



U.S. ROUNDTABLE FOR SUSTAINABLE BEEF

Our regional focus on sustainable feed and forage research



March 2024



MISSION

To advance, support and communicate continuous improvement of sustainability across the U.S. beef value chain.

VISION

The U.S. beef value chain is the trusted global leader in environmentally sound, socially responsible and economically viable beef.

BACKGROUND

MULTI-STAKEHOLDER ORGANIZATION



Cow-calf



Feedyard



Auction
Market



Packer &
Processor



Retail &
Foodservice



Civil Society



Allied Industry

HIGH-PRIORITY INDICATORS OF SUSTAINABILITY



Air & GHG
Emissions



Land
Resources



Water
Resources



Employee Safety
& Well-Being



Animal Health
& Well-Being



Efficiency
& Yield



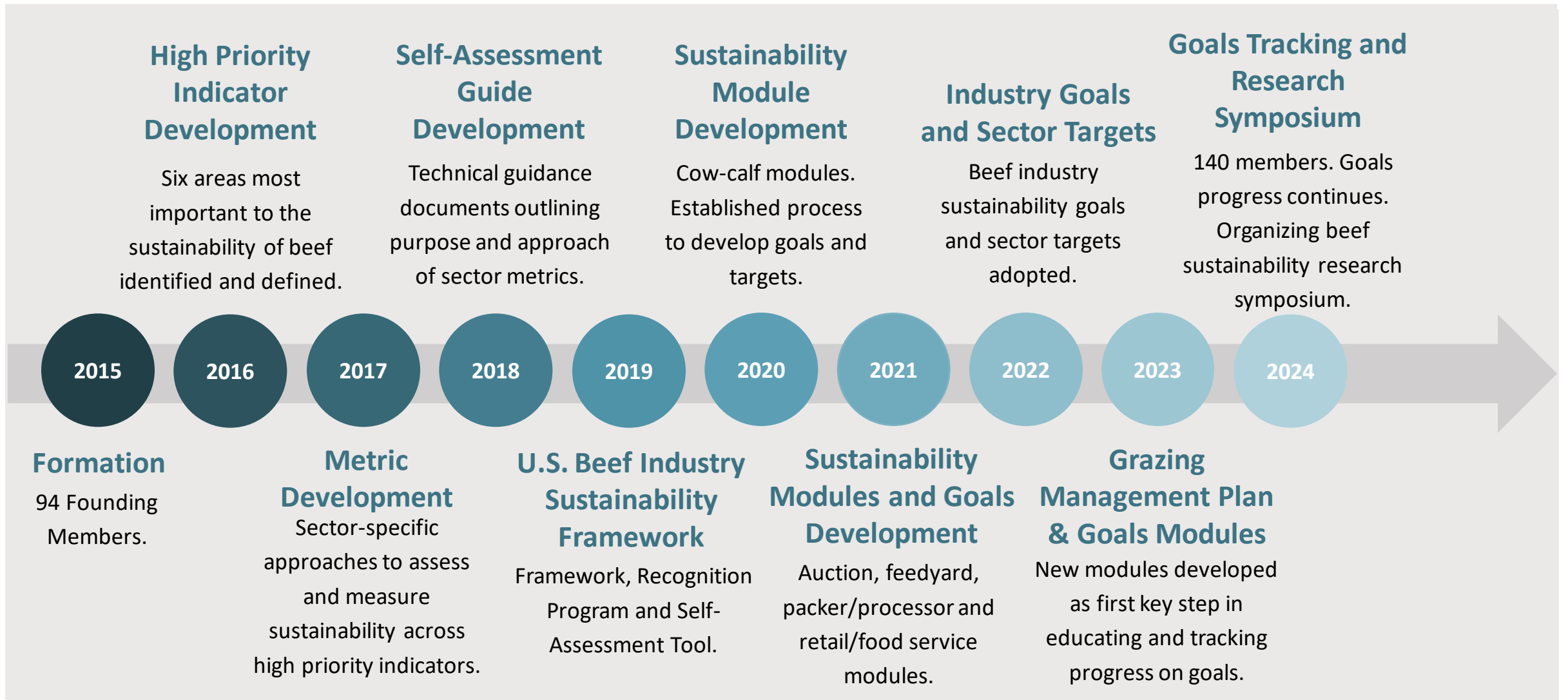
USRSB Members





USRSB TIMELINE & HISTORY

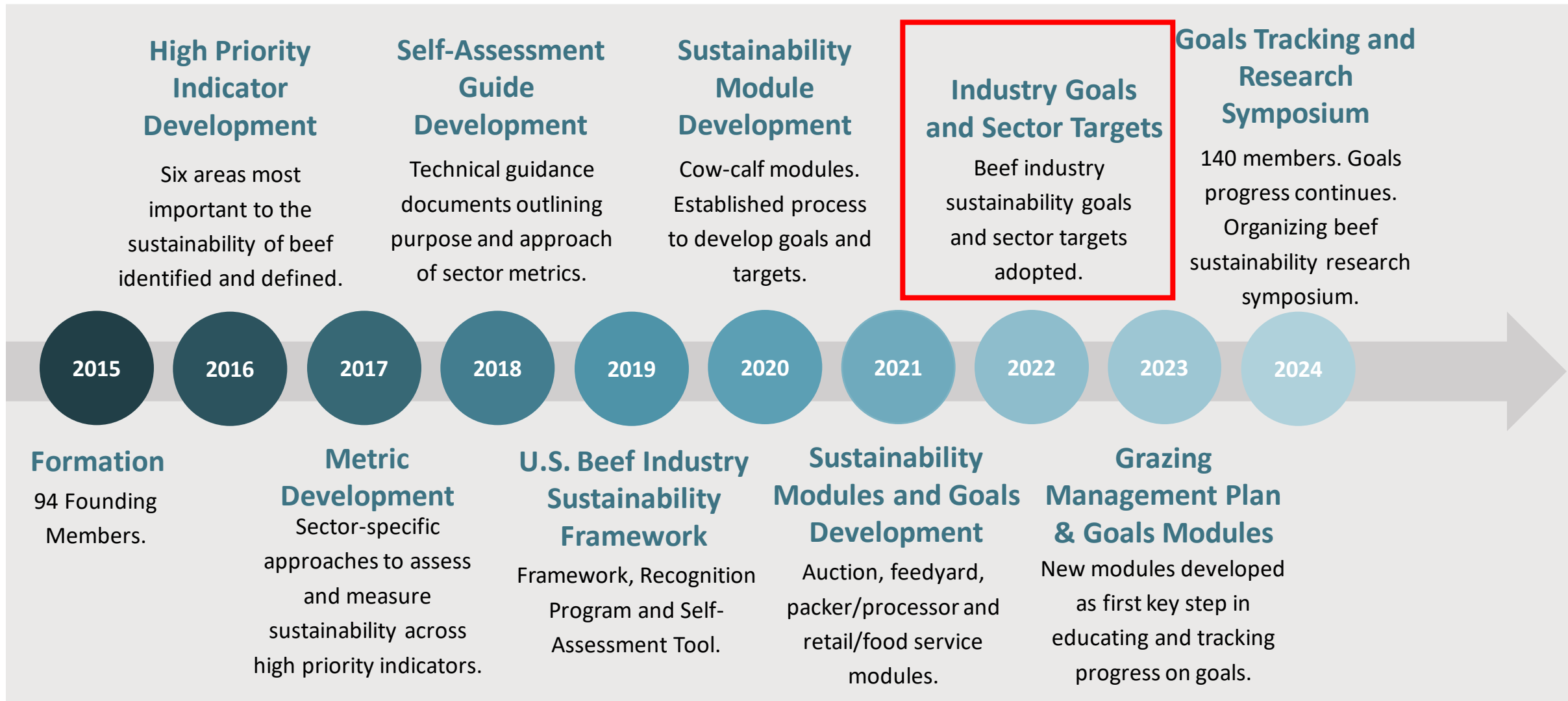
2015 – 2024





USRSB TIMELINE & HISTORY

2015 – 2024





HIGH-PRIORITY INDICATOR GOALS & SECTOR TARGETS



Air & Greenhouse Gas Emissions

The U.S. beef supply chain will achieve climate neutrality by 2040.



Land Resources

The U.S. beef supply chain will work to maintain and improve grazing lands under the care of U.S. beef producers.



Water Resources

By 2050, the U.S. beef supply chain will improve water management strategies and improve water quality.



Employee Safety & Well-Being

The U.S. beef supply chain is committed to continuously improving the safety, development and well-being of individuals working throughout the industry



Animal Health & Well-Being

The U.S. beef supply chain will continue to improve animal health and well-being.



Efficiency & Yield

The U.S. beef supply chain will improve efficiencies, enhance product value and increase demand, which collectively will enable operations and businesses to maintain and improve individual and community financial health.



USRSB goals & the role of water

By 2050, the U.S. beef supply chain will improve water management strategies and improve water quality. We will do this by:

- **Benchmarking water use and quality by 2025**
- Improving retention and capture of nutrients for beneficial use
- **Supporting feedstuffs growers to achieve their water sustainability goals**



Feed Sustainability Task Force

BOARD OF DIRECTORS

*Chair, Chair-Elect, Secretary/Treasurer, and Past-Chair
20 Board of Director Members*



GENERAL ASSEMBLY

*Five constituencies: Producer, Allied Industry, Civil Society,
Packers & Processors, Retail & Food Service*



WORKING GROUPS, COMMITTEES & TASK FORCES

*Appointed by the Board of Directors
Chaired by Members*

Scope of Work

Increase collaboration, including networking with other protein groups, as appropriate, to identify areas of engagement around sustainable feed production and manufacturing and promote transparency by encouraging the flow of feed relevant information along the value chain.



