

KDA Division of Water Resources and water conservation initiatives

Kansas Ag Growth Summit
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Kansas Department of Agriculture



Introduction

My focus: regulatory tools for water conservation under the Kansas Water Appropriation Act and GMD Act

Why talk about regulatory tools at an Ag Growth Summit?

- In areas of declining groundwater supply or conflict, water conservation today provides more water for our future and reduces conflict.
- In the Ogallala, the reality is: the benefits of conservation do not travel far. Water conservers get to keep their conserved water.

Kansas Water Appropriation Act, 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 water supply, allowing for orderly development of the state’s water resources
 - **Regulation** of water supply in times of shortage.
 - In surface water systems, priority administration is routine.
 - Groundwater conflicts more complicated

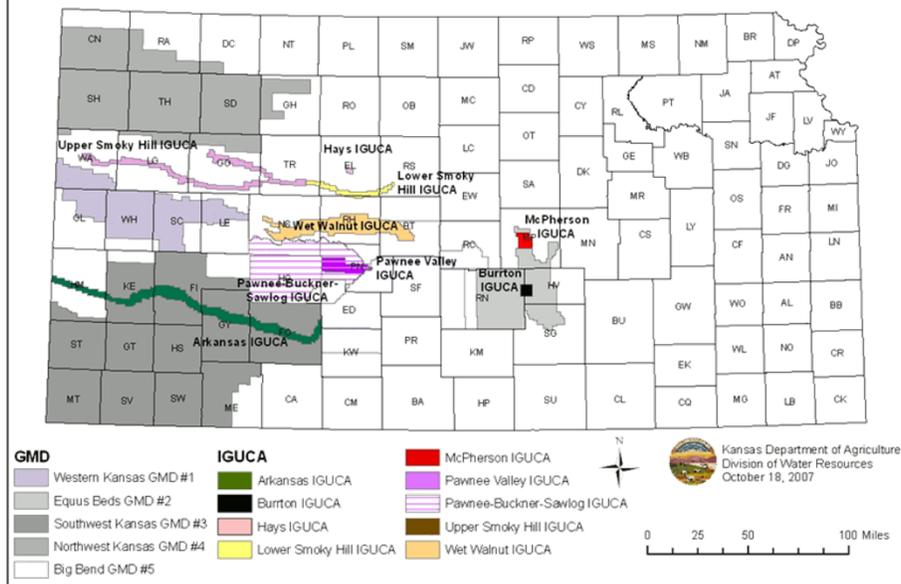
Legislative acts to encourage groundwater management

- 1972: GMD Act allow for the creation of GMDs to lead in local water conservation efforts
- 1978: GMD Act amended to allow for Intensive Groundwater Use Control Areas (**IGUCAs**).
- 2012: Local Enhanced Management Areas (**LEMA’s**) allowed
- 2012: Eliminating abandonment of groundwater rights in closed areas
- 2015: Water Conservation Areas (**WCA’s**) allowed
- 2015: Requirement for chief engineer to give due consideration of past voluntary conservation in all conservation programs

Intensive Groundwater Use Control Areas

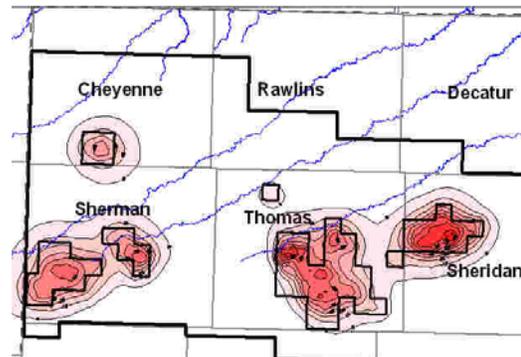
- Water management tool that works in conjunction with the Kansas Water Appropriation Act
- Allows for more flexible solutions, taking in to account the area and aquifer
- Provides alternatives to strict administration of water rights by priority
- Formal public hearings are held
- Decision by chief engineer based on hearing record

