

# Vision for the Future of Water Supply in Kansas

Matt Unruh  
Kansas Water Office

2015 Ag Stewardship Conference  
February 6, 2015  
Overbrook, Kansas

# OVERVIEW

---

- Discussion on the Long-term Vision for the Future of Water Supply in Kansas
- Vision items within 2015 Legislative Session
- Questions/Comments





## CALL TO ACTION

---

*“Water and the Kansas economy are directly linked. Water is a finite resource and without further planning and action we will no longer be able to meet our state’s current needs, let alone growth.” –*  
**Governor Sam Brownback**

# VISION DEVELOPMENT PROCESS

---

**October 2013**

**Governor issues Call to Action to develop Vision**

**November 2013**

**Vision Team assembled to outline plan of action for Vision development**

**Dec 2013 – March 2014**

**Stakeholder outreach to receive input on Vision, Mission, Goals and Action Items**

**April 2014**

**Initial stakeholder input shared and feedback received during leadership workshop**

**April – June 2014**

**Additional stakeholder outreach conducted to continue to receive input; KWA meeting**

**June 2014**

**Based on input received, Vision Team developed Preliminary Discussion Draft**

**July 2014**

**Statewide water vision public tour with twelve listening sessions**

**August 2014**

**KWA receives feedback on Discussion Draft; On-line survey released for additional feedback**

**Sept – Oct 2014**

**Additional stakeholder outreach to receive feedback; Vision Team developed second draft**

**November 2014**

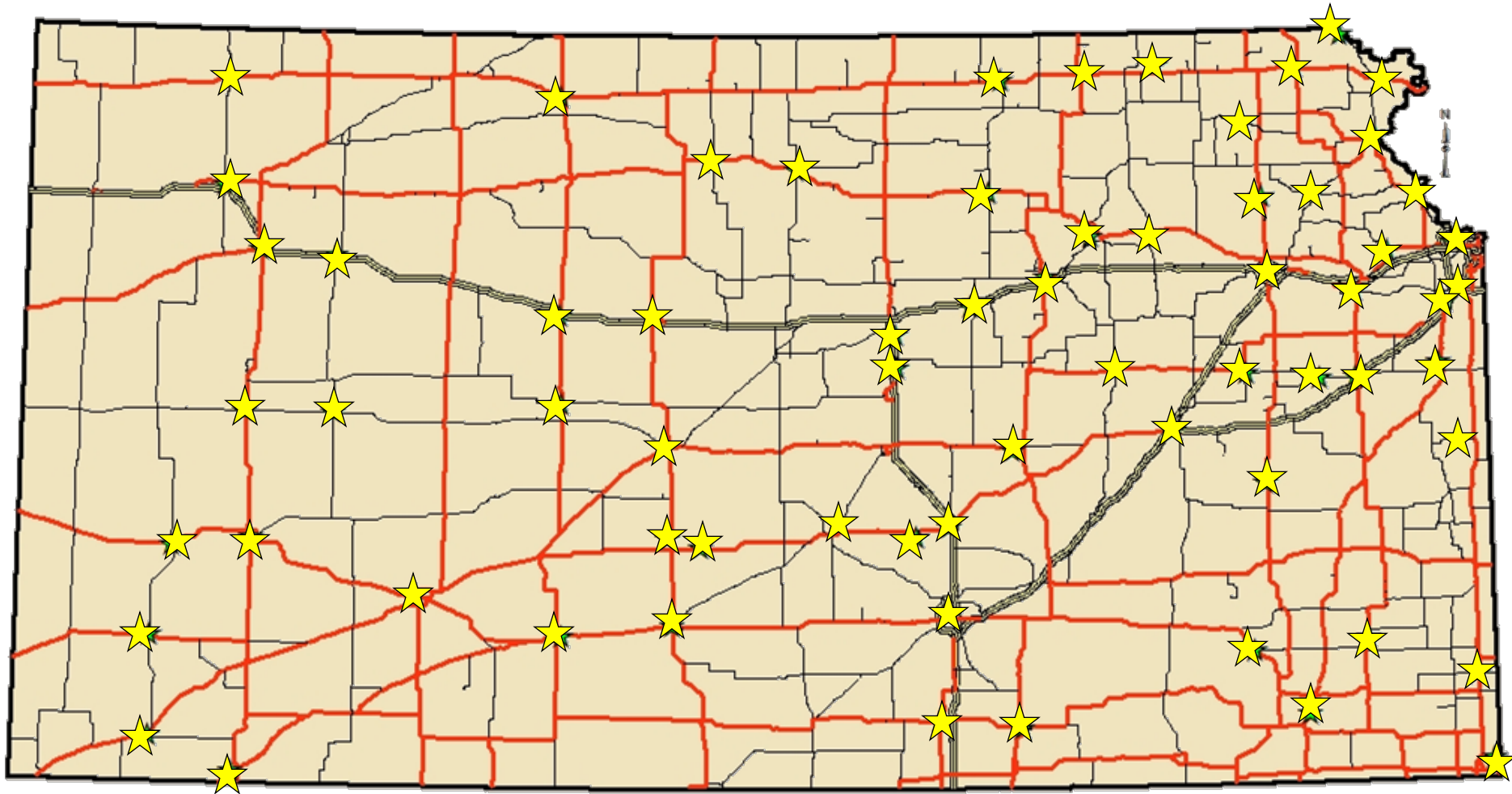
**Second draft of the Vision presented at Governor's Water Conference**

