

Implementing Legislative Tools to Extend the Life of the Ogallala Aquifer

Senate Agriculture and Natural Resources Committee

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Kansas Department of Agriculture
Division of Water Resources



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KDA Division of Water Resources (DWR) major responsibilities:

- Allocate and regulate the state's water resources
- Protect public safety and private property (dam/levee safety; regulation of stream and floodplain projects)
- Ensure Kansas obtains its share of interstate supplies
- Other services: water right and water use data, flood mapping and insurance, much more

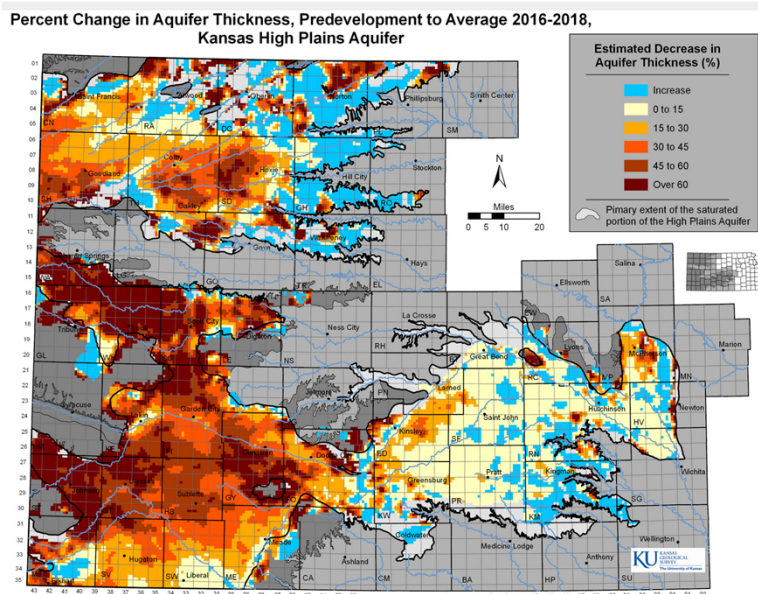
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Kansas Water Appropriation Act (KWAA), 1945

- **“All water within the state of Kansas is hereby dedicated to the use of the people of the state, subject to the control and regulation of the state in the manner herein prescribed.”**
- Based on prior appropriation (first in time, first in right)
- Groundwater and surface water in single priority system
- Charges Chief Engineer to oversee:
 - **Allocation** of the state’s water supply, allowing for orderly development of the state’s water resources
 - **Regulation** of in times of shortage.
- K.S.A. 82a-706: *The Chief Engineer shall enforce and administer the laws of this state pertaining to the beneficial use of water and shall control, conserve, regulate, allot and aid in the distribution of the water resources of the state for the benefits and beneficial uses of all its inhabitants in accordance with the rights of priority of appropriation.*

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The Ogallala challenge: Percent Change in Saturated Thickness of O-HP Aquifer



Notes:

- Despite significant declines, significant use continues and the water resource is critical to today’s and tomorrow’s economy.
- While south-central Kansas is experiencing less declines in groundwater levels, groundwater use is reducing streamflows.

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Legislative acts to encourage groundwater conservation

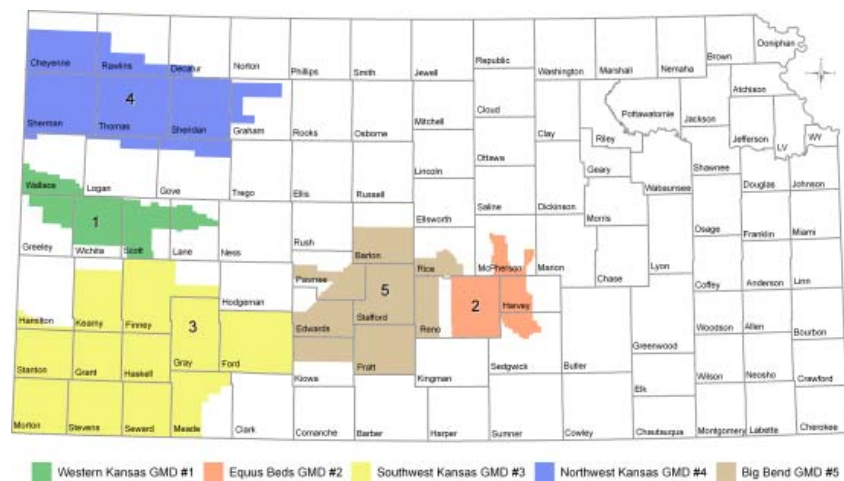
- Historic tools:
 - 1972: Groundwater Management District (GMD) Act allows for the creation of **GMDs** to assist in local groundwater conservation efforts
 - 1978: GMD Act amended to allow for Intensive Groundwater Use Control Areas (**IGUCAs**).
- New tools:
 - 2012: Local Enhanced Management Areas (**LEMAs**) allowed
 - 2015: Water Conservation Areas (**WCAs**) allowed
 - Getting rid of “use it or lose it”
 - 2012: Eliminating abandonment of groundwater rights in closed areas
 - 2015: Requirement for chief engineer to give due consideration of past voluntary conservation in all conservation programs