Intensive Groundwater Use Control Areas in Kansas



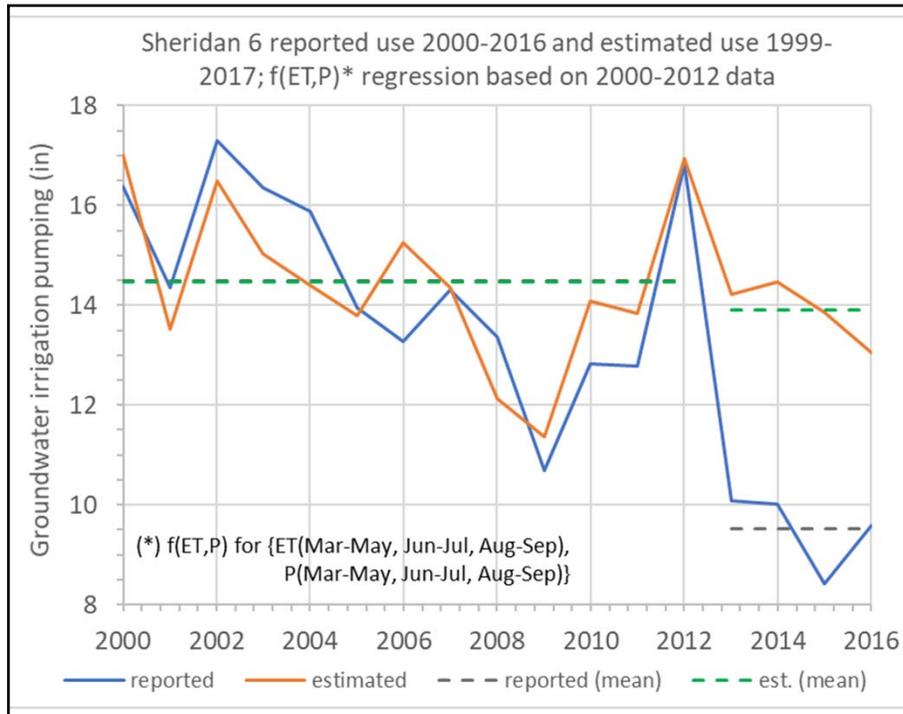
Northwest Kansas GMD 4 Seeks Enhanced Management

- “Sheridan 6” High Priority Area wanted to cut use by 20%, but not via priority administration, (2010-11)
- NW Kansas GMD No. 4 Board discusses and rejects IGUCA option
- Manager outlines new approach requiring new legislation
- Results in LEMA statute, 2012
- Sheridan 6 LEMA designation 2013-17 and 2017, **20% reduction in use**



Local Enhanced Management Areas (LEMA), 2012

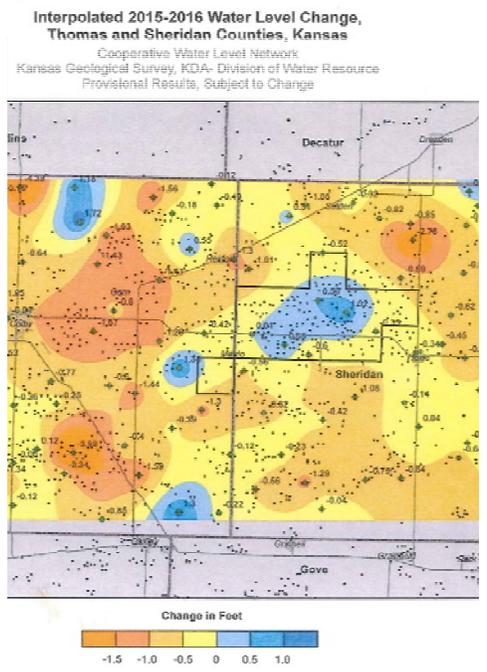
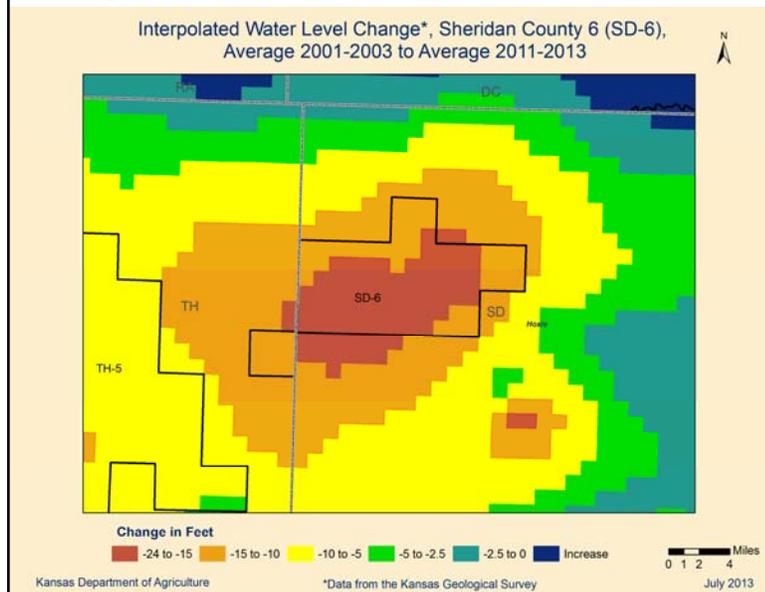
- Like IGUCAs, requires demonstrated problem: groundwater declines, dropping rates, etc.
- Similar tools as IGUCAs: allocations, rotation of use, etc.
- Like IGUCAs, due process required via hearings (as adjusting water rights)
- LEMA Plan to include conservation measures to address specific water resource problems.
- Hearings before the Chief Engineer to adopt, reject or return plan to the GMD
- Chief Engineer decision: is it consistent with state law; does it address the problem appropriately?