---

▶ **Vision for the Future of Water Supply in Kansas**

# MORE THAN 250 EVENTS WITH MORE THAN 12,000 ATTENDEES

---

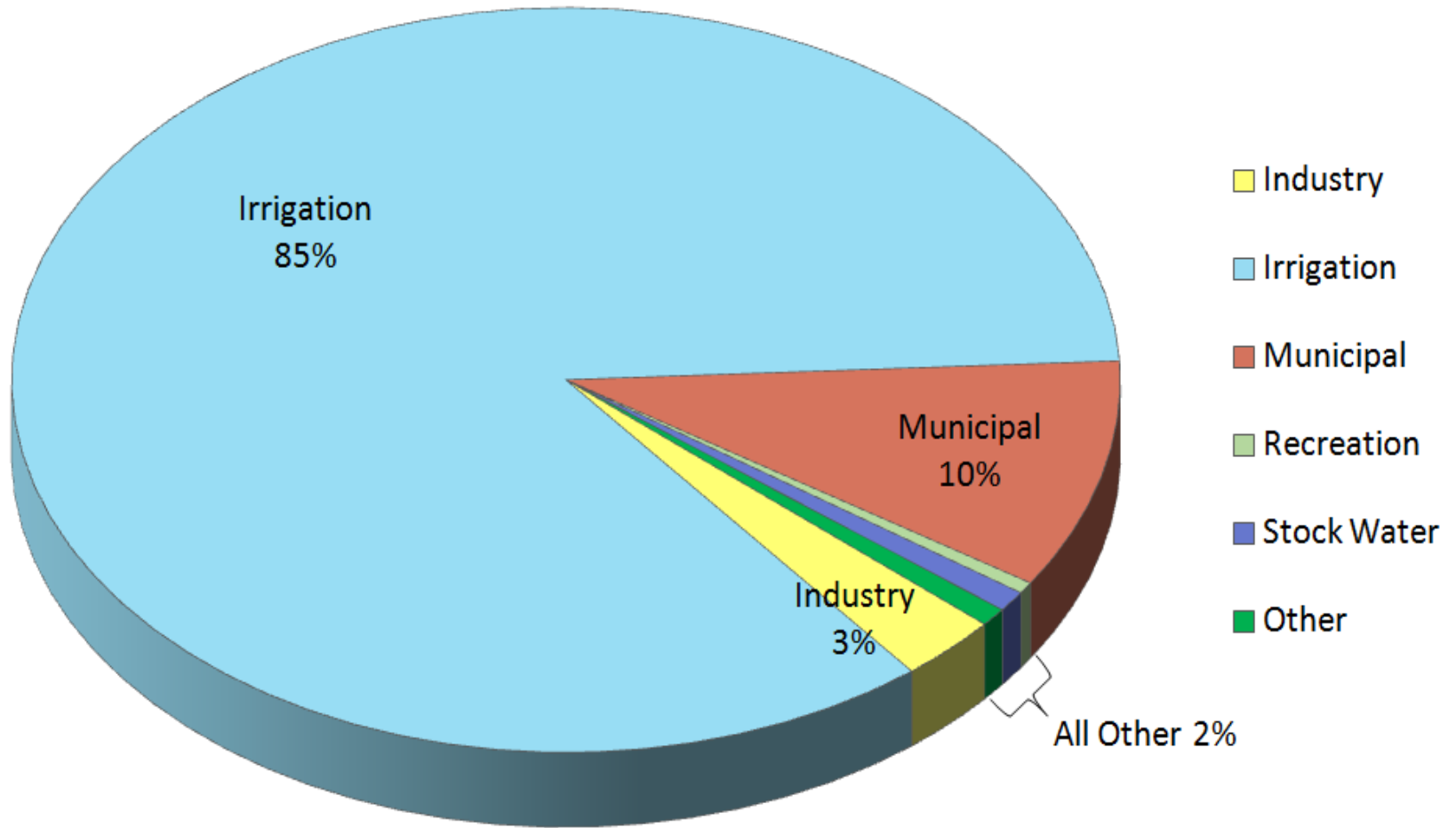




# STATE OF THE RESOURCE

Vision for the Future of Water Supply in Kansas

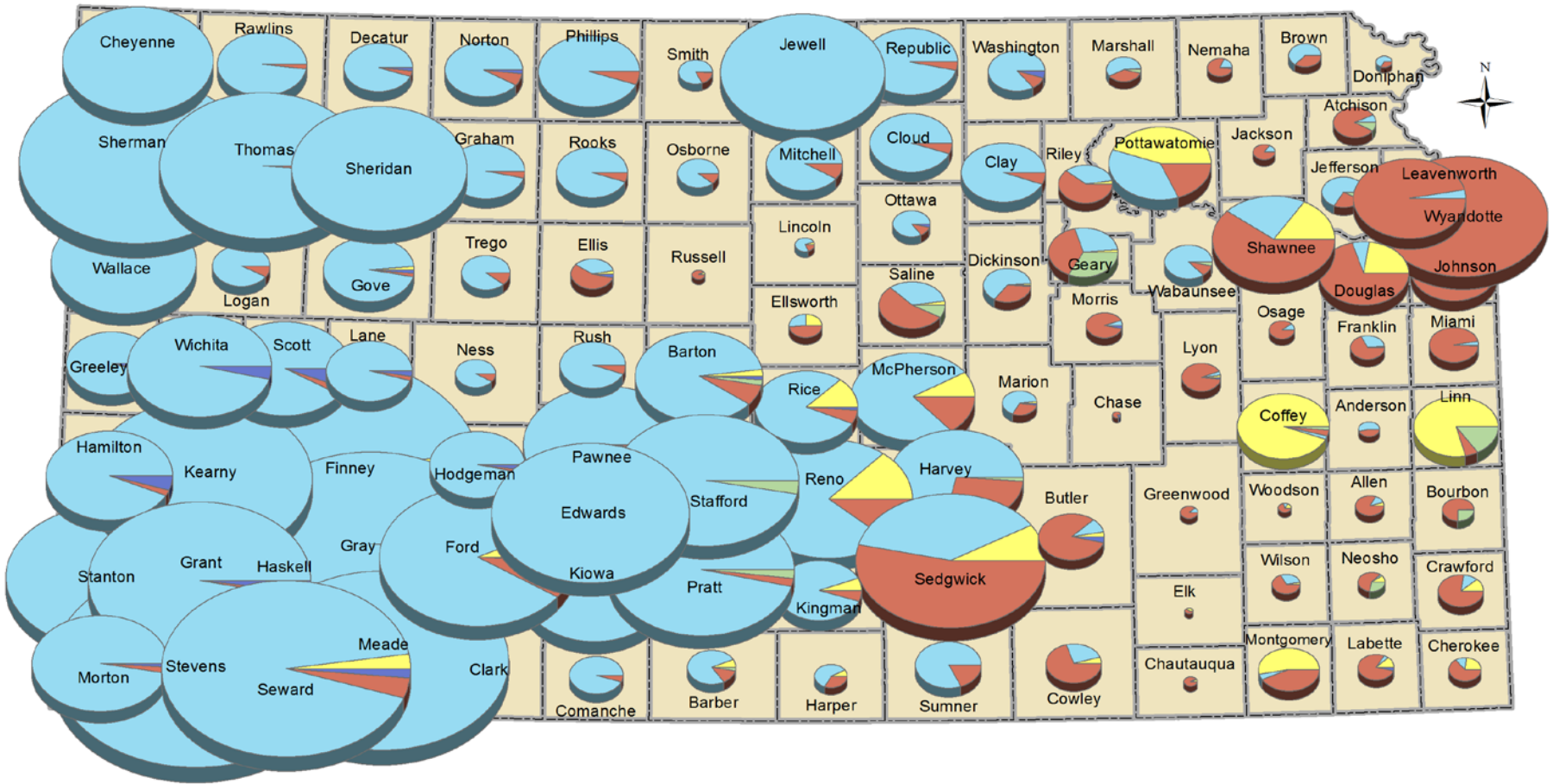
## 2012 Water Use by Type of Use



Sources:

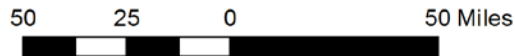
Division of Water Resources, Water Use Program  
Kansas Water Office, Water Marketing Program