HIGH-PRIORITY INDICATOR GOALS & SECTOR TARGETS



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Feed Sustainability Task Force Areas of Focus



TABLE 1

U.S. Roundtable for Sustainable Beef sector specific indicators relevant to the animal feed sustainability efforts

Goal areas and sector specific indicators	On-farm crop production	Ration innovation
Air and greenhouse gas emissions		
Feedyard: Reduce GHG emissions by 10% per year per pound of beef by 2030	X	X
Packer and processors: By 2030, take tangible action to achieve an approved science-based target to reduce emissions	X	X
Retail and food service: Set credible GHG reduction goals for their company to reduce scope 3 emissions and publicly report progress by 2030, and have a strategic plan in place by 2030 with concrete steps to achieved climate neutrality for the beef value chain by 2040 for scope 1, 2 and 3	X	X
Land resources		
Feedyard: Implement nutrient management plans and practices by 2030	X	
Retail and food service: Assess conversion risk in their supply chain, set science-based goals, and by 2025, will implement a strategy to reduce conversion	X	X
Water resources		
All: Support feedstuff growers to achieve their water sustainability goals	X	
Feedyard: Implement water conservation management practices by 2030	X	X
Retail and food service: Implement improvement plans, track performance and publicly report progress of water stewardship across the company's sourcing footprint by 2030	X	X
Efficiency and yield		
Feedyard: Continue to enhance cattle performance and feedyard efficiency		x





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Feed Sustainability Task Force Water Resources Goals

- **All:** Support feedstuff growers to achieve their water sustainability goals (on-farm crop production)
- **Feedyard:** Implement water conservation practices by 2030 (on-farm crop production, ration innovation)
- **Retail and food service:** Implement improvement plans, track performance and publicly report progress of water stewardship across the company's sourcing footprint by 2030 (on-farm production, ration innovation)





Research Priorities Working Group

BOARD OF DIRECTORS

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Scope of Work

Review and support external projects, field trials, pilot projects, research projects and resources that align with the USRSB vision and mission, including oversight of approved projects, progress reports and results. Identify gaps in research knowledge and actively look for new research opportunities to support that will promote progress towards achieving the USRSB High-Priority Indicator Goals & Sector Targets.