Sheridan 6 success: Significantly reduced groundwater use

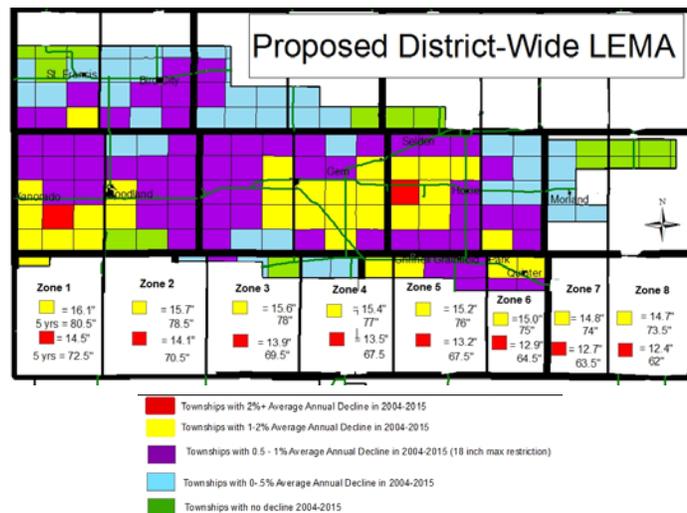
- Blue line = reported water use
- Orange line = estimated water use based on climate factors (2000-12 data used to develop)
- 2013-2016 estimated use based on climate is 0.6 inches lower than 2000-12
- 2013-2016 reported use is 4.4 inches lower than estimated (32% reduction vs. 20% reduction goal)

