

## **THE OGALLALA WATER COORDINATED AGRICULTURAL PROJECT: OPTIMIZING WATER USE FOR AGRICULTURE AND RURAL COMMUNITIES**

**Meagan Schipanski**

Assistant Professor  
Colorado State University  
Fort Collins, CO  
Meagan.Schipanski@colostate.edu

**Jonathan Aguilar**

Assistant Professor  
Kansas State University  
Garden City, KS

**Allan Andales**

Associate Professor  
Colorado State University  
Fort Collins, CO

**Jose Chavez**

Associate Professor  
Colorado State University  
Fort Collins, CO

**Isaya Kisekka**

Assistant Professor  
Kansas State University  
Garden City, KS

**Danny Rogers**

Professor  
Kansas State University  
Manhattan, KS

**Daran Rudnick**

Assistant Professor  
University of Nebraska-Lincoln  
North Platte, NE

**Joel Schneekloth**

Water Resources Specialist  
Colorado State University  
Akron, CO

**Tim Shaver**

Associate Professor  
University of Nebraska-Lincoln  
North Platte, NE

**Jason Warren**

Associate Professor  
Oklahoma State University  
Stillwater, OK

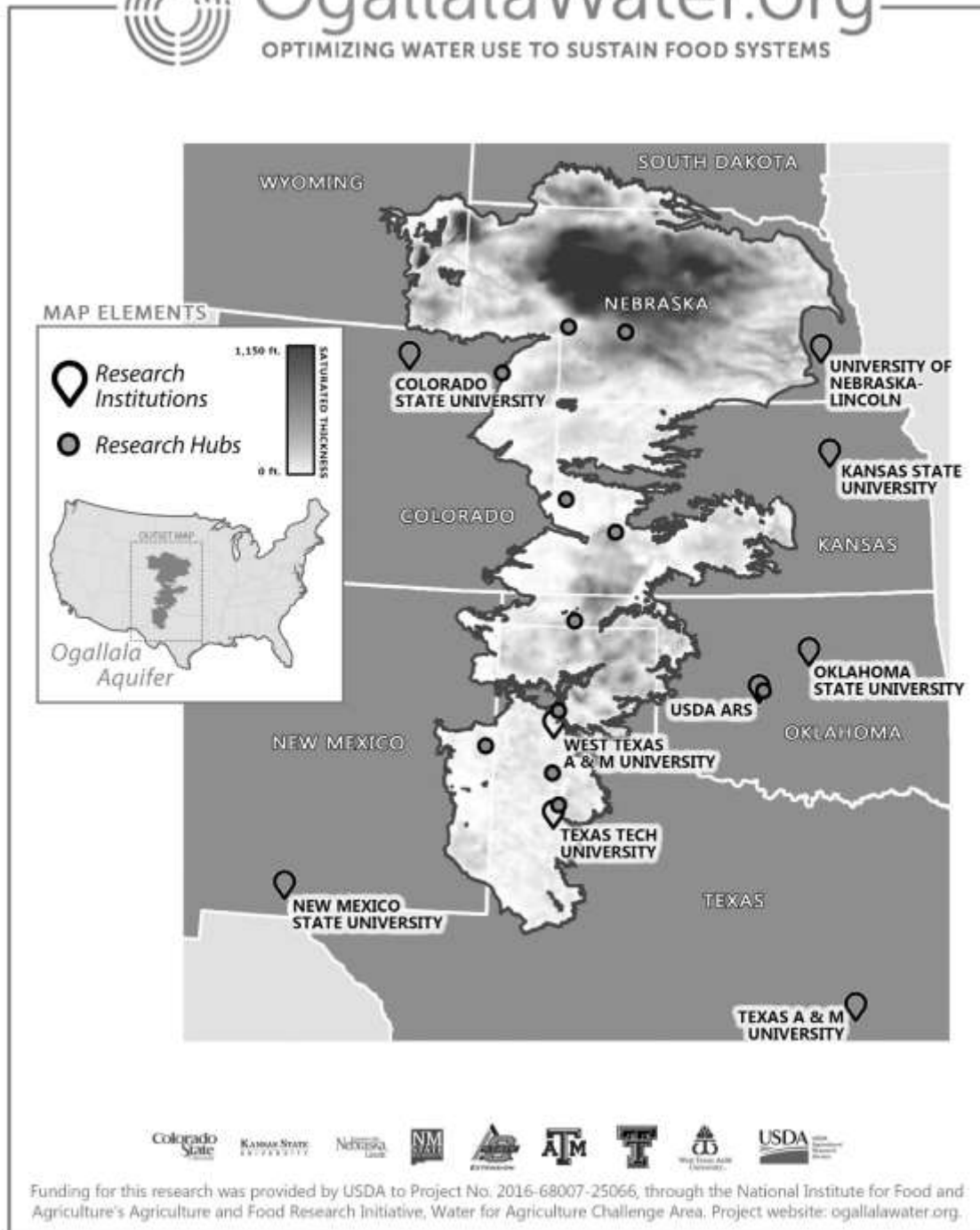
The Ogallala Aquifer underlies eight states and supports about 30% of U.S. agricultural crop and livestock production. The quantity of available groundwater and groundwater level changes over the past 50 years are relatively well understood. Recharge rates vary across the Ogallala Aquifer Region (OAR) where sustainable use is an option in northern regions and water quality can be a greater concern than water quantity. In contrast, declining groundwater levels are inevitable in parts of the central and southern OAR where recharge rates do not match the water demands of agricultural crops. This regional variation requires different management strategies and each state differs in groundwater management approaches. Difficult questions are facing producers and rural communities across the OAR—what are the most promising crop and water management options on the horizon? what is the value of groundwater today or in the future? what are potential strategies to transition to reduced groundwater dependence in regions facing declining capacity?

The Ogallala Water Coordinated Agricultural Project (CAP) is a 4-year USDA-NIFA funded effort to link research and outreach efforts across the OAR to address these difficult questions. The project started in 2016 and includes more than 40 scientists from 9 institutions and 6 states across the OAR. We are collaborating with research, producer, and industry groups to develop and identify cutting edge crop, soil, and water management approaches, technologies, and tools. Field research efforts are based at 6 hub sites on the aquifer and focus on irrigation technologies, limited irrigation strategies, and soil and dryland management systems. We are also linking modeling efforts to evaluate the economic and water use impacts of management and policy options for local groundwater management groups to help OAR communities plan for the future.



# OgallalaWater.org

OPTIMIZING WATER USE TO SUSTAIN FOOD SYSTEMS



The locations of Ogallala Water CAP participating institutions and research hubs across the variability in aquifer saturated thickness.