

CASS COUNTY MAPLE RIVER T-180 DAM

SPONSORS:

Maple River Water Resource District
Red River Joint Water Resource District

LOCATION:

Maple River Tributary
Section, 24 Highland Township
Cass County, ND

KEY DATES:

Construction: 1985

FEATURES:

Drainage Area: 37 sq. mi
Storage: 5,240 ac-ft
Side Slopes: 4:1 upstream & 3:1
downstream

TOTAL COST:

\$820,000

Challenge

The Maple River in Cass County experiences frequent flooding due to flow contributions from its tributary streams. As water moves toward the outlet of the Maple River, it leaves the highly topographic upper reaches of the watershed and enters the lower and significantly flatter Lake Agassiz basin. Channel capacities decrease here and cause overbank flooding to nearby urban and agricultural lands. The goal was to reduce peak flows along the Maple River mainstem and downstream rivers.

Solution

Construct a floodwater detention structure on a Maple River tributary to attenuate flood waters and reduce peak flows to downstream rivers.

This project included an earthen structure that is approximately 45 feet tall and has a dam crest elevation of 1,052 feet. The emergency spillway elevation is at 1,046 feet and it stores 2,900 acre-ft of water at this elevation.

Project Outcome

The T-180 Maple River Dam is a dry dam that reduces flooding along the Maple River and downstream Sheyenne and Red Rivers. The 100-year, 24-hour event peak discharge at the dam is reduced by about 80% due to detention benefits from the T-180 Maple River Dam.