

Ogallala Aquifer vital to agriculture, development

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Currently, the use of groundwater from the aquifer is unsustainable as withdrawals exceed the natural recharge of the aquifer. Intensive agricultural and industrial practices threaten the quality and quantity of the water source.

America's stewardship of this natural resource is critical. Stretching from western Texas to South Dakota, the Ogallala Aquifer supports nearly one-fifth of the wheat, corn, cotton and cattle produced in the United States.

Underlying approximately 225,000 square miles of the Great Plains, water from the aquifer is vital to agricultural, municipal and industrial development, making up 30 percent of all groundwater used for irrigation in America.

About 27 percent of the irrigated land in the United States overlies this aquifer system. The aquifer system provides drinking water to 82 percent of the people who live within the aquifer boundary.

The Natural Resource Conservation Service (NRCS) State Conservationists in OAI states collaborated with local conservation districts, state environmental agencies, land grant universities and NRCS State Technical Advisory Committees to complete inventories and determine high priority resource concerns within the OAI area.

How does OAI Work?

OAI is designed to reduce the quantity of water removed from the aquifer, improve water quality using conservation practices and enhance the economic viability of OAI-area croplands and rangelands by:

- Improving irrigation efficiency by a minimum of 20 percent on 3.7 million acres.
- Applying nutrient management and conservation cropping system practices on a minimum of 3.4 million acres

Establishing an equilibrium level of water recharge and water removal from the aquifer over time

- Maintaining water quality to Environmental Protection Agency (EPA) standards
- Helping agricultural producers save billions of gallons of water from the Ogallala Aquifer
- Assisting agricultural producers in developing conservation plans and prescribed voluntary conservation alternatives specific to water quality and quantity resource concerns

To achieve these goals, NRCS will work with landowners to implement conservation practices such as:

- Converting irrigated land to dry land
- Planting non-irrigated permanent vegetation
- Implementing nutrient and pest management
- Adjusting cropping systems and perennial vegetation for haying, grazing, and wildlife habitat
- Replacing inefficient, flood-irrigated systems for more efficient center pivot and Sub-surface Drip Irrigation (DI) systems

Conservation activities are carried out using NRCS's environmental Quality Incentives Program (EQIP) and funding provided by state and local agencies. The socially disadvantaged and limited resource farmers and ranchers in the project area have separate funding sources.

How does OAI Benefit Producers?

Agricultural producers will experience immediate benefits from participating in OAI through improved irrigation efficiency. Economic benefits include:

- Improvements in irrigation water management help maintain the long-term viability of the irrigated agricultural sector
- Water savings at the farm level help offset the effect of rising water costs and restricted water supplies on producer income.

Improved water management reduce expenditures for energy, chemicals and labor inputs, while enhancing revenues through higher crop yields and improved crop quality.

How does OAI Benefit the Public?

Wildlife Protection – Increased river flow in the OAI region as a result of conservation measures will benefit the endangered interior least tern, whooping crane, pallid sturgeon and the threatened piping plover.

Farm Returns – Water savings can help offset the effect of rising water costs and restricted water supplies. Improved water management may also reduce expenditures for energy, chemicals, and labor inputs, while enhancing revenues through higher crop yields and improved crop quality.

Water Conservation – Efficient irrigation systems and water management practices help conserve water and maintain farm profitability in the Ogallala Aquifer region.

These practices also reduce the impact of irrigated production agriculture on water quantity and quality.

Water Quality – Improved water management helps minimize offsite water quality impacts of irrigated production agriculture by:

- Lowering the amount of chemicals used in irrigated crop production
- Decreasing field salinity and erosion
- Slowing pollutant concentrations in rivers and streams due to an increased flow of water.

The OAI is a partnership effort. NRCS collaborates with local conservations district, state agencies and land grant universities to complete inventories and determine high priority resource concerns within the OAI area.

For more information about the Ogallala Aquifer Initiative and how you can participate in protecting water quality and quantity in the Ogallala Aquifer, contact your local NRCS office or refer to the NRCS website at visit www.nrcs.usda.gov under Landscape Initiatives.