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Kansas Groundwater Management Districts

GMD accomplishments:

- **Closed districts** to new appropriations, regulations related to change applications, **metering**, groundwater models, studies, incentive-based programs, more
- But **no significant action to address over-appropriation** in Ogallala (until 2012)



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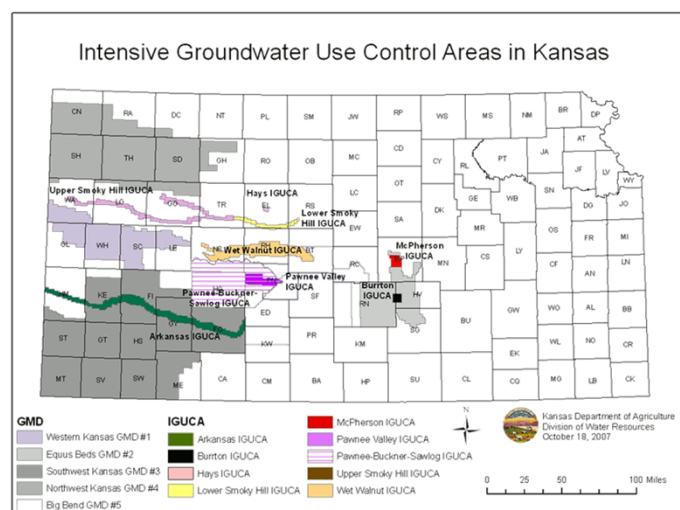
Intensive Groundwater Use Control Areas (IGUCAs), 1978

- Part of the Groundwater Management District (GMD) Act, but IGUCAs also can be used in groundwater areas outside GMDs
- Water management tool that works in conjunction with the Kansas Water Appropriation Act
- Allows for more flexible solutions than strict priority administration of groundwater rights, called “corrective controls,” to address the groundwater decline problems
- Formal public hearings are held to provide due process
- Decision by chief engineer based on hearing record

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Intensive Groundwater Use Control Areas

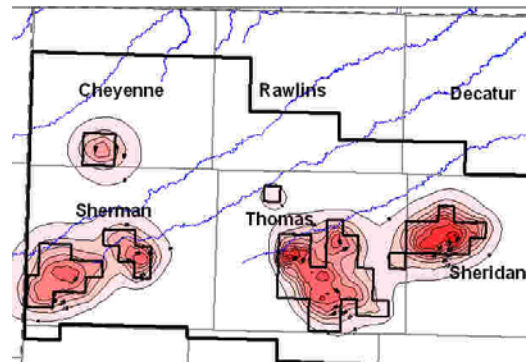
- **McPherson County**, 1979, closed area, required meters
- **Pawnee Valley**, 1980, set safe yield criteria
- **Burrton**, 1982, water quality concern; criteria for review
- **Lower Smoky Hill River**, 1983, closed area, 15-inch allocation
- **Upper Smoky Hill River**, 1984, closed area
- **Arkansas River Valley**, 1984, closed area, restrict moves
- **Hays and Immediate Area**, 1985, restrict lawn watering by domestic wells
- **Walnut Creek**, 1990, 5-year allocations: senior set at 12-14 inches; junior set at 5.25-6.25 inches, flexibility to move allocations
- **None in Ogallala**