# 2012 Water Use By County



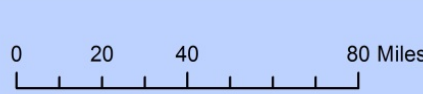
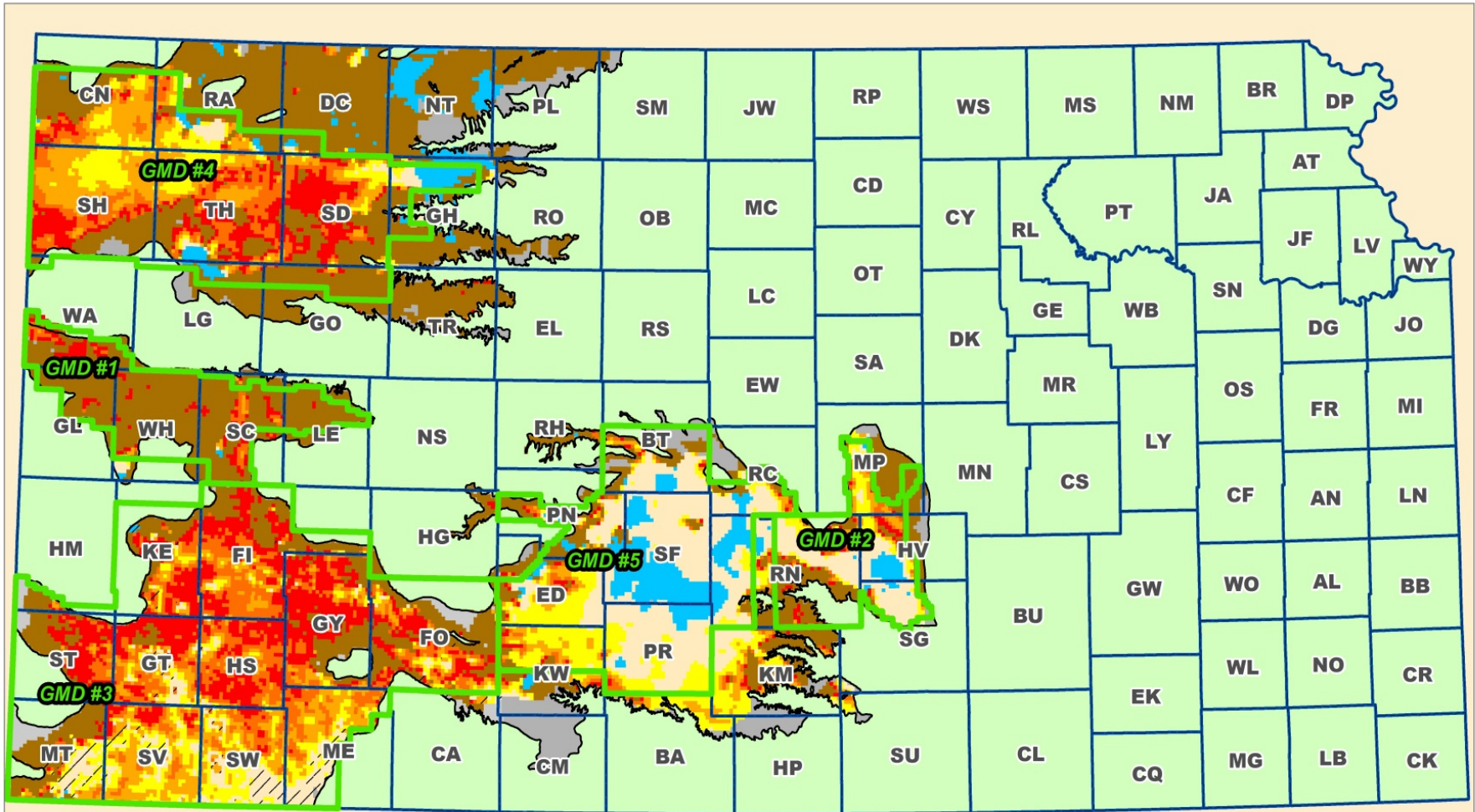
Data Sources:  
 Division of Water Resources, Water Use Program  
 Kansas Water Office, Water Marketing Program

## Water Use by Type of Use



# Estimated Usable Lifetime for the High Plains Aquifer, Kansas\*

(Based on groundwater trends from 2001-2003 to 2011-2013 and the minimum saturated thickness required to support well yields at 400 gpm under a scenario of 90 days pumping with wells on 1/4 section)



## Years Until the Average 2011-2013 Saturated Thickness (ST) Meets Minimum Threshold

- Under 25
- 25 - 50
- 50 - 100
- 100 - 250
- Over 250
- Water Table Above 2001-2003 Levels
- Low Use Areas\*
- ST Already Below Minimum Threshold

\*Low use areas are defined by a section with less than 75 acre-feet of net average use from 2000-2009 and only for GMD #3

