CORPS FACTS Minnesota & North Dakota Flood Control Projects

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The Minnesota and North Dakota Flood Control Section staff are responsible for managing separately budgeted, multi-purpose water resource projects on four major river basins in eastern and north central North Dakota and western Minnesota. Resources managed include 16 dams and associated water management structures with an annual budget of approximately $4 million and 20 full-time and seasonal employees. The breakout between the sections is described below.

It is the mission of the western office to manage flood control, water supply and shoreline management benefits for communities near and downstream of the projects, as well as provide land and wildlife management activities and recreational opportunities, such as overnight camping, day-use facilities, boat launching facilities and visitor assistance. The personnel provide budgetary, administrative, supervisory, contracting and technical support to all field sites in the area, as well as serve as liaisons between the field sites and the St. Paul District.

NORTH DAKOTA FLOOD CONTROL SECTION

Baldhill Dam/Lake Ashtabula

Lake Ashtabula is located on the Sheyenne River, 10 miles north of Valley City, N.D. The Corps operates and maintains seven recreation areas around Lake Ashtabula, including four campgrounds and 35 miles of the North Country National Scenic Trail which has been certified by the National Park Service. The project has 8,116 acres of fee-land, of which 1,600 acres are managed for wildlife. The staff provide onsite management, as well as interpretive programs on the outdoors, environment, and water and boat safety.

The conservation pool elevation at Baldhill Dam is 1266.0 feet. Each year, from October through February, the pool is drawn down to elevation 1262.5 feet. Depending on the amount of snow water content in the basin, the pool can be further drawn down to a maximum elevation of 1255.0 feet by the end of March. The Corps balances storage capacities and flows during floods with the goal to maximize storage while minimizing outflows to reduce flooding downstream. The pool may rise to elevation 1271.0 feet allowing for an additional 30,700 acre-feet of storage above the conservation elevation.

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The Sheyenne River channel capacity below Baldhill Dam is considered to be 2,400 cubic feet per second, or cfs.

Homme Dam

Homme Dam is located on the south branch of the Park River near Park River, N.D. The project is operated and maintained by the staff at Lake Ashtabula. The Walsh County Park Board operates a leased 30-acre park on the south side of the dam.

The conservation pool elevation at Homme Dam is 1079.8 feet. The maximum drawdown elevation is 1064.0 feet. The pool is drawn down before the spring runoff begins because there is no flood control storage above conservation at this project. The flood control storage results from the drawdown. With the exception of the spring runoff and rain events, it is common for this reservoir to have no inflow.

Souris River Project

The Souris River Project is located on the Souris River in north central North Dakota. The project consists of Lake Darling Dam, two additional water control structures and four pumping stations at the Upper Souris National Wildlife Refuge and five water control structures/embankments at the J. Clark Salyer National Wildlife Refuge. An agreement between the U.S. Fish and Wildlife Service, or USFWS, and the Corps of Engineers identifies the Corps is responsible to maintain the flood control and mitigation structures. Management for this project is provided by the Lake Ashtabula staff.

The Corps takes over management of Lake Darling Dam when spring runoff is expected to be at least a 1 in 10 event. The conservation pool elevation is 1597.0 feet. During the fall of each year, the USFWS lowers the Lake Darling pool elevation by one foot prior to Feb 1. Additional drawdowns may be done in late winter/early spring depending on the amount of snow water content within the basin. The Corps works with the Saskatchewan Water Authority and the USFWS during a flood to reduce downstream flooding in compliance with the 1989 International Agreement. The pool may rise to elevation 1601.0 feet during flood conditions, which allows for an additional 39,700 acre-feet of storage.

MINNESOTA FLOOD CONTROL SECTION

Orwell Dam

Orwell Dam is located on the Ottertail River near Fergus Falls, Minn. The Corps operates two day-use recreation areas near the dam. The Minnesota Department of Natural Resources leases nearly 2,000 acres of this site for wildlife management. Of this area, approximately one-third is a closed sanctuary.