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LEMA tool from GMD 4's efforts to cut use

- Water users of the “Sheridan 6 High Priority Area” of Northwest Kansas GMD No. 4 wanted to cut use by 20%, but NOT via priority administration, (2010-11)
- GMD 4 Board discusses and rejects IGUCA option
- LEMA statute passes, 2012
- Sheridan 6 LEMA designated for 2013-17
- Approx. 100 sq. mi.; 200 water rights
- **Goal of 20% reduction in use via 5-year allocations: 55 inches/acre**
- **Actual water use savings: 32%**
- Extended for 2018-22



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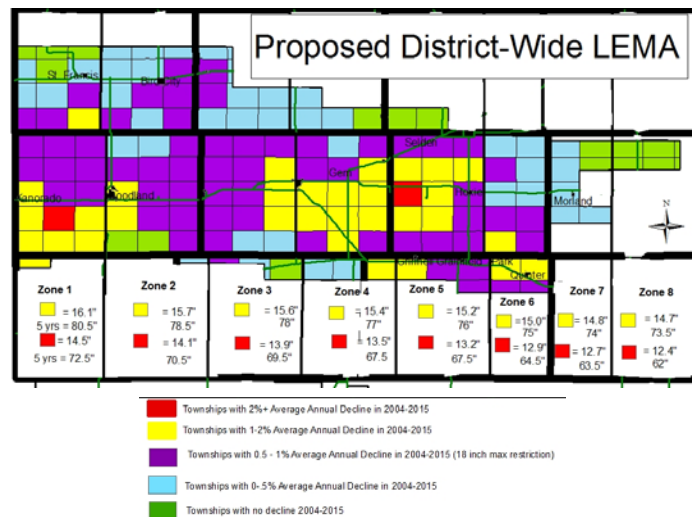
Local Enhanced Management Areas (LEMA), 2012

- Like IGUCAs:
 - Requires demonstrated groundwater problem
 - Similar tools “corrective controls”
 - Due process required via public hearings, decision based on the record
- Unlike IGUCAs:
 - LEMA plan developed by a GMD with a specific goal and defined “corrective controls” to address the problem
 - After hearings, decision by the chief engineer to adopt, reject or return plan to the GMD
- Wayne Bossert: “You are not guaranteed to get what you want, but you are guaranteed to not get what you don’t want.”

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GMD 4 District-Wide LEMA

- Sets 5-year allocations in inches/acre based on township rate of decline:
 - Highest decline areas (red): 65-70 inches for 5 years
 - Second highest decline (yellow): 75-80 inches
 - Purple township: 90 inches
 - Blue/green: no restrictions
- No additional flexibilities, encourages use of WCAs for flexibility
- LEMA adopted for years 2018-22



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GMD 4 District-Wide LEMA, judicial review

- On April 13, LEMA Order of Designation issued.
- On June 13, 2018, petitioners filed for **judicial review** in Gove County, essentially claiming the LEMA is unconstitutional.
- On October 15, 2019, the **District Court found** that the "...GMD 4 District Wide **LEMA should be upheld**. The LEMA Plan restrictions do not appear to be unconstitutional on their face or as applied. There is substantial evidence backing the agency's decision and therefore it is not arbitrary or capricious."
- On November 12, 2019, plaintiffs filed a motion requesting the Gove County District Court to alter and amend its decision. We are awaiting the Court's action.
- The District Court's decision is expected to be appealed.

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2015 Legislation: Water Conservation Areas (WCAs)

By the end of 2014, the only LEMA in place was Sheridan County. Water users requested a streamlined tool to facilitate water conservation without requiring hearings and GMD approval.

The 2015 Legislature authorized K.S.A. 82a-745 to allow for Water Conservation Areas.