USRSB Research Working Group



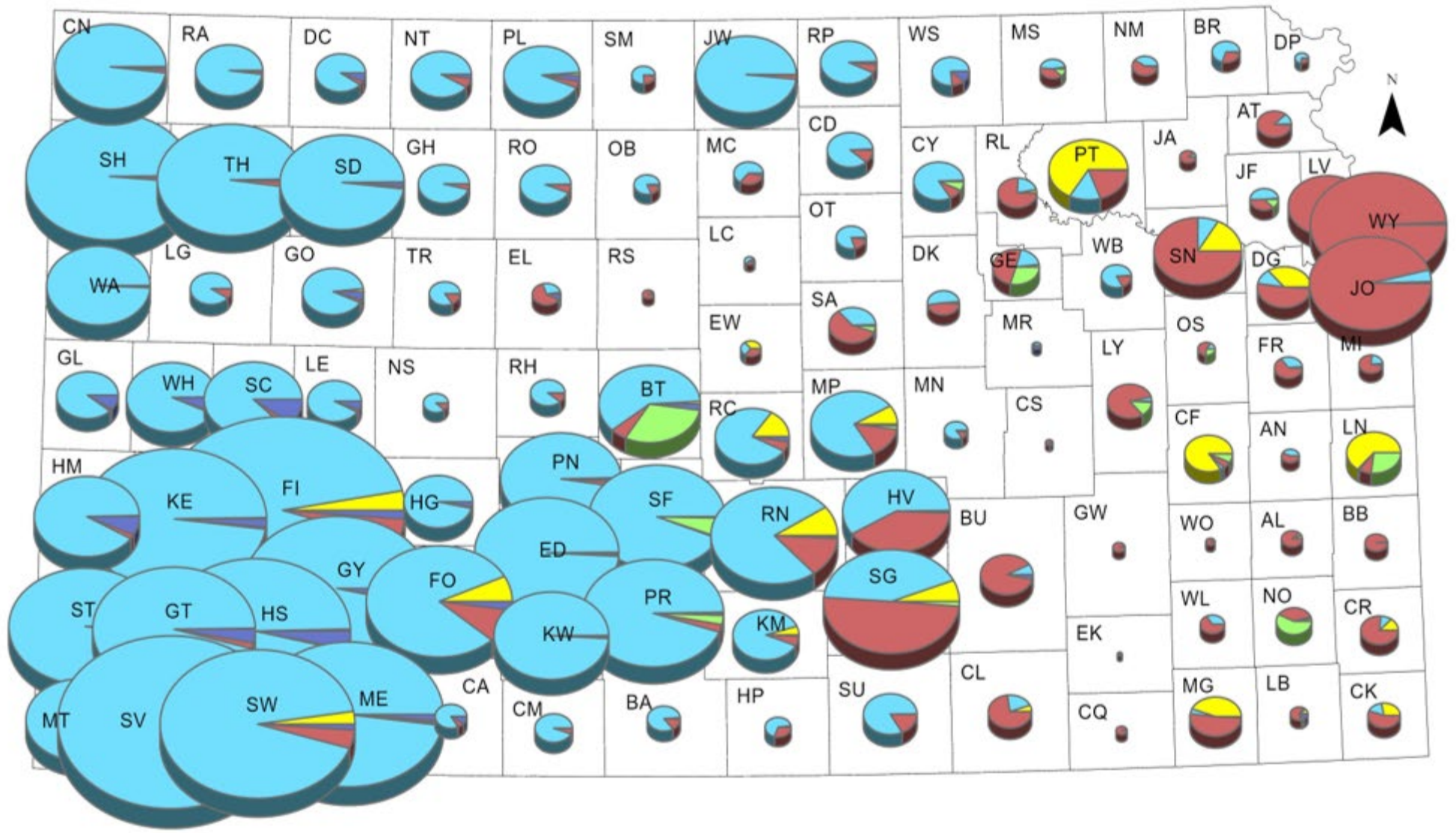
“Sorghum feeding research ...everything
from flaking to feeding”

- Clayton Huseman (Kansas Livestock Association), USRSB Research Working Group



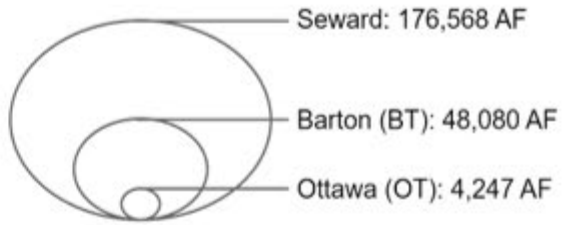
Which Groundwater-Dependent Industries Do We Need to Protect?

- Based on 2018 IMPLAN data, compared to crop production in Finney County:
 - The beef sectors employs 11.36 times as many people; generates 11.64 times as much output (revenue); and generates 5.42 times as much value added (profit)
- Guerrero et al. (2012) suggests that, accounting for only the direct water use, dairies are high-value users of water generating over \$93,000 per acre-ft.
- Guerrero et al. (2013) suggests that, accounting for only the direct water use, the beef industry is a high-value user of water generating over \$165,576 per acre-ft.
- Based on 2022 KSU extension budgets, corn production in Southwest Kansas generates \$970 per acre-ft.