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The conservation pool elevation at Orwell Dam is 1064.0 feet. Depending on the amount of snow water content in the basin the pool may be drawn down to a maximum elevation of 1050.0 feet in March. The pool may rise to elevation 1070.0 feet allowing for an additional 5,700 acre-feet of storage above the conservation level. The Corps has the authority in extreme conditions to increase the flood storage capacity within the reservoir to elevation 1073.0 feet. The supplementary surcharge pool provides an additional 3,700 acre-feet of storage above the flood control pool. The Otter Tail River channel capacity below Orwell Dam is considered to be 1,200 cfs.

Lake Traverse Project

The Lake Traverse Project is located on the Minnesota/South Dakota border near Wheaton, Minn. The project consists of three structures: Browns Valley Dike, and Reservation and White Rock dams. The project consists of three day-use recreation areas and 640 acres of fee land for wildlife. The Minnesota Department of Natural Resources leases 872 acres for wildlife management purposes. Additionally, the district sign shop is located here.

The Browns Valley Dike sits on the continental divide between the Red River of the North basin and the Mississippi River basin via the Minnesota River. Water flows into Lake Traverse, through Reservation Dam, into Mud Lake, through White Rock Dam and down the Bois de Sioux River before joining up with the Otter Tail River in Wahpeton, N.D., and forming the Red River of the North.

The conservation elevation at Reservation Dam is 976.8 feet and the conservation elevation at White Rock Dam is 972.0 feet. There is no drawdown on Mud Lake. The Corps performs a drawdown at Reservation Dam in March and it can be between elevation 975.5 feet and 974.0 feet dependent on the amount of snow water content. During a flood, the gates at White Rock Dam are closed when a trigger has been met (a stage of 12 feet at Wahpeton when the snow water content is above 3 inches or a stage of 10 feet at Wahpeton when the snow water content is below 3 inches and during summer events). The gates are reopened once the flood stage has either fallen back below the trigger or there is no more storage in the pools. During a flood event the pools may rise to elevation 981.0 feet allowing for an additional 128,500 acre-feet of storage above conservation. The Bois de Sioux River channel capacity below White Rock Dam is considered to be 1,100 cfs.

Bigstone/Whetstone

Bigstone/Whetstone is located on the Minnesota River near Odessa, Minn. In accordance with an agreement with the Corps, the lands and waters are managed by the USFWS as a national wildlife refuge. The Highway 75 dam and related structures are operated and maintained by Corps staff from the La qui Parle Project.

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After the spring runoff, the USFWS determines what elevation they want the pool held at through December. Therefore conservation pool elevation can vary from 947.3 feet to 952.3 feet. The Lac qui Parle Project is located downstream of the Highway 75 dam on the Minnesota River.

Lac qui Parle Project

The Lac qui Parle Project is located on the Minnesota River near Watson, Minn. The project consists of the Lac qui Parle, Marsh Lake and Chippewa River Diversion dams and Watson Sag Weir. The Corps operates and maintains two day-use recreation areas here, one below Lac qui Parle Dam and the other below the Marsh Lake Dam. For wildlife management purposes, 347 acres are leased to the Minnesota Department of Natural Resources.

Water continues to flow southeast down the Minnesota River after leaving Highway 75 Dam. It passes first through Marsh Lake and over Marsh Lake Dam, which has a fixed crest spillway, then into Lac qui Parle Lake and out Lac qui Parle Dam. Following the spring runoff, Lac qui Parle is held at elevation 933.5 feet until May for fish spawning. Following the spawn, the lake is held at a conservation elevation of 933.0 feet through the end of August. The pool is held at a winter conservation elevation of 934.0 feet from the beginning of October until the end of February to provide suitable fish habitat. The pool may rise to elevation 941.1 feet during a flood event, which allows for an additional 117,700 acre-feet of storage above the conservation level. The Minnesota River channel capacity below Lac qui Parle Dam is considered to be 2,500 cfs.

The Chippewa River is a large tributary to the Minnesota River. During non-flood events, the water coming from the Chippewa River is split 50/50, with half flowing through the Chippewa Diversion Dam and continuing down the Chippewa River and the other half flowing over the Watson Sag weir into Lac qui Parle Lake. During flood events, the flow through the Chippewa Diversion Dam is limited to no more than 1,000 cfs until the gate is closed and all water is flowing over the structure. The Chippewa River channel capacity below the Chippewa Diversion Dam is 1,000 cfs.