

STEELE COUNTY BEAVER CREEK DAM

SPONSORS:

Steele County Water Resource District
Red River Joint Water Resource District

LOCATION:

Beaver Creek
Section 1, Finley Township
Steele County, ND

KEY DATES:

Construction: 1988

FEATURES:

Drainage Area: 117 sq. mi
Max Pool Elev: 1,298 feet
Side slopes: 3:1 upstream &
downstream

TOTAL COST:

\$1,175,000

Challenge

The Goose River watershed suffers from overbank flooding along the mainstem and overland flooding due to its topography. Streams have a pronounced slope and there are few natural basins to attenuate flows and store flood waters. The Goose River in Steele and Traill Counties has experienced frequent flooding due to contributions from its tributary streams. The goal is to reduce peak flows along the Goose River and in turn, reduce flooding downstream on the Red River of the North.

Solution

Construct a floodwater detention structure on Beaver Creek, a tributary to the Goose River, to control the flow of flood waters and reduce peak flows downstream of the project.

This project included an earthen structure that is approximately 70 feet tall and 900 feet in length and a concrete spillway. The earthen emergency spillway is at elevation 1,294 feet. The temporary pool area at the emergency spillway is 205 acres. Storage at the emergency spillway is 5,400 acre-ft.

Project Outcome

The Beaver Creek Dam is an earthen structure that operates as a dry dam. It impounds water for flood control and has a permanent conservation pool. The dam reduces peak flows from the 100 year – 24 hour event by about 40%, with even larger reductions on smaller events.