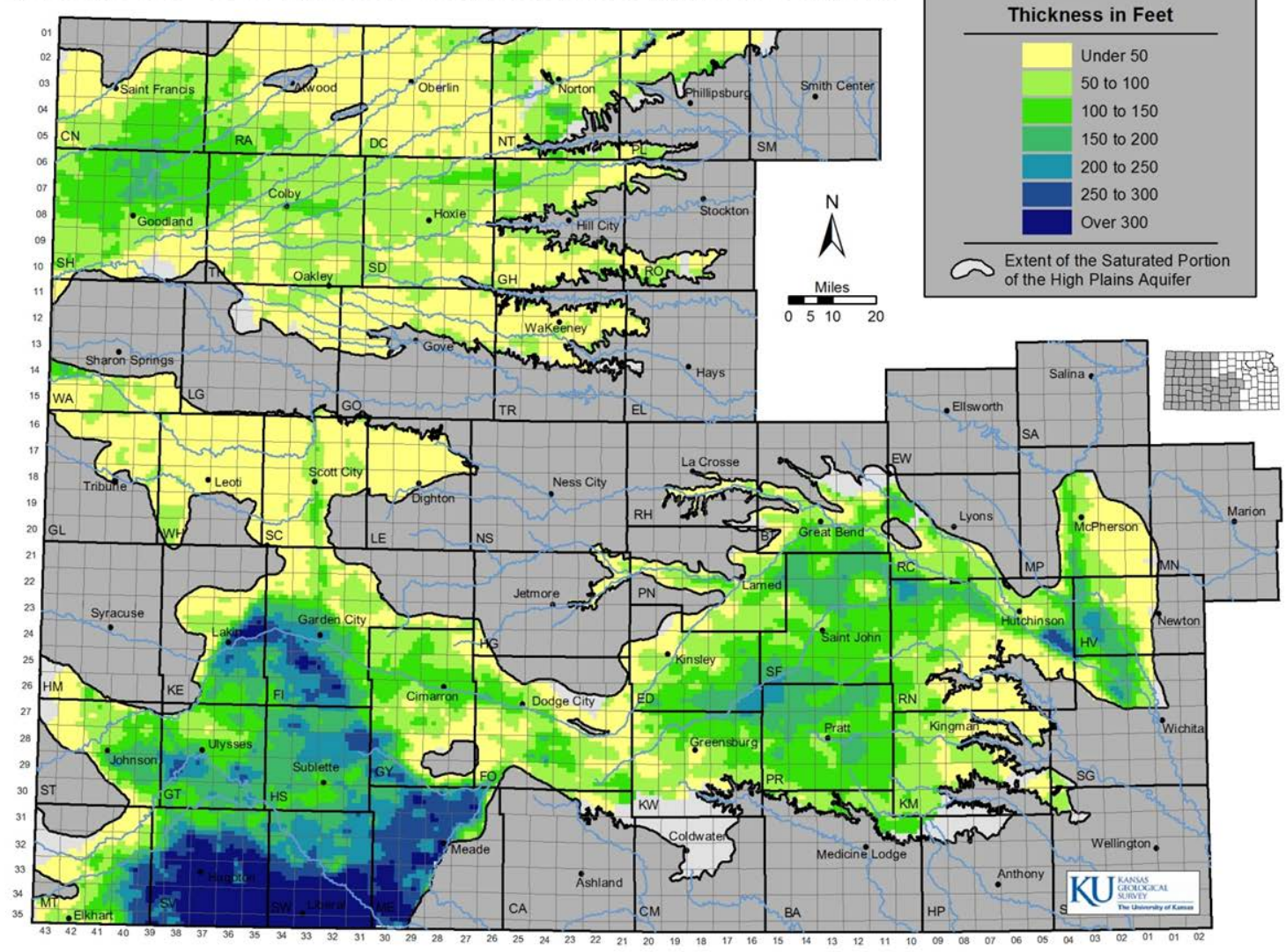
- Beyond extent of High Plains Aquifer
- Extent of the Saturated Portion of the High Plains Aquifer



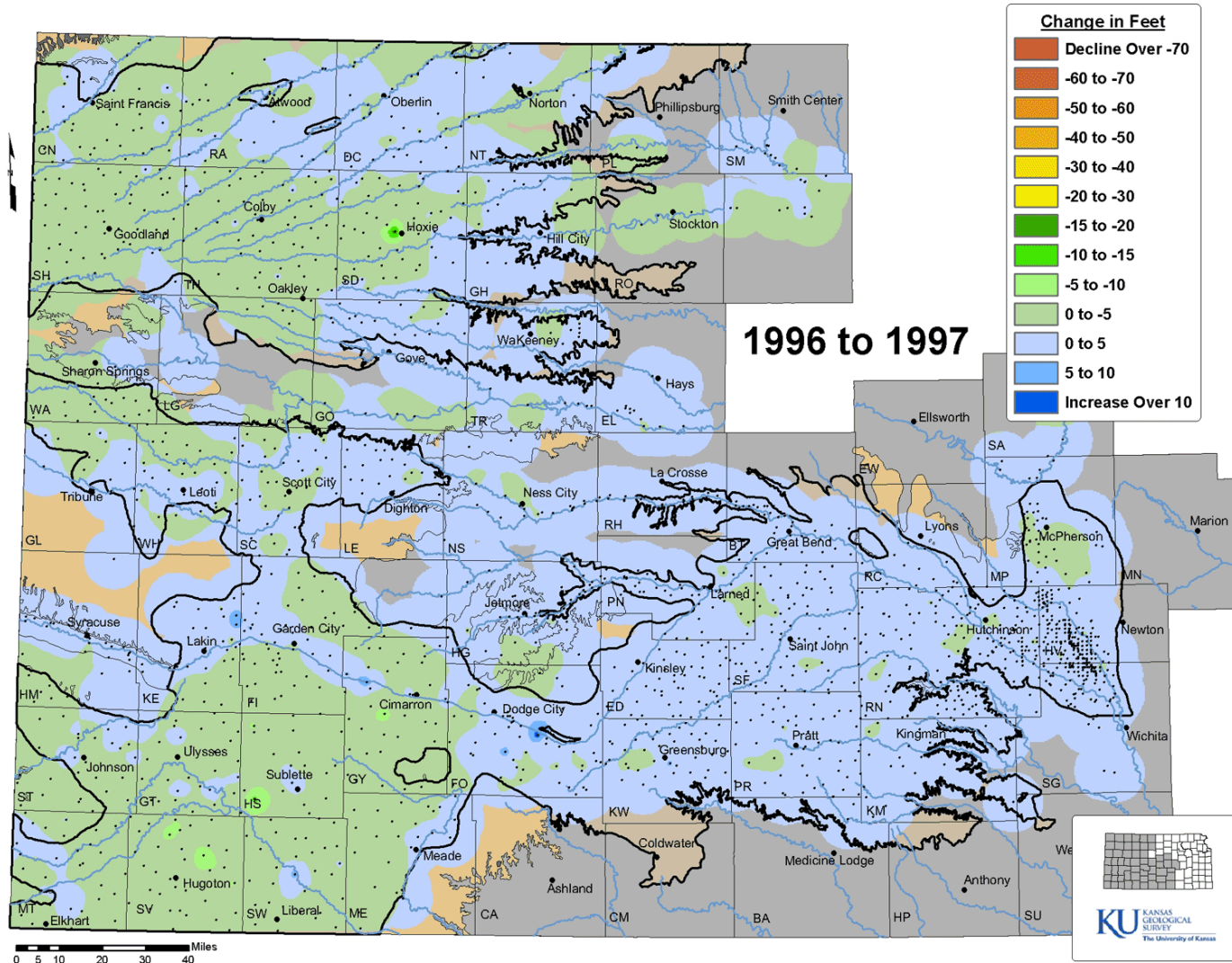
Kansas Department of Agriculture  
Division of Water Resources  
\*Data from the Kansas Geological Survey