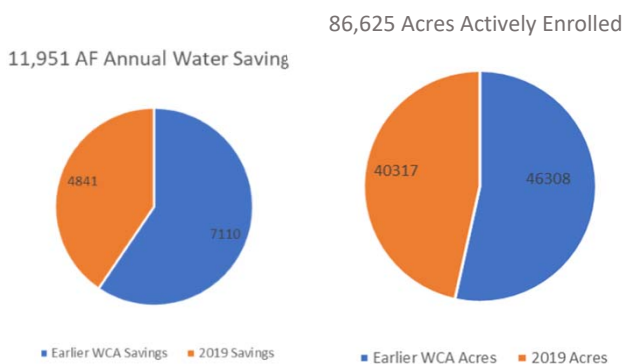
- A Water Conservation Area (WCA) is a designated area with an approved management plan developed by a water right owner(s) with the consent of the chief engineer to **reduce water withdrawals** while maintaining economic value via **water right flexibility**.
- **Flexibilities** can include multi-year allocations, exceeding annual authorized quantities, allowing for new uses of the water, when no impairment.
- **No hearings**; streamlined process – GMD opportunity for review.
- WCAs do not make a permanent change in the water right.

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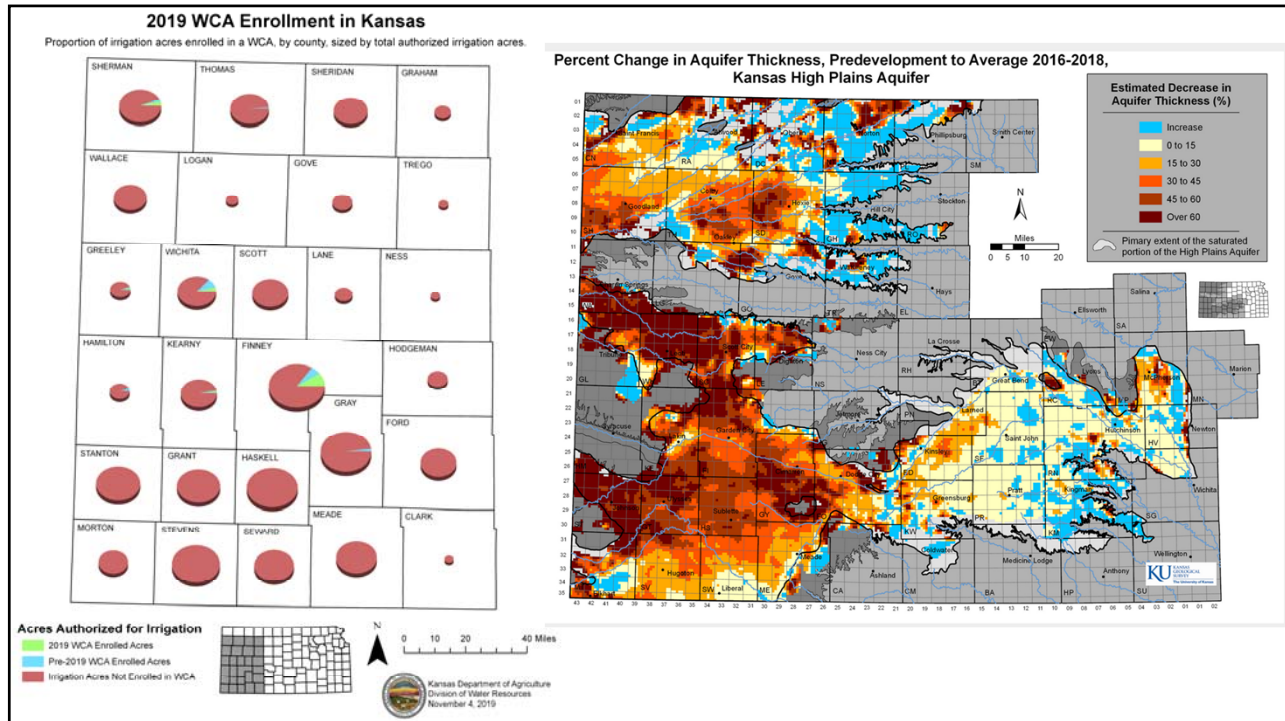
WCA totals

- Current status:
 - 27 plans active as well as 26 Wichita County WCA consent agreements
 - **86,625 active acres enrolled**
 - 11,951 acre-feet of annual water savings
- **Several significant WCA plans have been approved in 2019:**
 - Seven (7) plans approved in 2019
 - 40,317 acres enrolled in 2019
 - 4,841 acre-feet annual water savings
- Additional WCAs under discussion