Use Made of Water

- Industrial
- Irrigation
- Stockwater
- Municipal
- Recreation

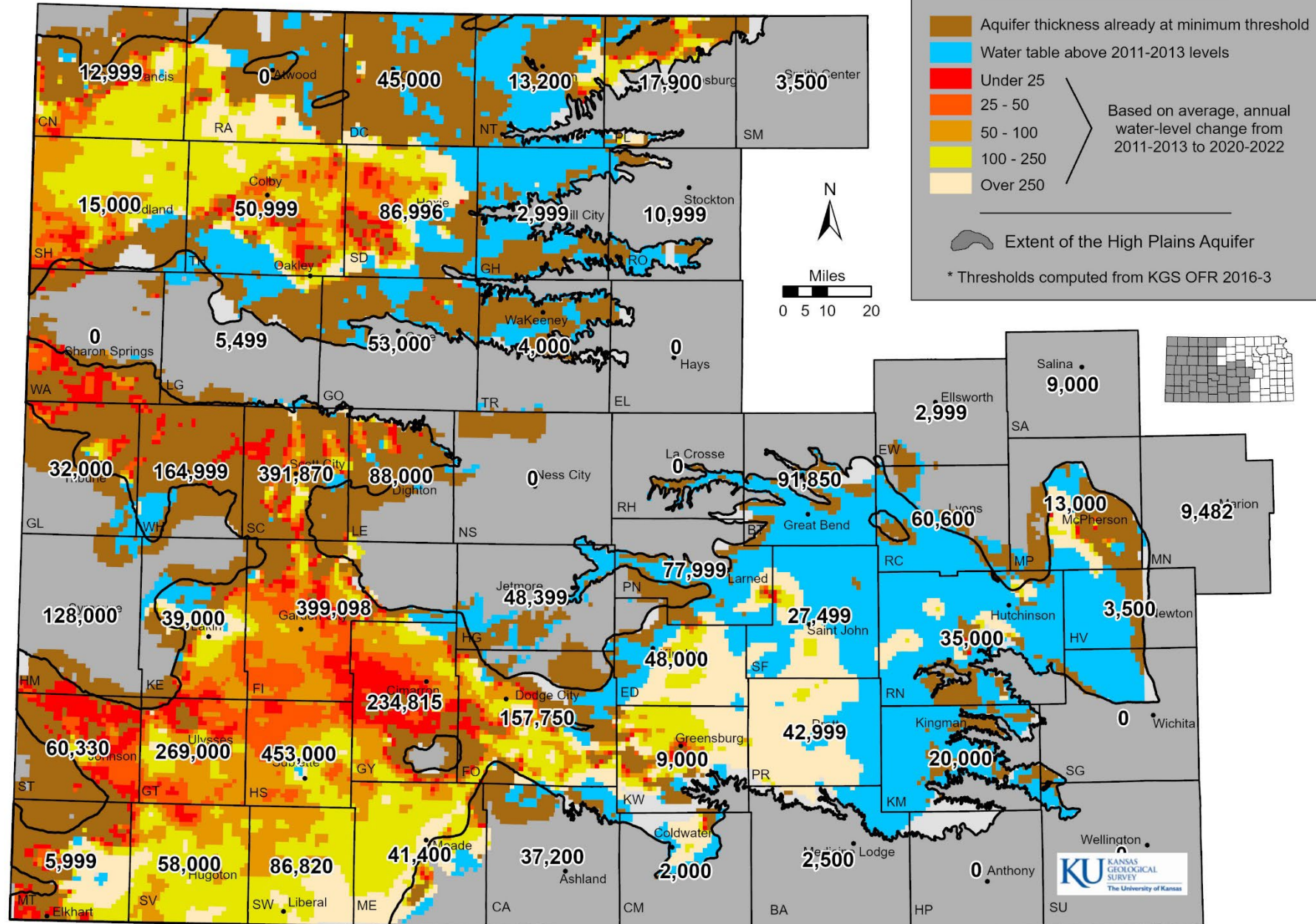


Features on this map represent conditions as of the date of the map and are subject to change. The user is referred to specific policies, regulations and/or orders of the Chief Engineer.

Uses of water for artificial recharge, contamination remediation, dewatering, domestic, fire protection, hydraulic dredging, sediment storage, thermal exchange and water power are not shown on the charts.