# Saturated Thickness (Water in Storage)

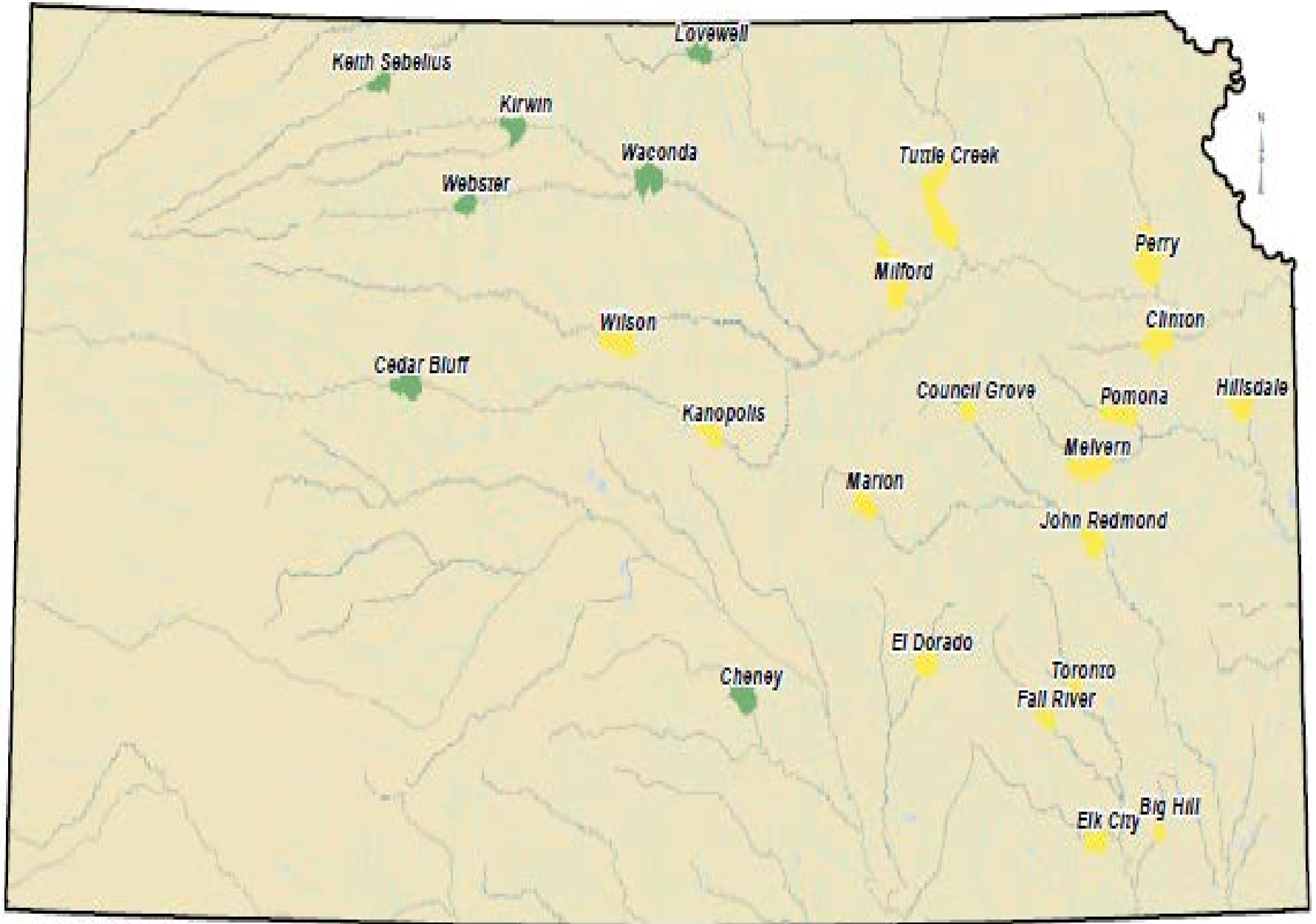
Average 2010 - 2012 Saturated Thickness, Kansas High Plains Aquifer