Sheridan LEMA success, reduced groundwater declines



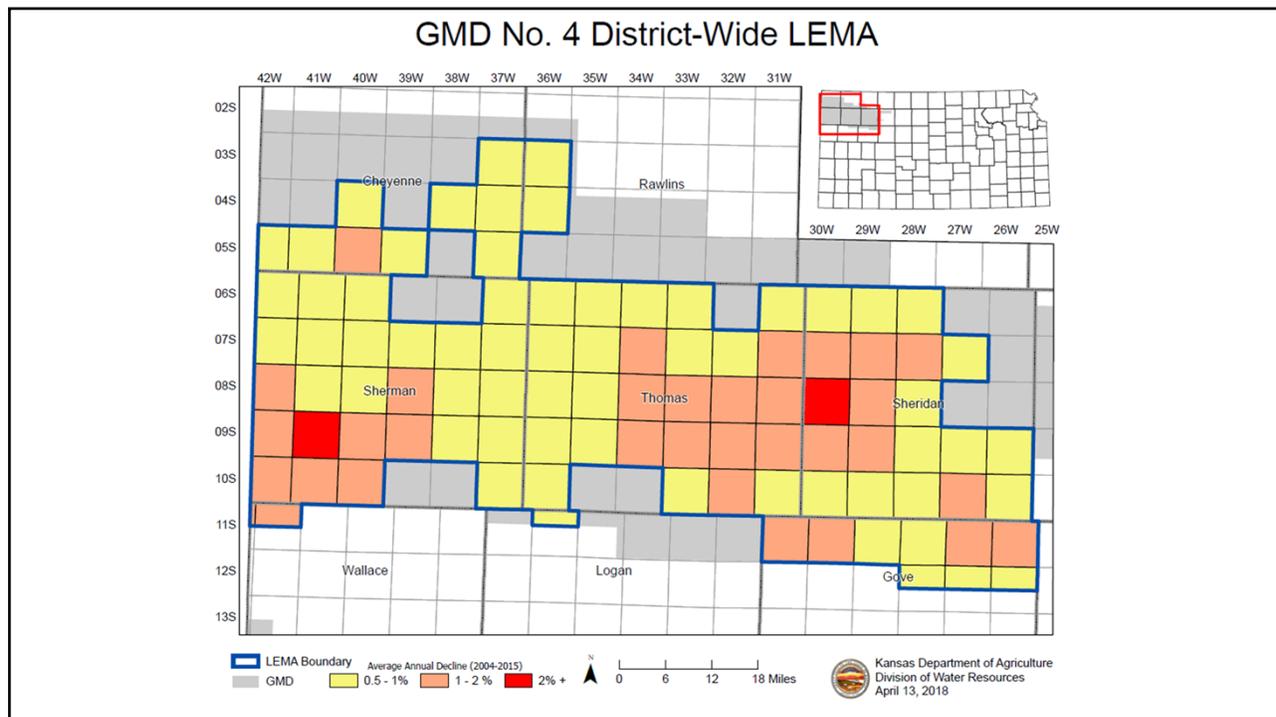
GMD#4 District Wide LEMA

- GMD 4 determined rate of decline by township
- Sets 5-year allocations in inches/acre based principally on NIR for corn
 - Highest decline areas (red): 13-14 inches
 - Second highest decline (yellow): 15-16 inches
 - Purple township, 18 inches
 - Blue/Green: no restrictions
- No additional flexibilities, encourages WCAs



GMD 4 District-wide LEMA, Process

- Plan developed by GMD 4, working with members over 2015-17
- GMD's LEMA Plan sent to chief engineer June 8, 2017
- Initial hearing held August 23, 2017; positive decision
- Second hearing held November 14, 2017
 - a group of intervenors granted expanded "due process"
 - Significant public comment provided
- On February 23, 2018, order of decision issued, returning it to District with recommended changes to improve plans administration.
- GMD accepted the recommended changes.
- On April 13, 2018, the Order of Designation issued.



GMD 4 District-wide LEMA legal challenges

- In Gove County District Court (Friesen vs. Barfield), petition for judicial review filed, challenges the process to develop the LEMA order and the validity of K.S.A. 82a-1041 (the LEMA statutory provisions), particularly allowing allocations that do not consider priority.
- In Thomas County, a petition for judicial review filed seeking review of the LEMA order, esp. as related to GMD's authority to make final decisions on allocation appeals.

2015 Legislation: Water Conservation

K.S.A. 82a-745. Water conservation areas; establishment procedures; duties of chief engineer; notice; orders; consent agreement; review.

(a) Any water right owner or a group of water right owners in a designated area may enter into a consent agreement and order with the chief engineer to establish a water conservation area. The water right owner or group of water right owners shall submit a management plan to the chief engineer.

What is a WCA?

- 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.
- Benefits:
 - Extending the usable lifetime of the local aquifer
 - Flexibilities such as multi-year allocations, exceed annual authorized quantities and/or allowing for new uses of the water when no impairment.
 - No hearings; streamlined process
- WCAs do not make a permanent change in the water right
- Can be limited in duration to allow water right owners to try out control

WCA's (outside Wichita County)

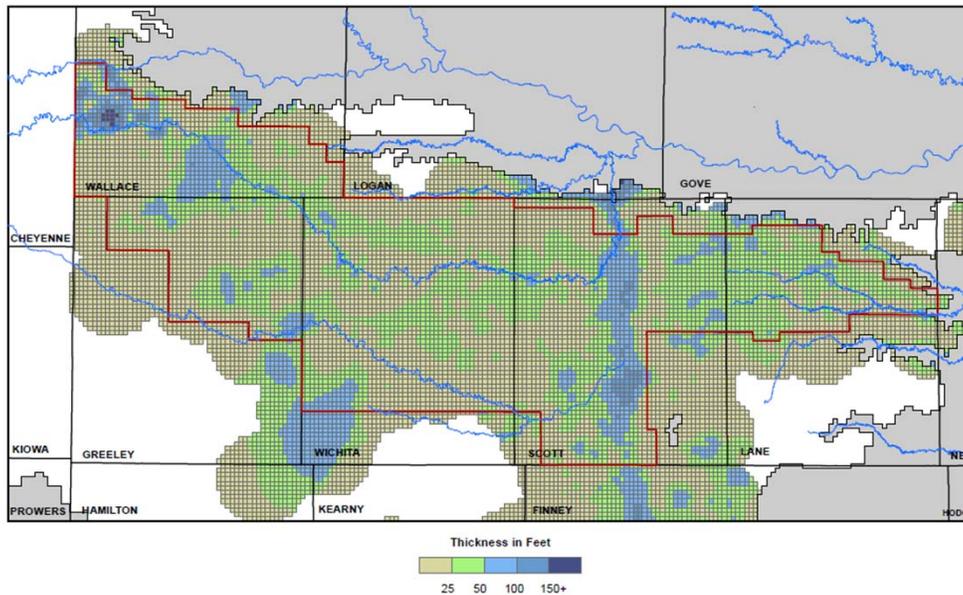
- Current status:
 - 16 plans approved
 - 24,797 acres enrolled
 - 125 Water rights / 132 wells enrolled
 - 3,690 acre-feet of annual water savings
- Many more in process