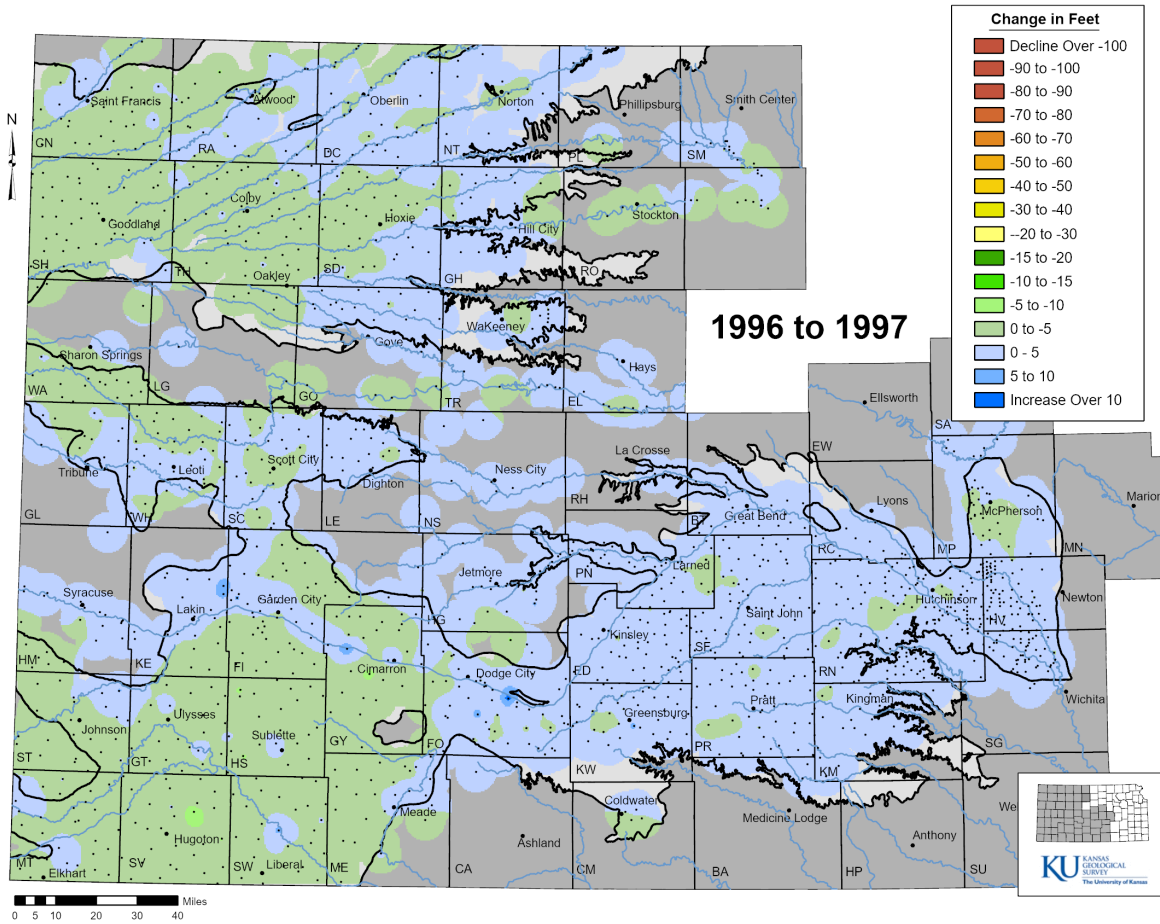


Estimated Usable Lifetime for the Kansas High Plains Aquifer (based on groundwater trends from 2011-2013 to 2020-2022 and the minimum aquifer thickness required to support 200 gpm well yields under 90 day of pumping scenario with 200 gpm wells on 1/4 sections)



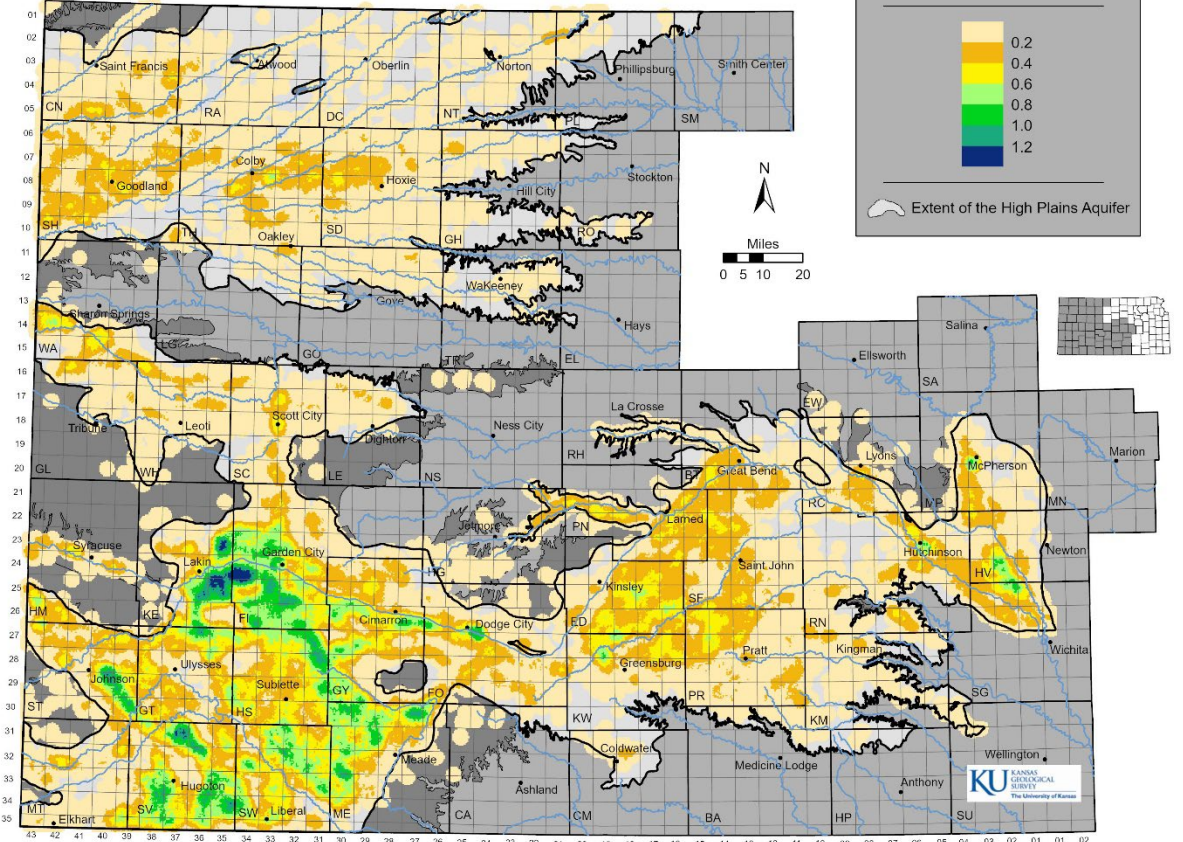
Water-Level Change vs Reported Water Use

