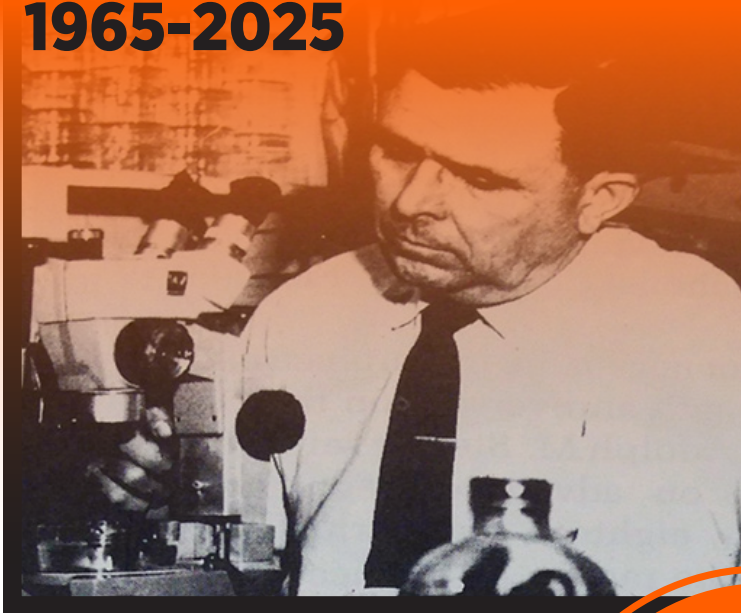


REMEMBERING YESTERDAY

OKLAHOMA WATER RESOURCES CENTER HISTORY 1965-2025



**60
YEARS**
1965-2025



1964 was a pivotal year in American history, marked by civil rights progress and scientific ambition. It was also the year that President Lyndon B. Johnson signed the Water Resources Research Act (WRRRA). Building on President Kennedy's environmental legacy, the Act created a nationwide network of water research institutes at land-grant universities to address water challenges and train future scientists and engineers. The WRRRA has since supported tens of thousands of student research projects and helped support economic growth in water-based sectors like fishing, agriculture, recreation and clean water infrastructure.

At Oklahoma State University, the Oklahoma Water Resources Research Institute was established on July 1, 1965, being charged as the water resources research and technology institute for Oklahoma in response to the WRRRA. On August 16, 2011, the Oklahoma Water Resources Research Institute combined under the same umbrella of the Water Research and Extension Center (est. 1979) – creating the Oklahoma Water Resources Center that is now celebrating 60 years of dedication to water research and extension.

The Oklahoma Water Resources Center (OWRC) provides science-based, community-supported solutions for the state's pressing water quantity and quality challenges for the entire state of Oklahoma. The OWRC strives to help Oklahoma achieve high levels of water quality and sustainable use of our region's water through integrated research, education, training and technology assistance.

“THE INCREASED USE OF WATER PER CAPITA, THE CONSTANT THREAT OF DROUGHT, AND THE DEPENDENCE OF MOST OKLAHOMA COMMUNITIES ON SURFACE WATER SUPPLIES, LENDS AN URGENCY TO THE EXPANSION OF WATER RESOURCES RESEARCH IN THIS STATE.”

~ THE OPENING SENTENCE OF THE DECEMBER 2, 1964 NOTICE ESTABLISHING THE WATER RESOURCES RESEARCH INSTITUTE AT OKLAHOMA STATE UNIVERSITY.

THIS SENTIMENT STILL RINGS TRUE TODAY.

OUR MISSION

Empowering informed decision making and enriching understanding of the state's most critical water management issues through engagement, education and actionable science.

OUR VISION

Safe, secure and sustainable water resources for all of Oklahoma.

KEVIN WAGNER | 2017-CURRENT

As the current director, Wagner works with research & Extension faculty to advance irrigation, improve grazing land management, advance produced water research, enhance monitoring & modeling and encourage adoption of new technology.

GAREY FOX | 2014-2016

Fox advanced understanding of stream sediment processes & restoration techniques as well as started the national student water conference & onsite wastewater treatment professional education program.

WILL FOCHT | 2003-2011

Focht formed the external advisory board (WRAB) & launched collaborative research to support the state's water plan and enhance public participation.

GARY OSTRANDER | 1995-1997

Under Ostrander's leadership, OWRRRI developed multiple GIS prototypes for water use permits and OWRB water quality standards.

THOMAS COLLINS | 1991-1994

Collins led the center through research on improved hydrologic models, economic impact of large water-based projects, groundwater recharge and water quality.

MARVIN EDMISION | 1965-1978

As the first and longest director, Edmision was the head of OWRRRI for the first 13 years.

JUSTIN MOSS | 2016-2017

Serving as an interim director, Moss maintained the many events supported by OWRC & promoted urban water conservation.

DAVID ENGLE | 2011-2014

Under Engle's direction, the Water Research and Extension Center joined with Oklahoma Water Resources Research Institute to form Oklahoma Water Resources Center as well as advancing grazing land research.

