

Keeping The Marsh Wet

Managing extremes

The average annual rainfall at Cheyenne Bottoms is about 24 inches. The average annual evaporation rate is 60 inches. Obviously, water in the basin is sustainable only through inflow from surrounding areas.

Prior to development at Cheyenne Bottoms, the marsh would be dry two out of every five or six years. However, back then if the Bottoms went dry there were usually other wetlands in the region that would be wet from intense local, rainfall events. Since then, land has been settled and converted to agricultural production, and many wetlands have been drained. In fact, over the past 200 years, Kansas has lost 50 percent of its wetlands. Some states have lost more than 90 percent. As a result, the remaining wetlands have become even more important to migratory waterbirds. To increase the number of years in which Cheyenne Bottoms has water, a 23-mile inlet system was built, funded with hunting license dollars. This system can bring supplemental water to the basin from the Arkansas River, Dry Creek and Wet Walnut Creek.



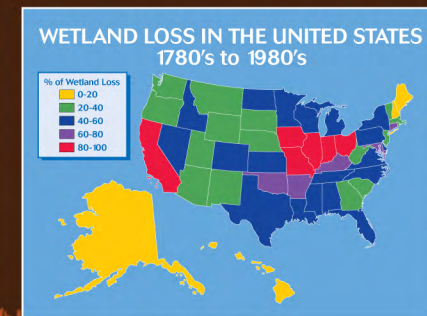
Effects of a Drought
KDWPT Photo



Water control at the bottoms, KDWPT

Controlling the Water

Beginning in 1942, the Kansas Forestry, Fish and Game used hunting license dollars and monies derived from a federal excise tax on sporting arms and ammunition to start developing Cheyenne Bottoms. The primary goal was to bring supplemental water to the basin, but also to be able to manage that water once it reached the property. A system of dikes and water control structures was built to facilitate water movement within the basin.



Wetland Loss Illustration, KDWPT

Motion and Change

Since going dry periodically is good for a marsh, dikes and water control structures allow some pools to be dry while others are kept wet.

This management scheme emulated the natural drying of the marsh but also helped keep at least some water in the basin each year. However, as demand for water increased in the 1970s and 1980s, flows in the Arkansas River and its tributaries became unreliable and severely reduced the available supplemental water for Cheyenne Bottoms.