WCA Name	County	Plan	Agreement & Order	Period	Enrolled(Ac/Yr)	Savings (AF/Yr)	Approved
	SC/WH	WCA Plan	WCA CAO	2019-2025	5,959	812	10/04/2019
Wichita County (2018)	FI/KE	WCA Plan	WCA CAO	2018-2022	15,578.97	2,001	07/22/2019
& Cattle	FI	WCA Plan	WCA CAO	2018-2022	9,588.3	1,074	06/28/2019
(9)	FI	WCA Plan	WCA CAO	2019-2021	1,570	110	06/28/2019
	ST	WCA Plan	WCA CAO	2019-	720	212	06/11/2019



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Wichita County WCA development / LEMA discussions

- Only 20 feet of average remaining saturated thickness, well rates dropping, less than 25 years of remaining life
- Extensive process to develop WCA proposal, driven by a local committee, initiated August 2016; approved March 2017
- Unique, county-wide WCA allows for significant flexibility for those enrolling
- Conservation factor, starts at 29% increasing to 50%
- 20% of county enrolled
- Committee pushing GMD 1 for a LEMA, or will petition for an IGUCA

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KEARNY, FINNEY COUNTY

PROPOSED LOCAL ENHANCED MANAGEMENT AREA (KFL)

PROPOSAL SUMMARY

3/20/17

What is a Local Enhanced Management Area (LEMA)?

A Local Enhanced Management Area, or LEMA, is a management plan to address local groundwater concerns. A Groundwater Management District (GMD) has the authority to recommend a LEMA to the chief engineer.

The following provides a summary of discussions for a potential LEMA and does not represent a final proposal.

Water level changes, 2005-2016, (Kansas Geological Survey), (Black line indicates proposed LEMA boundary)

Why is a LEMA being considered for Northern Finney and Kearny counties?

Local water right owners in northern Finney and Kearny counties are seeking ways to reduce the rate of decline in the

When will this proposed LEMA take effect?

The goal is to have the proposed LEMA in place by January 1, 2018. By law, two public hearings are required to ensure the LEMA is needed and is in the public interest.

- Discussions initiated among water users fall 2016 as WCA
- Discussion moved to LEMA, but stalled due to lack of consensus required by GMD 3.
- Water users moved back to WCA
- 30,000+ acres with 4000+ AF/year of savings
- Approaching 20% of Finney County in WCAs

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Growing awareness beginning to drive change

Water Technology Farms demonstrate water saving methods

From: <https://kwo.ks.gov/projects/water-technology-farms>

Key findings from recent sociology research:

- Kansas producers overwhelmingly support groundwater conservation
- Primary motivation is supporting the local community & future generations
- Most believe they are already doing all they can individually to conserve**
- Producers in LEMAs and WCAs are finding additional ways to conserve**
- With support, voluntary group efforts have opportunity to grow
- 5 recommendations for voluntary group conservation efforts

From Stephen Lauer, KSU

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Ogallala – next steps

- While these developments and new tools (LEMA, WCA) represent progress, esp. in areas like the GMD 4 and Sheridan County LEMAs, the Wichita County WCA, and the Finney County areas, **the benefits are local.**
- Declines continue through much of the Ogallala, resulting in declining pumping rates, increasing conflicts, limited future. **Much more is needed.**
- But **expanded joint action offers the best hope for extending the regional economies** depending on the declining Ogallala.
- Change is difficult but possible and needed for the long-term good of the region. Local leadership is needed to expand action for the future.

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The screenshot shows the Kansas Department of Agriculture website. The header includes the state seal and the text "KANSAS DEPARTMENT OF AGRICULTURE Serving the State's Largest Industry". A navigation menu is visible with links for Home, About Us, News & Events, Divisions & Programs, Services, Public Information, FAQs, and Contact Us. The main content area is titled "Division of Water Resources" and contains a paragraph describing the division's responsibilities. Below this is a "COMMON SEARCHES" section with several bullet points listing topics like Quivira, Hays R9, Water Conservation Area (WCA), Local Enhanced Management Area (LEMA), Wichita ASR, Kickapoo Water Right, Republican River Compact, and Multi-Year Flex Accounts (MYFAs).

For more information

agriculture.ks.gov/dwr

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