# Ogallala – High Plains Aquifer



# Surface Water Resources in Kansas

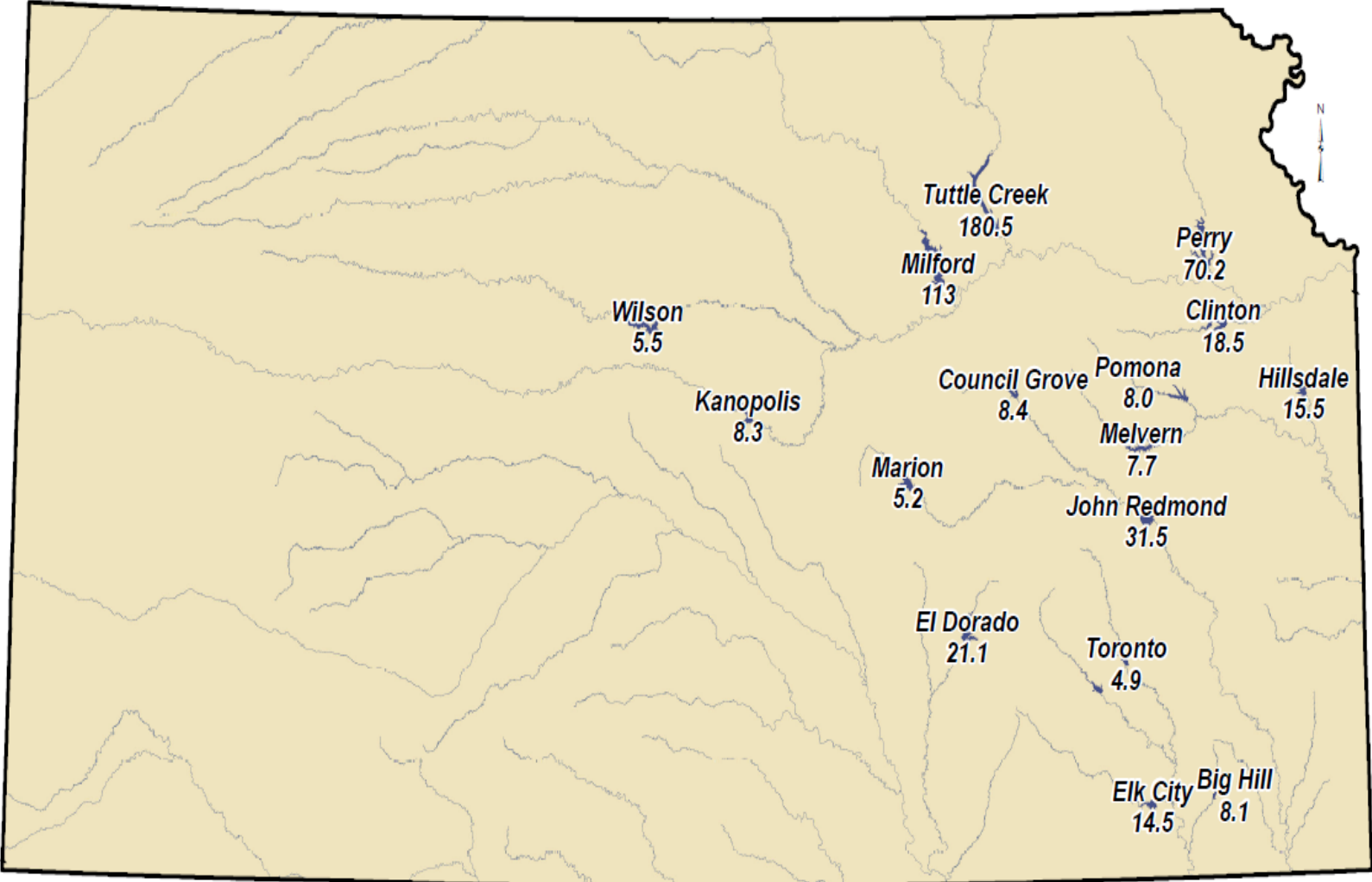


Bureau of Reclamation



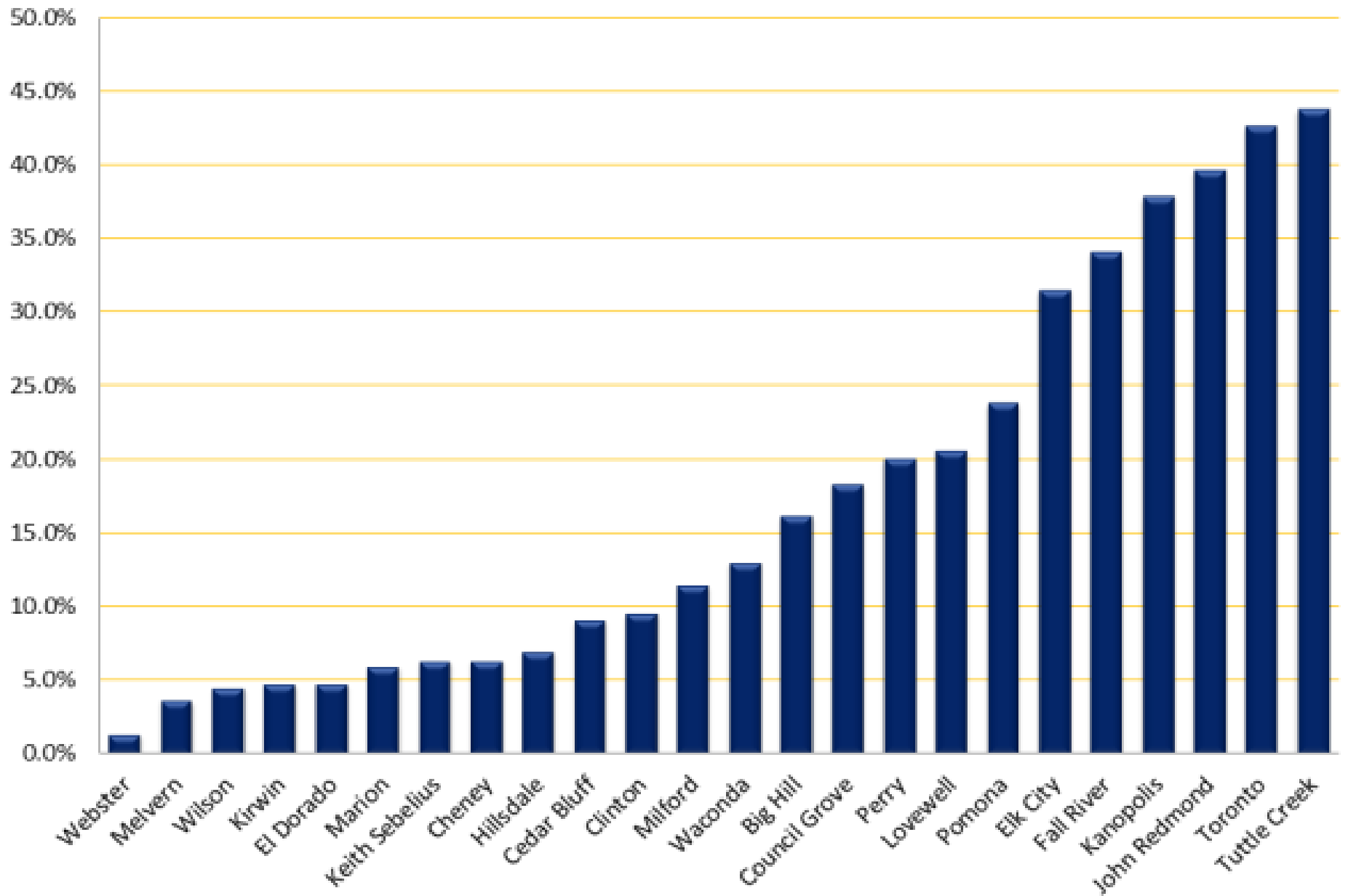
U.S. Corps of Engineers

# Water Supply Reservoir Yield (MGD)



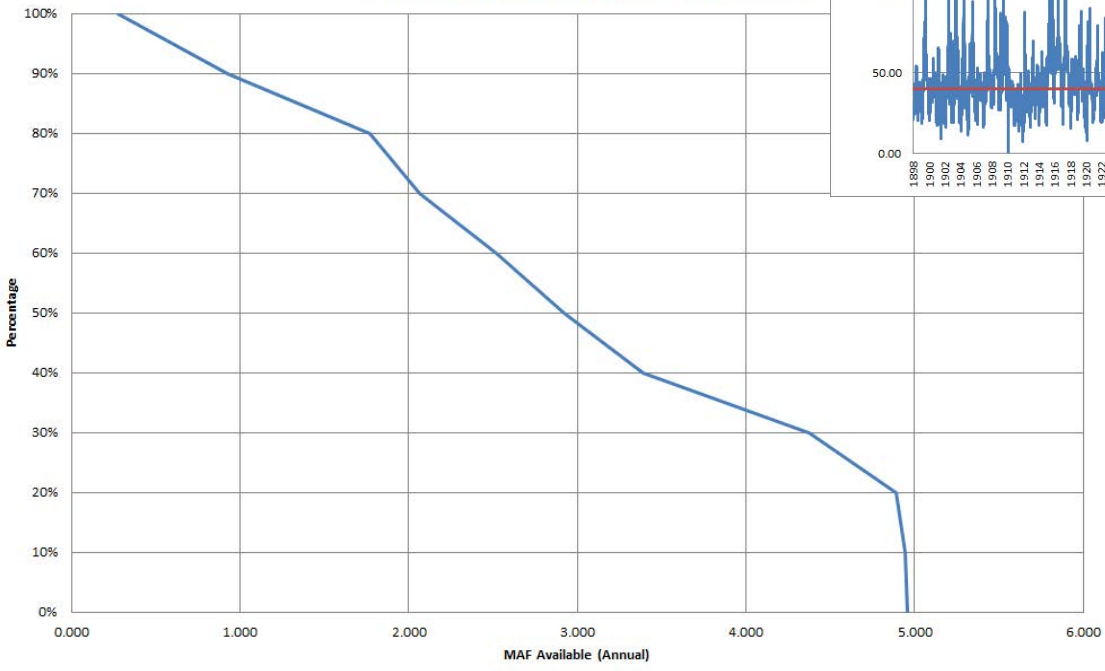
Kansas Water Office, 2014

# Loss of Storage Capacity

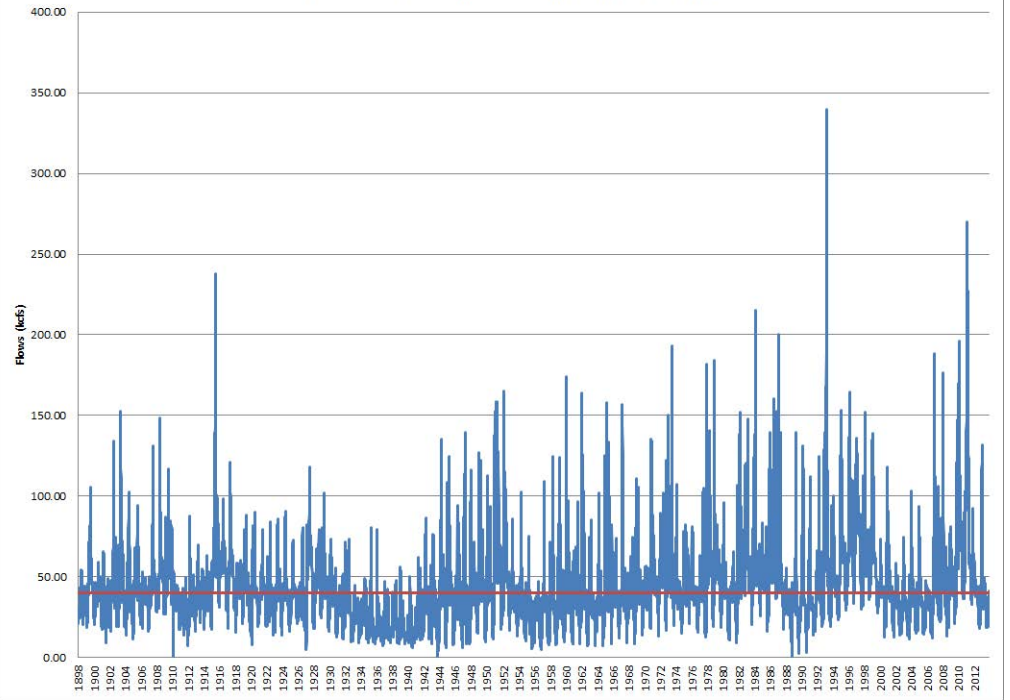


# MISSOURI RIVER

Probability of annual water availability



Flows above navigation targets (1898-2014)



# VISION

*Kansans act on a shared commitment to have the water resources necessary to support the state's social, economic and natural resource needs for current and future generations.*

# MISSION

*Provide Kansans with the framework, policy and tools, developed in concert with stakeholders, to manage, secure, and protect a reliable, long-term state-wide water supply while balancing conservation with economic growth.*

## GUIDING PRINCIPLES

---

- ▶ Locally driven solutions have the highest opportunity for long-term success.
- ▶ Policies and programs should not unintentionally penalize those who have already demonstrated good stewardship with the state's water resources; and
- ▶ Voluntary, incentive and market-based water conservation and land management activities are the preferred tools for ensuring a reliable state-wide water supply.

## IMMEDIATE PRIORITY ACTION ITEMS

---

- ▶ Improve coordination on water related issues by the state's primary water related agencies through the creation of the Governor's Water Resources Sub-Cabinet at the Executive level with additional regular agency collaborative activities to implement joint activities.
- ▶ Establish a Blue-Ribbon Task Force to develop a balanced, affordable and sustainable method to provide financing for water resource management and protection; including alternatives that utilize public and private partnerships.



# ACTION ITEMS

---

- ▶ **Categorized by regions:**

- ▶ Statewide
- ▶ Ogallala-High Plains Aquifer
- ▶ Reservoirs
- ▶ Other Regions

- ▶ **Organized by priority:**

- ▶ Phase I – Initiated, but not necessarily completed in first year
- ▶ Phase II – Initiated within five years
- ▶ Phase III – Longer term and may require additional research, development and stakeholder coordination



# WATER CONSERVATION

---

- ▶ Strategically emphasize information and education regarding the importance of water and water conservation practices