Water-Level Change



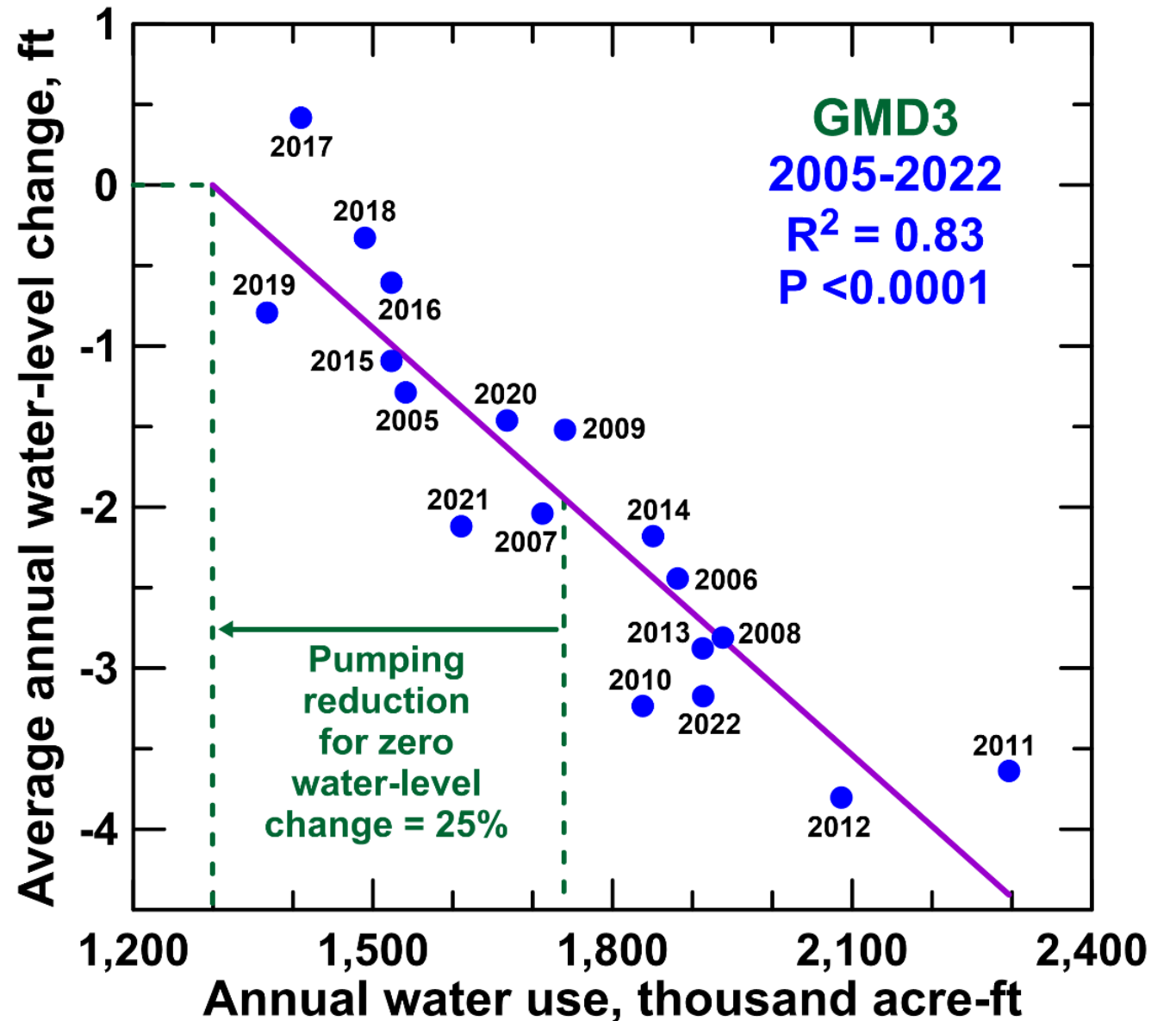
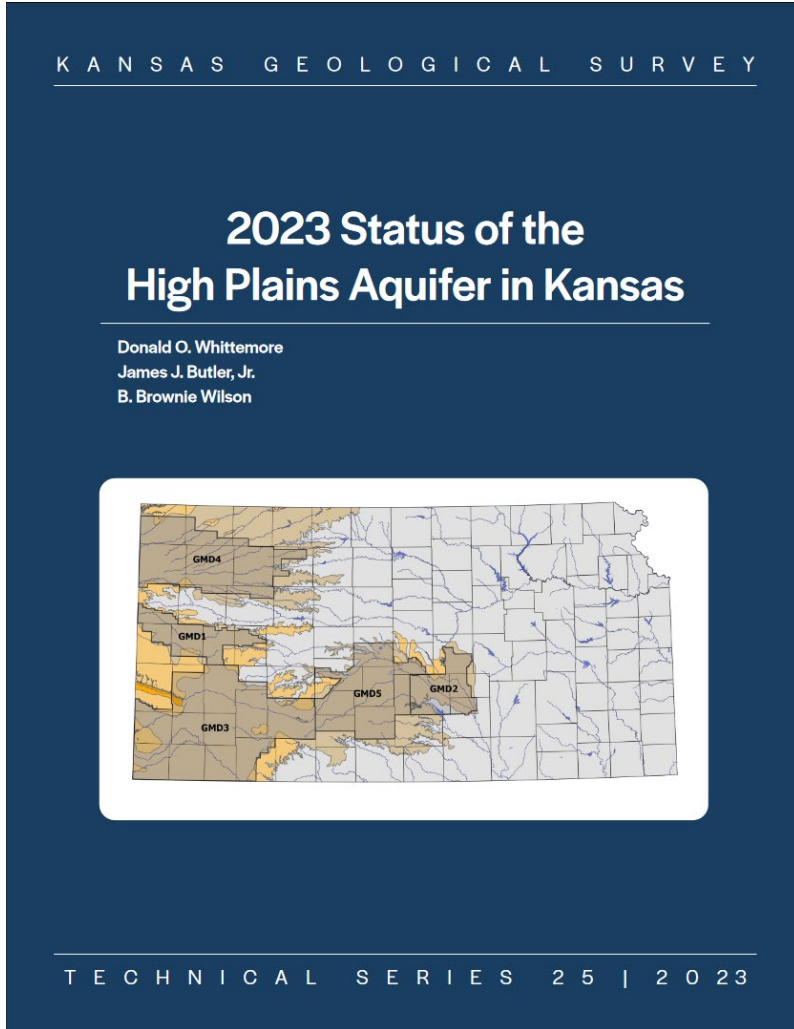
Groundwater Use

