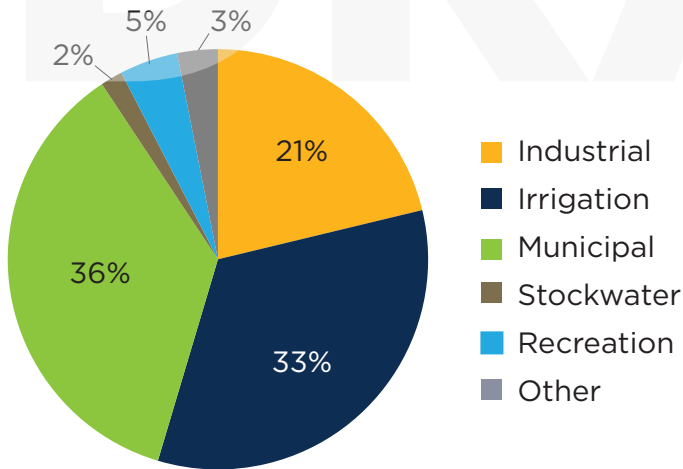
**Statewide GDP:** \$175 Billion

**Major Economic Drivers:**

- Agriculture
- Retail
- Manufacturing
- Mining (Portland cement)

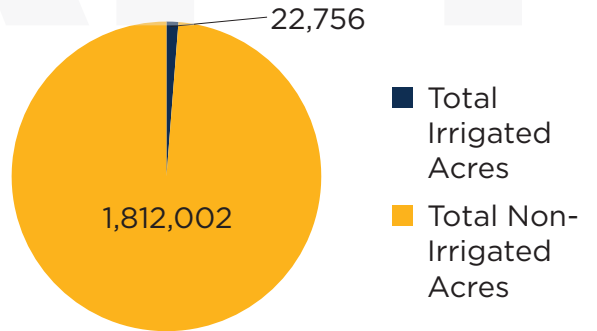


**Southeast Kansas Water Uses by Category**

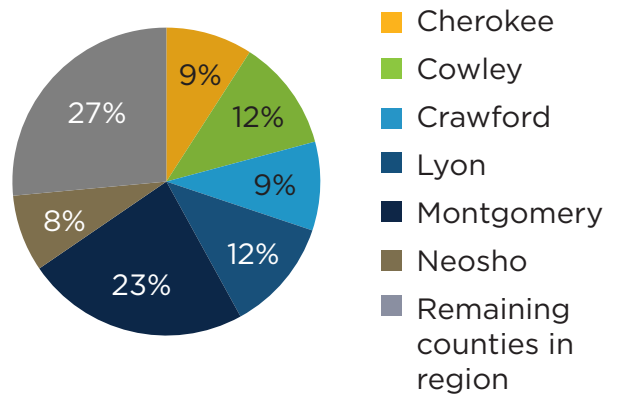


**More Info About the Region's Top Use of Water**

**Total Cropland Acreage in Southeast Kansas**



**Top Municipal Water Use by County**



**Irrigation Statewide in Kansas**

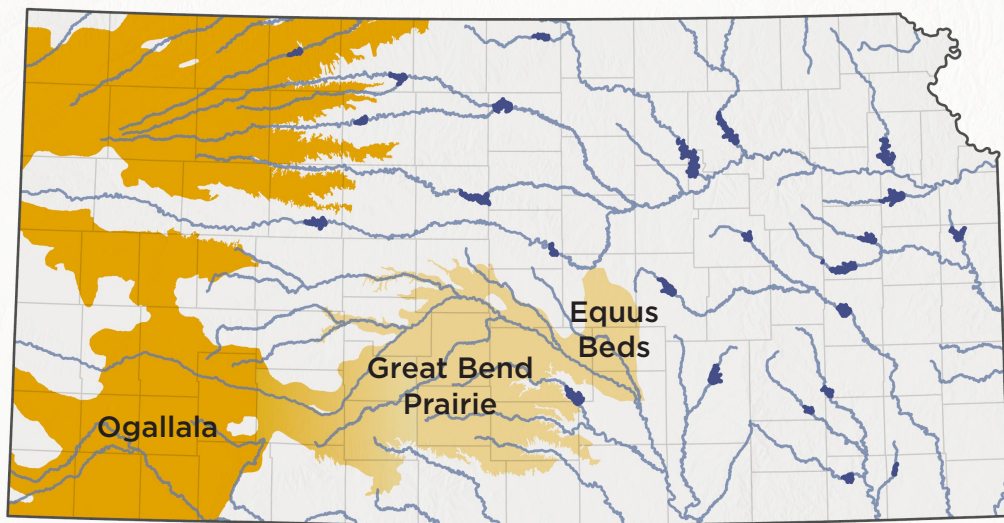
≈ 3 million acres irrigated  
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Source: K-State Research & Extension



