



# Ogallala Aquifer Initiative

## 2013 Progress Report OAI

Natural Resources Conservation Service



### Overview

The Ogallala Aquifer lies beneath approximately 225,000 square miles in eight states in the central U.S. Nearly 15.1 million irrigated acres of agricultural land are located in this vast region, representing 30 percent of all groundwater used for irrigation in the United States.

Water quantity is the primary concern in the Ogallala Aquifer region because the current use of groundwater exceeds the amount of recharge through natural processes. This has led to substantial decreases in water levels in many areas of the aquifer. Water quality is also a concern where water recharge carries contaminants, including nutrients and pesticides.

Agricultural producers feel the adverse impacts of reduced water in the aquifer as water is the lifeblood of agriculture in this region. USDA's Natural Resources Conservation Service (NRCS) established the Ogallala Aquifer Initiative (OAI) in Fiscal Year 2011 to increase water efficiency, promote recharge and increase river flow to benefit wildlife. Agricultural producers receive technical and financial assistance to implement water conservation practices in areas where the aquifer level has declined significantly and where the groundwater is susceptible to nutrients and pesticide contamination.

### Goals

- Encourage water conservation through improved irrigation systems and conversion to non-irrigated production.
- Enhance the economic viability of cropland and rangelands around the aquifer.

### Program

- Environmental Quality Incentives Program (EQIP)

### Funding

In Fiscal Year 2013, NRCS invested nearly \$18 million to fund 376 contracts covering more than 70,000 acres.

Since this program began in Fiscal Year 2011, NRCS has invested about \$49 million in financial assistance to more than 1,230 producers to help them implement groundwater conservation on approximately 278,000 acres of agricultural lands.



*Texas agricultural producer Greg Chavez (right) installed flow meters and center pivot sprinkler irrigation systems on his farms. NRCS approved his OAI contract in 2012.*

# Results

**Producers use OAI to adopt better techniques to manage their water use. NRCS partners with these producers to provide the science, technology and financial assistance to achieve their goals.**

**Agricultural producers participating in OAI have increased water efficiency in the most vulnerable areas of the aquifer.** In 2013, NRCS prepared an analysis of reduced water withdrawals resulting from agency program contracts in the Ogallala. A recent NRCS study reported that conservation practices used over the past four years reduced water withdrawals from the Ogallala Aquifer by at least 1.5 million acre-feet or more than 489 billion gallons. These practices also reduced irrigation energy needs equivalent to almost 33 million gallons of diesel fuel. Assistance provided through OAI accounted for more than one-quarter of the reduced total withdrawals. OAI practice implementation accounted for a reduced water withdrawal of around 434,000 acre-feet and reduced energy needs by 9 million gallons of diesel-equivalent.

**The City of Holdrege, Nebraska, has experienced significant benefits from NRCS's work with agricultural producers who use water drawn from the aquifer more efficiently.** The city's municipal wells have been plagued with rising nitrate levels over the past two decades. The source—agricultural nutrients leaching into the groundwater. NRCS and its conservation partners have helped farmers improve nutrient management and increase irrigation efficiency, which, in turn, reduces nitrate leaching. In June 2013, the Nebraska Department of Health informed the city that the nitrate levels in several of its wells were "reliably and consistently below acceptable levels for drinking water. As a result, Holdrege is not required to test its water as frequently and the city is not required to plan for alternative sources of drinking water.

## Fiscal Year 2013 Ogallala Aquifer Initiative NRCS Financial Assistance (FA) and Active and Completed Contracts

State	Environmental Quality Incentives Program (EQIP)		
	Number of Contracts	FA Contract Obligations	Contract Acres
<b>Colorado</b>	15	\$606,585	7,865
<b>Kansas</b>	37	\$4,461,798	7,269
<b>Nebraska</b>	83	\$4,623,307	8,452
<b>New Mexico</b>	0	\$0	0
<b>Oklahoma</b>	7	\$476,259	2,254
<b>South Dakota</b>	0	\$0	0
<b>Texas</b>	233	\$7,568,721	44,515
<b>Wyoming</b>	1	\$224,502	123
<b>Totals</b>	<b>376</b>	<b>\$17,961,173</b>	<b>70,494</b>

Statistical source: Protracts for new enrollment, October 25, 2013.

**For a map and other information, visit**

<http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/initiatives/?cid=stelprdb1048809>

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