



2024 Ogallala Aquifer Program Workshop

March 19-21, Liberal, Kansas

Introductions and Session Orientation

*A Research Consortium for the Southern
Ogallala Aquifer Region:*

Kansas State University

Texas A&M AgriLife

Texas Tech University

West Texas A&M University

USDA ARS, Bushland and Lubbock

OAP Objectives 2024

- Develop and evaluate **water management strategies and technologies, including dryland cropping systems**, that could **reduce water withdrawals** for irrigation while maintaining and/or enhancing the economic viability of the agriculture industry and the vitality of the Southern Ogallala Aquifer Region.
- Develop and evaluate **management strategies and technologies** that would increase the productivity and profitability of **forage or other short-season** cropping systems that **reduce or eliminate water withdrawals**.
- Improve the understanding of hydrological and climatic **factors that affect water use and economic profitability**, and provide estimates of the climatic, hydrologic, cropping, and profitability conditions that are likely to occur on the southern High Plains over the next 50 years.
- Determine the **impacts of alternative water withdrawal/use policies** on the economic viability of the agriculture industry and the vitality of the Southern Ogallala Aquifer Region.
- Develop **best management practices for alternative crops** that increase the sustainability of dryland farming or high value crops that maintain farm income with decreased pumping from the Ogallala Aquifer.

Research Plan Timeline

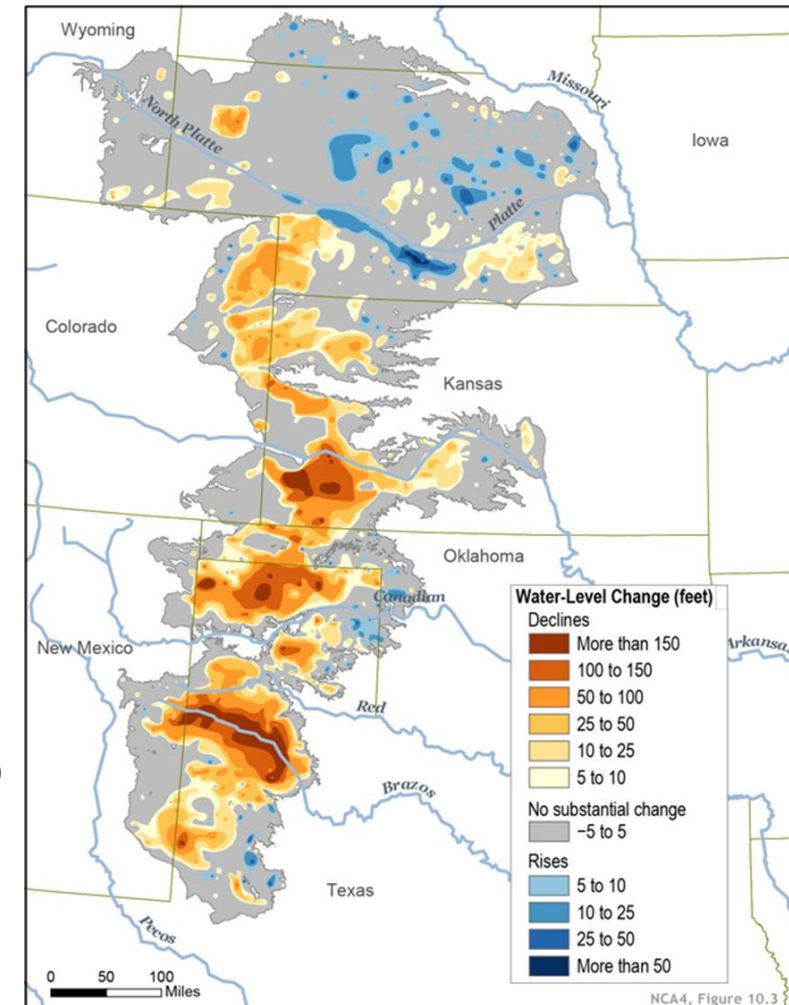
- **January 2024:** Call for pre-plans
- **March 20-21:** OAP Workshop – work to finalize pre-plans
- **April 12:** Deadline for pre-plan submission
- **April 19:** Deadline for budget submission
- **May 3:** Deadline for pre-plan review and ranking
- **May 10:** Leadership meets in executive session
- **May 10-31:** Writing of agreements with the universities
- **June 3:** Submission of agreements to the USDA ARS Area Office

The workshop – Today

- Updates from national and regional perspectives
 - Forage Production in Water Limited Environments
 - Roundtable for Sustainable Beef – linkage to our focus on sustainable feed and forage research
 - Regional water planning – Texas Panhandle example
- OAP Team Reports – Projects with at least 2 years of progress
 - Update on the Big Cotton Project
 - Optimizing Water Productivity of Industrial Hemp
 - Site-Specific Water Management for Sustainability
 - Summer Annual Legumes for the Ogallala Region
 - Economic & Policy Implications of Water Withdrawals
 - Technology Transfer Across the Board
 - Roundtable with Questions
- Poster session

The workshop – Tomorrow

- Breakouts by Objectives – Research Projects (self-sorting)
- Report outs
- Breakouts by OAP Objective – Pre-plan teams
- Pre-plan team writing and completion
- Report Outs and Wrap up for 2024 OAP Workshop
- Poster session
- March 22 is World Water Day!



The Changing Nature of OAP R&D Efforts

- In 21 years, the realization of aquifer decline and its impact on sustainability of rural economies has changed perceptions and aspirations
- This is true for the public at large, the farming community, the vertically integrated animal industries, water planners, economic planners (banks), other water users, and all who rely on agricultural production
- Past foci lose relevance and new foci come to the fore
- A shift to forage production systems and other profitable but less water consuming systems is imperative
- Understanding of how new productive systems best meet the needs of animal industries is key
- Understanding of economic outcomes remains important

Thank you to:

- Dr. Susan Metzger and her team for assessing multiple locations, then handling arrangements, logistics, catering and so much more...
- Dr. Marlen Eve for taking the time to be and share with us
- Gwen Coyle and her associates for meeting organization and much more....
- All our speakers for sharing their time, energy, and hard-won knowledge to broaden our perspectives and deepen our insights
- All of the OAP participants from four universities and two ARS locations for their diligence and cooperation for 21 years