WCA PLANS AND AGREEMENTS

WCA Name	County	Plan	Consent Agreement & Order	Period	Acres Enrolled(Ac/Yr)	Water Savings (AF/Yr)	Date Approved
Powerline Dairy, LLC	GY	WCA Plan	Pending	2017-2021	2,893	435	Pending Approval
Midwest Feeders, NC	GY	WCA Plan	Pending	2018-2020	1,145	32	Pending Approval
Pillango Investments	SH	WCA Plan	Pending	2018-2020	1,432	-	Pending Approval
Bartlett Farms	FO	WCA Plan	Pending	2018-2022	333	49	Pending Approval
McCarthy-Rexford	TH	WCA Plan	WCA CAO	2018-2022	1,417	108	07/31/18
Wheatland Electric Coop Inc.	FI	WCA Plan	WCA CAO	2018-2022	3,190	1,219	08/17/18
The Garden City Company	FIKE	WCA Plan	WCA CAO	2017-2021	7,170	943	05/08/18
Ray Smith	GLWA	WCA Plan	WCA CAO	2017-2026	1,479	87	04/06/18
Fansher Farms	FI	WCA Plan	WCA CAO	2017-2021	1,246	171	03/29/18
Larry Goss Farm	FI	WCA Plan	WCA CAO	2017-2021	432	89	02/19/18
Hayden Family Farms	SH	WCA Plan	WCA CAO	2018-2017	800	85	01/26/18
R&R Unruh Farms	FIKE	WCA Plan	WCA CAO	2017-2021	1,613	248	01/26/18
Big D Farms	FI	WCA Plan	WCA CAO	2017-2021	2,790	253	09/05/17
Richmeier Farms	FI	WCA Plan	WCA CAO	2017-2021	597	129	08/25/17
Hatcher Land Co. LP	SW	WCA Plan	WCA CAO	2017-2019	252	19	07/31/17
Compton Lane County Farm	LE	WCA Plan	WCA CAO	2017-2031	288	38	03/30/17
Wichita County	WH	WCA Plan	WCA CAO Amendment	-	10,673	2,226	03/07/17
Compton Highway 4 Farm	SC	WCA Plan	WCA CAO	2017-2031	649	97	02/20/17
T&O Finney County (Willis)	FI	WCA Plan	WCA CAO	2016-2018	1274	PC*	07/25/16
Westside Dairy	ST	WCA Plan	WCA CAO	2016-2018	640	164	02/23/16
Franklin Family	SH	WCA Plan	WCA CAO	2016-2030	960	40	01/12/16

*WCA allocation held to historical average giving due consideration of past conservation per K.S.A. 82a-745.

Western Kansas GMD No 1, Remaining Saturated Thickness



Saturated Thickness - Average 2014 to 2016 (interpolated)

• Well measured in winter of 2014-2016

Wichita County WCA proposal development

- Unique, county-wide WCA that producers can enroll in
- Extensive process to develop proposal, driven by a local committee, initiated August 2016
- Plan approved March 2017



Wichita County WCA

- Four 7-year milestones beginning in 2017 and ending in 2045. Conservation factor from recent historic use, beginning at 29% and increasing to 50% by the last 7-year planning period
- Can use their allotment for any use made of water on any land
- Current status:
 - 24 consent agreements approved
 - 2226 acre-feet of annual water savings (first 7 years)
 - 10,673 acres enrolled (in excess of 15% of irrigated acres in county)
 - 61 wells enrolled
- WC committee asking GMD to propose WCA plan as a LEMA

KEARNY, FINNEY COUNTY

PROPOSED LOCAL ENHANCED MANAGEMENT AREA (KFL)

3/20/17

Change in Feet

Decline Over 20
-10 to -20
-5 to -10
0 to -5
-5 to 0
0 to 5
5 to 10
10 to 15
15 to 20
20 to 25
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Extent of the Saturated Portion of the High Plains Aquifer

PROPOSAL SUMMARY

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)
- Significant public process by stakeholders
- Discussion moves to LEMA
- Lack of consensus, LEMA stalled
- 6 WCAs in the area to get started: 13,848 acres, 1832 AF/year of savings

Value of Water Conservation Areas

- Water savings (generally under estimated as water users reluctant to commit to more savings than they are comfortable with)
- Flexibilities allow water users to maintain profitability
- Demonstration to others
- Discussions leading to consideration of additional LEMAs

Questions