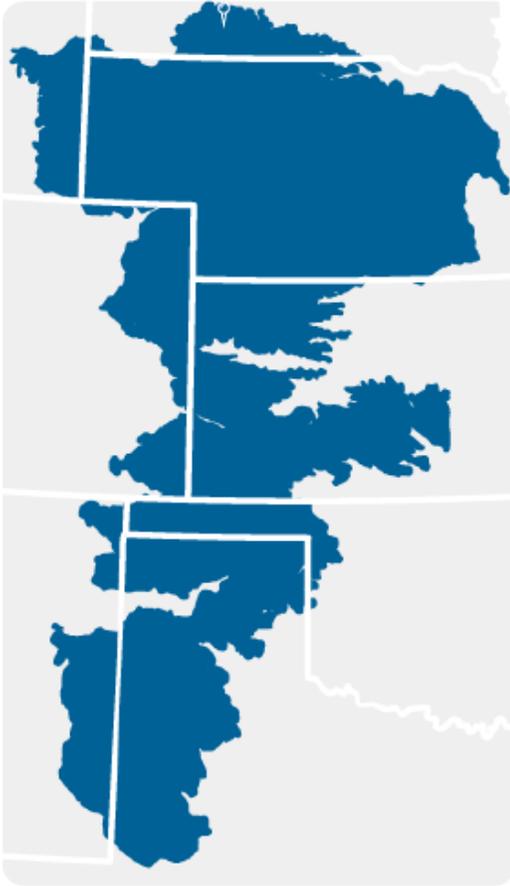




THE

OGALLALA AQUIFER

The Ogallala Aquifer is one of the largest freshwater aquifer systems in the world, spanning 174,000 square miles. It underlies eight states: Texas, New Mexico, Oklahoma, Colorado, Kansas, Nebraska, Wyoming and South Dakota.



The Ogallala Aquifer lies relatively near the land surface with a maximum saturated thickness of 1,000 feet in parts of Nebraska. However in our region, the saturated thickness is generally a few hundred feet or less.

Well yields also vary, from just several gallons per minute (gpm) in areas with less saturated thickness to over 1,000 gpm in areas with greater saturated thickness.

Water in the southern portion of the formation flows from northwest to southeast at variable rates, around 150 feet per year under natural conditions.

This aquifer provides water to farms, ranches, municipalities, individual landowners, schools, and industries. Approximately 95 percent of the water pumped from the Ogallala Aquifer is for irrigated agriculture and livestock production.

Natural recharge occurs slowly, approximately one half inch per year. Recharge occurs primarily through percolation of precipitation through the soils and underlying sediments. Playa lakes are primary points for most natural recharge.

FORMATION

Deposition of the Ogallala Formation began 10 to 12 million years ago during the late Tertiary (Miocene/Pliocene) geologic time. Sand, gravel, silt and clay eroded from upland areas to the west and north. These materials were deposited over the erosional land surface of the present-day High Plains by primarily eastward flowing streams.

As a result, the Ogallala Formation is thicker where these sediments filled old stream channels and thinner where hills and upland areas were covered.