- ▶ Implement additional or enhanced water conservation policies and practices
- ▶ Reduce barriers and increase development of locally driven conservation and management plans
- ▶ Encourage conservation planning in economic development and business recruitment
- ▶ Increase adoption of watershed practices that reduce future water supply loss



# WATER MANAGEMENT

Vision for the Future of Water Supply in Kansas

# WATER MANAGEMENT

---

- ▶ Modify reservoir operations and downstream targets to most efficiently operate reservoirs for water supply
- ▶ Improve interstate cooperation so that Kansans' water needs are met and protected
- ▶ Increase the regionalization of water supply to improve long-term water supply reliability
- ▶ Evaluate changes to the Kansas Water Appropriation Act and Rules and Regulations to promote better balance between efficient water use and economic benefit
- ▶ Evaluate and improve state agency coordination and collaboration



# TECHNOLOGY & CROP VARIETIES

---

- ▶ Promote irrigation efficiency technologies
- ▶ Increase utilization of less water intensive crop varieties
- ▶ Implement research-based technology aimed at better understanding our state's water supply
- ▶ Develop career and technical education programming related to water resource management and technology to build the needed workforce



## ADDITIONAL SOURCES OF SUPPLY

---

- ▶ Restore water supply lost to sedimentation through dredging and other in-lake sediment management techniques
- ▶ Allow for the transfer of water supplies between basins where feasible and cost effective
- ▶ Evaluate the sources and potential uses of lower quality water
- ▶ Secure all available storage at Federal reservoirs including reallocating storage where such actions are possible
- ▶ Increase other sources of storage available for water supply



# ECONOMIC ANALYSIS

---

## ▶ Current Studies

- ▶ Value that irrigation water adds to the local and state economies.
- ▶ Income, expense, and net income generated from an acre-foot of water
- ▶ Long-term supply and demand for water in all basins

## ▶ Phase I

- ▶ Impact analysis on policy alternatives
- ▶ Decision making tools
- ▶ Water conservation outreach

## ▶ Phase II

- ▶ Economic analysis of value of water in Kansas, by region
- ▶ Decision making tools