EDWARD KROBE | 1997-2002

Krobe focused on Oklahoma water resources & studying their pollutants, life cycles & the groundwater affects.

PAUL MATTHEWS | 1994-1995

Matthews started the Environmental Science Graduate Program at the University Center at Tulsa, a consortium of NSU, Langston, OU and OSU.

NORMAN DURHAM | 1979-1990

Durham started the Environmental Science Graduate Program at Oklahoma State University after transferring to the director position from Dean of Grad College.

As we continue to advance projects and programs relevant to state/regional water policy and management issues critical to Oklahoma, we highlight some past projects and accomplishments.

FIRST PROJECT FUNDED: “ECOLOGICAL FACTORS AFFECTING TURBIDITY AND PRODUCTIVITY IN PRAIRIE PONDS IN THE SOUTHERN GREAT PLAINS” 1965-1968

1987-1991

- An Evaluation of the Uncertainties Associated with Pesticide Transport to Groundwater
- Incorporation of Risk in Designing Water Resources Facilities
- Gamma Ray Attenuation Tomography for Imaging of Porous Media & Multiphase Fluid Systems

1993-1997

- Nature Conservancy uses species list developed by project “Biodiversity in Oklahoma in Relation to Precipitation” for education on the Tallgrass Prairie Preserve
- First analysis of “The Impact of Franco-American Charolaise, Ltd. v. OWRB” completed
- Developed one of first World Wide Web oriented simulation games for water treatment
- Prototype of interactive GIS for water use permits and completed GIS of Oklahoma water quality standards developed for Oklahoma Water Resources Board

2001-2002

- First Water Research Symposium held in 2002

2003-2007

- Oklahoma Conservation Commission uses phosphorus allocation optimization software
- Historic study of groundwater levels shows that Ogallala levels are recovering in areas
- First proof that presence of pharmaceuticals & hormones in groundwater from municipal wastewater pose a risk on threatened/endangered cave-dwelling species
- First joint OK Governors Water Conference & Research Symposium held by OWRB & OWRC

2011-2012

- OWRC works with OWRB to host stakeholders meetings across OK for input for water plan

2014-2020

- OWRC hosted National Student Water Conference for several years
- Improved soil moisture monitoring, drought evaluation and streamflow forecasting
- Integrated, statewide monitoring system for warning & management of hydrologic extremes
- Treatment and reuse technologies and methods for produced water
- Increased irrigation water use efficiency

THE PRESENT



OKLAHOMA WATER
RESOURCES CENTER

Investing in Research

Oklahoma Well Owner Network

An Extension led program which provides free of charge residential well water screening and training to rural communities.

Improving Ecosystem Services with Virtual Fencing

Research on how GPS-enabled collars worn by cattle can help producers better manage grazing while also improving water quality, wildlife habitats, and soil health.

Socially Sustainable Solutions

A social science framework to identify socially sustainable, science-based solutions for complex problems at the intersection of land use, water availability and infrastructure.

Regenerative Agriculture

A multi-disciplinary collaborative focused on demonstrating the effects of regenerative agricultural practices on cotton production, soil health, producer income, water resources and rural economies.

Oklahoma Master Irrigator Program

An Extension program to promote water conservation in irrigated agriculture, providing advanced training on irrigation management, equipment maintenance, energy conservation and economic strategies.

Oklahoma Water Research Grants

In collaboration with the USGS, the OWRC administers two grants annually to support research addressing priority water problems in the state and nation.

Conjunctive Freshwater Saltwater Management

Researching the possibility of blending saline water and freshwater to stretch available freshwater supplies in southwest Oklahoma.

Modernization of DAM Analysis Tools

A collaborative research initiative between the OWRC, USDA-ARS and the USDA-NRCS to develop tools and techniques for monitoring and inspecting aging dams.

OK-HAWQS

A joint project with Texas A&M and OCC, to develop a simple, easy to use web-based water quantity and quality modeling system for conducting watershed modeling, assessment and research.

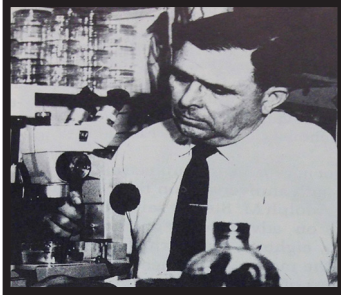
Effects of Prescribed Fire on Water Quantity and Quality

Determining the effect of prescribed fire regimes, both low and high intensity, on water quantity and quality in the Cross Timbers region.

THE FUTURE

Expanded Collaboration

OWRC remains committed to collaboration and research focused on addressing high-priority water challenges in Oklahoma. As one of 54 federally authorized water research institutes across the United States and its territories, OWRC is tasked with planning, conducting and facilitating applied, peer-reviewed research. Our mission includes improving water supply reliability, exploring innovative solutions to water issues, advancing knowledge of water-related phenomena, encouraging the entry of new professionals into water resource fields, and sharing research findings with water managers and the public.



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