Density Distribution (2-mile radius) of the Average Reported Groundwater Use, 2012 to 2021, in the Kansas High Plains Aquifer



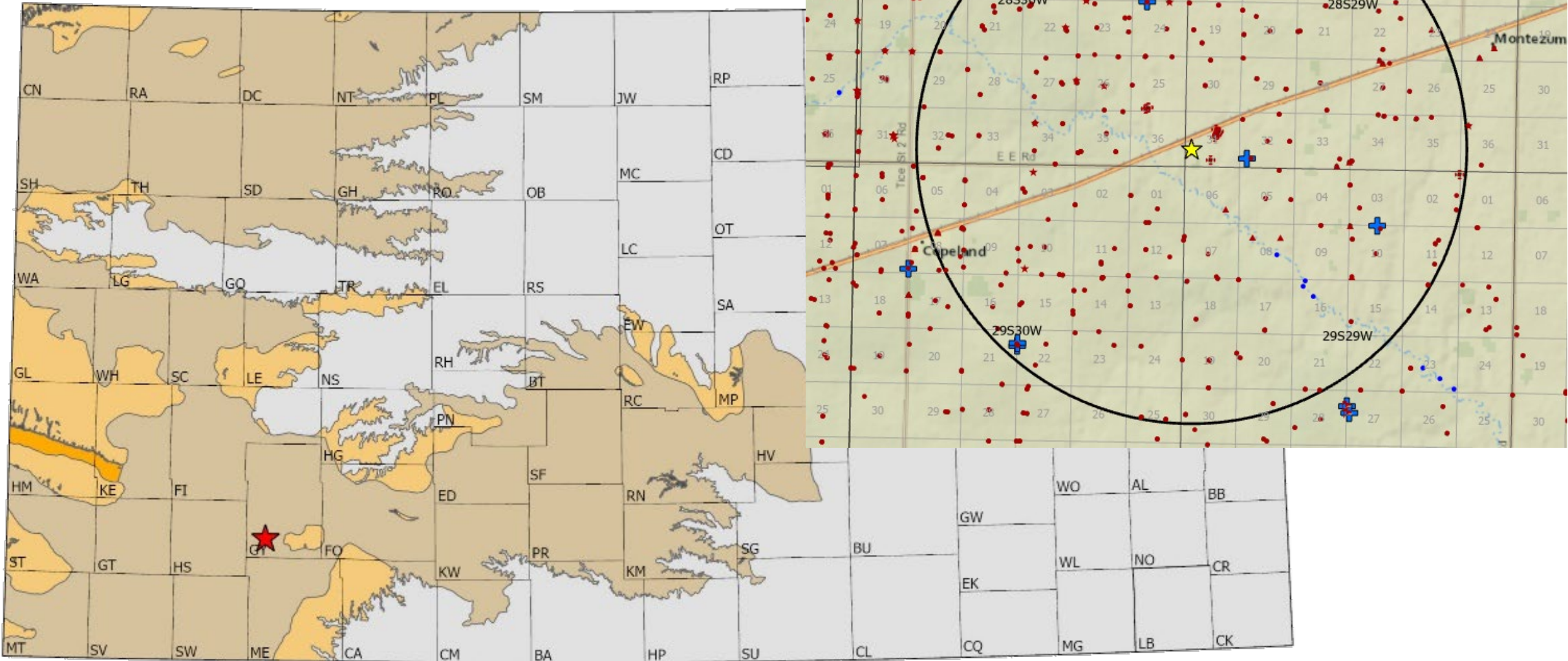
Status of the High Plains Aquifer in Kansas

KGS Technical Series 25- <https://kgs.ku.edu/2023-status-high-plains-aquifer-kansas>