---

## ▶ Vision for the Future of Water Supply in Kansas



# Measuring Success with a Regional Approach

---

**Nov – Dec 2014**

**Define Regional Planning Areas**

**January 2015**

**Identify Regional Goal Leadership Teams**

**Feb – March 2015**

**Public Outreach**

**April – May 2015**

**Define Regional Goal and Present to KWA**

**June – July 2015**

**Public Comment**

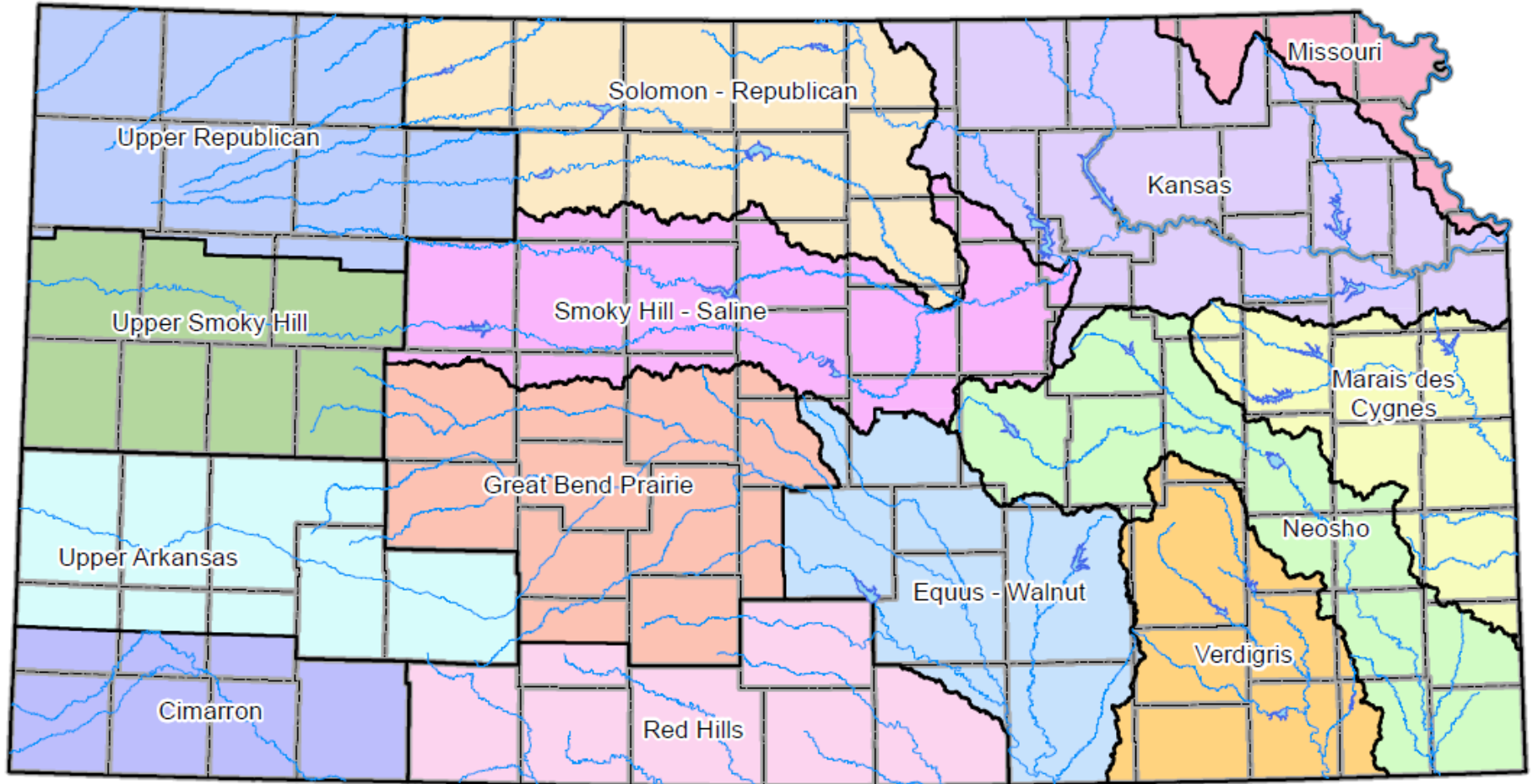
**August 2015**

**Incorporate Regional Goals into Vision**

**Nov 2015 – Jan 2016**

**Present Regional Goals to Governor and Legislature**

# DRAFT REGIONAL PLANNING AREAS



▶ Vision for the Future of Water Supply in Kansas



# BE THE VISION

Vision for the Future of Water Supply in Kansas

## BE THE VISION

---

- ▶ Owens Corning
- ▶ Fort Riley
- ▶ City of Hays
- ▶ McCarty Family Farms, Inc.
- ▶ Supreme Feeders
- ▶ Richard Wenstrom
- ▶ National Cooperative Refinery Association (NCRA) and City of McPherson
- ▶ Sheridan-6 Local Enhanced Management Area (LEMA)
- ▶ FirstWater Ag, Inc.

# Next Steps

---

- ▶ Draft II posted on-line
- ▶ Continue to receive stakeholder input and feedback through January 9<sup>th</sup> and finalize prior to KWA meeting (January 28-29) and KS Legislature
- ▶ Implement two immediate action items
- ▶ Initiate regional goal setting process
- ▶ Complete 5-Year Update of Kansas Water Plan
- ▶ Commence Phase I actions items



# Vision and the Legislature

---

- ▶ Several action items in Vision will be presented during 2015 Session in an effort to improve water management and increase access to additional sources of supply:
  - ▶ Modify Multi-Year Flex Account (MYFA) statute to allow carry forward of unused water when a water right holder re-enrolls into another 5-year flex account
  - ▶ Establish corrective controls that allow flexibility based on local average reasonable use within the Local Enhanced Management Area (LEMA) statute so not to penalize those who have already demonstrated reduced water use
  - ▶ Expand LEMAs so a proposal can come forward to the Chief Engineer from either Groundwater Management Districts (GMDs), directly from local water right holders or other entities such as county conservation districts

# Vision and the Legislature

---

- ▶ Vision related items to be presented in 2015 Session:
  - ▶ Provide authority to the Kansas Department of Agriculture, Division of Conservation, to hold conservation easements on behalf of applicants for the purpose of mitigation requirements under Section 404 of the Clean Water Act. Costly and cumbersome mitigation requirements are an impediment to the construction of new watershed flood control structures. Watershed structures are important practices for sediment reduction
  - ▶ Eliminate statutory prohibition to use drinking water State Revolving Loan Fund (SRLF) funds for water transfers

# Vision and the Legislature

---

- ▶ Rules and Regulation changes to be presented during 2015 Session (*no legislative action required*):
  - ▶ Limit the movement of a point of diversion greater than 300 feet over the Ogallala aquifer in areas where the source is ground water and resource is declining unless the applicant of the change application can demonstrate hydrologic analysis or pump test results, that the new, proposed location does not adversely affect any current authorized nearby wells, including domestic wells
  - ▶ Develop flexibility options for stockwater, municipal and industrial uses to improve management and evaluate current consumptive use regulations to ensure they are being applied properly

# Vision and the Legislature

---

- ▶ Rules and Regulation changes to be presented during 2015 Session (*no legislative action required*):
  - ▶ Increase enforcement and implement more stringent fees and penalties for over pumping and other violations
  - ▶ Administratively close additional areas of the state to new appropriations where already fully allocated