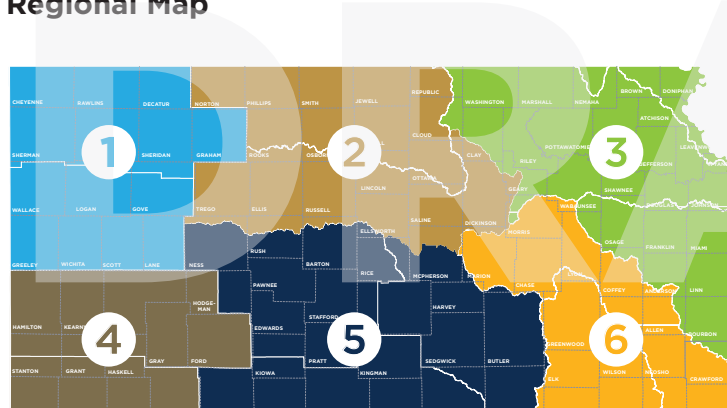


## Water Sources for Our State



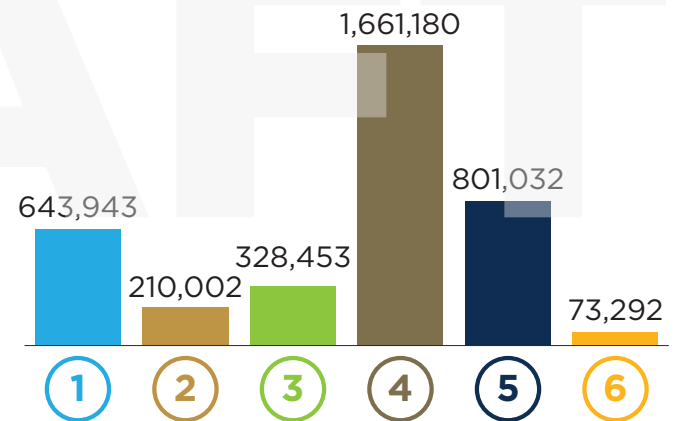
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## Regional Map



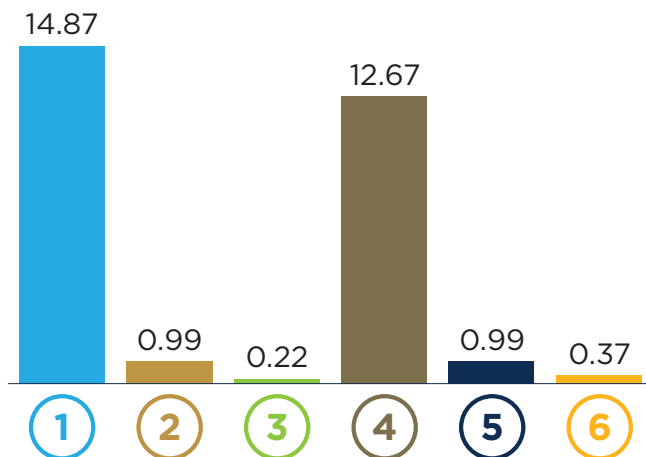
## Total Water Use by Region

Average Annual Water Use in Acre-Feet

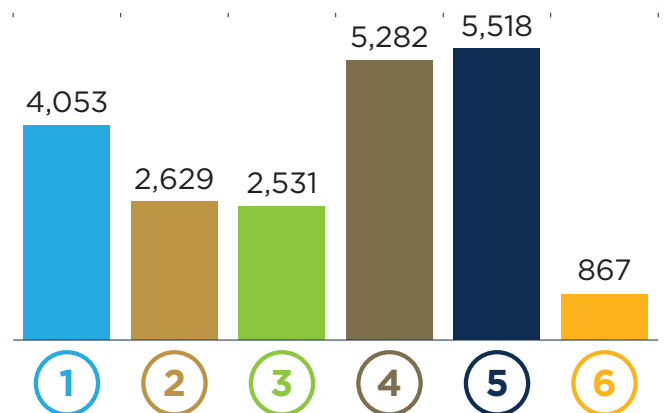


## Regional Average Annual Water Use Per Capita

Average Annual Water Use in Acre-Feet Per Capita



## Number of Water Rights Owners By Region



Water rights are required for any purpose other than domestic use, such as for municipal, irrigation farming, or industrial use.