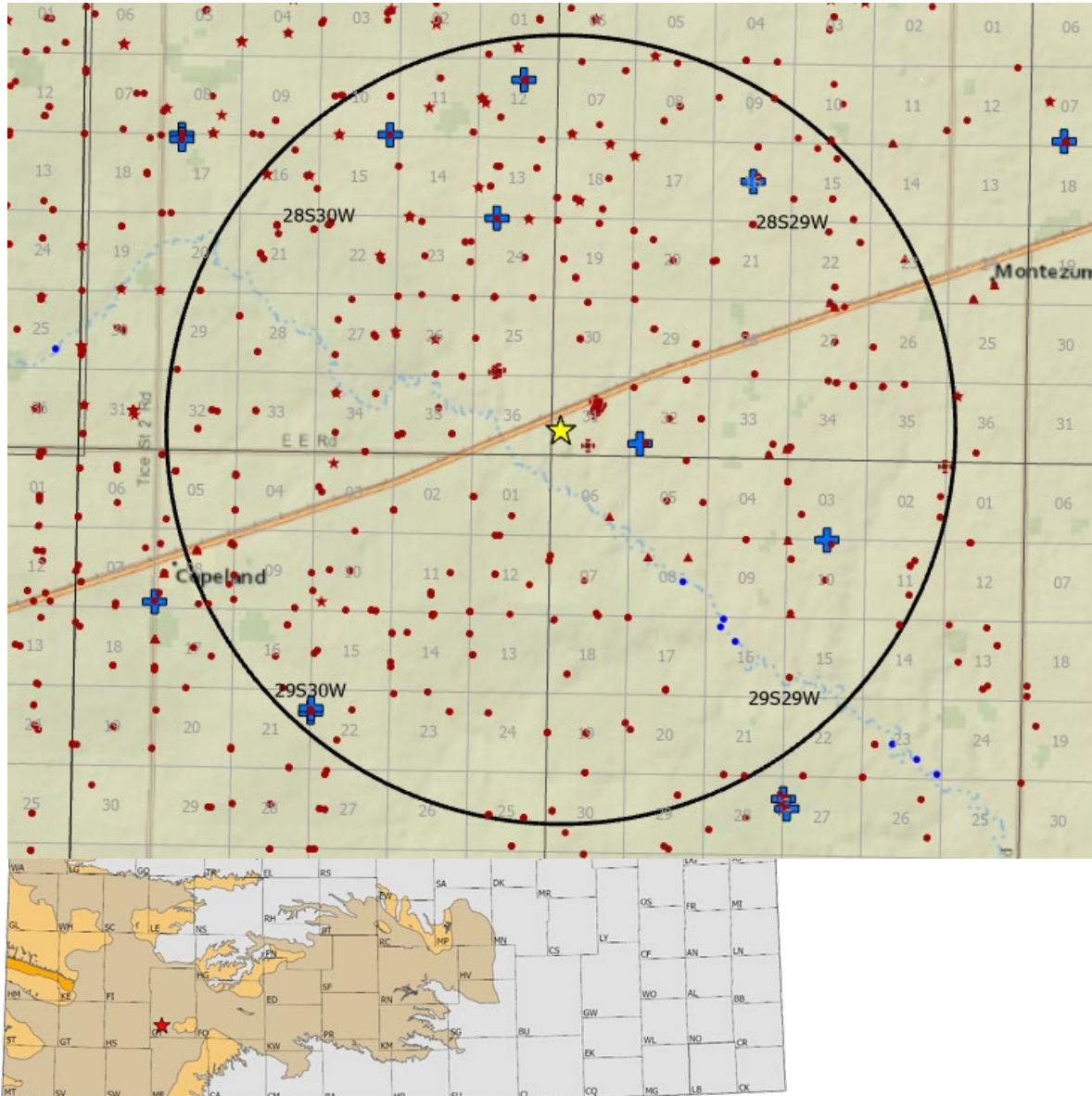
Hy-Plains Feedyard LLC

Reported water use and measured water levels, 2005 to 2022

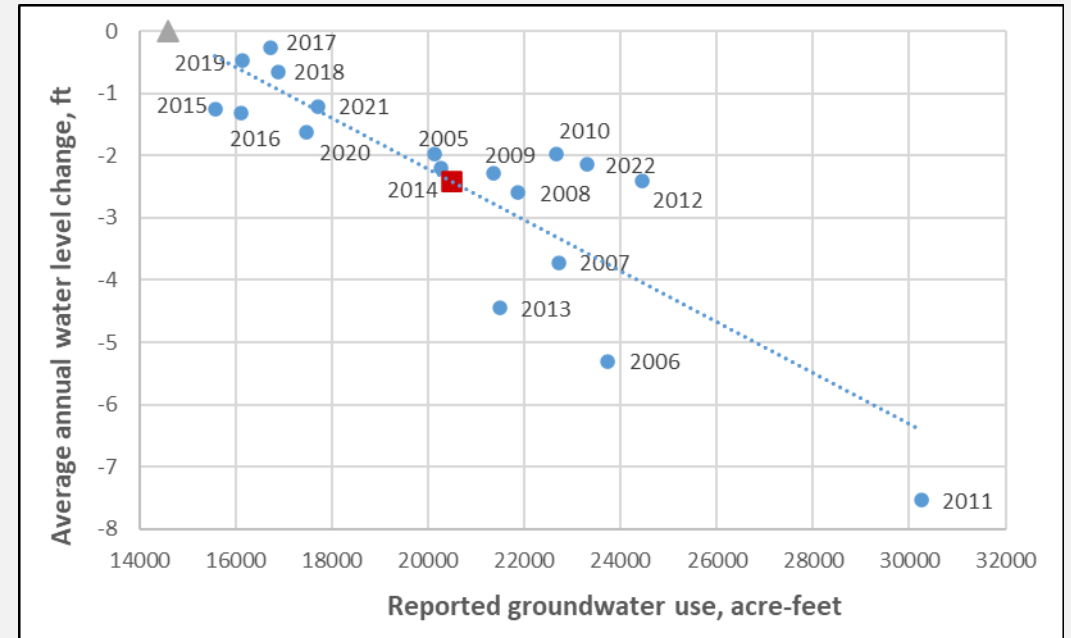


Hy-Plains Feedyard LLC

Reported water use and measured water levels, 2005 to 2022



- R-squared = 0.73, $P < 0.000007$
- Average water level change = -2.41 ft
- Average total reported use = 20,490 AF
- Net inflows = 14,600 AF
- Percent reduction for stable water levels:
 - Average conditions = 29%
 - Drought (2011) = 52%
 - Wetter (2017) = 13%



THANK YOU!



www.USRSB.org | usrsb@beef.org | [@USRSBeef](https://twitter.com/USRSBeef)