

Figure 4

Flood Operations

When flood operations are declared, additional drawdown may be required prior to snowmelt runoff. The Agreement stipulates the target level for the reservoir based on forecasted inflow. The target drawdown level is adjusted based on updated runoff forecasts. Figure 4 shows the target drawdown levels for Grant Devine Reservoir.

How flood operations are declared:

Flood conditions are declared by the International Souris River Board if one of two conditions is met within Annex A prior to the spring melt. Those conditions are met when the Canadian Water Security Agency and the US National Weather Service issue a:

- » 30-day, unregulated forecast volume at Sherwood, ND that equals or exceeds 175,200 acre-ft (216,100 dam³), or a
- » 30-day, local runoff volume forecast between the Canadian reservoirs and Sherwood, ND that equals or exceeds 30,000 acre-ft (37,000 dam³).

Grant Devine Reservoir

FACT SHEET

Souris River Basin

The Souris River rises near Weyburn, Saskatchewan, and flows in a southeasterly direction for approximately 349 km (217 miles) where it enters the United States near Sherwood in northwestern North Dakota. The river continues on a southeasterly course flowing through Minot, North Dakota. At Velva, the river forms a loop and turns northeast to Towner and then gradually assumes a northwesterly direction to flow back into Canada at Westhope, Manitoba. The Souris River continues its journey in Canada and empties into the Assiniboine River, which flows to the Red River of the North at Winnipeg. The Souris River has a total length of about 1173 km (729 miles), including about 576 km (358 miles) in North Dakota.

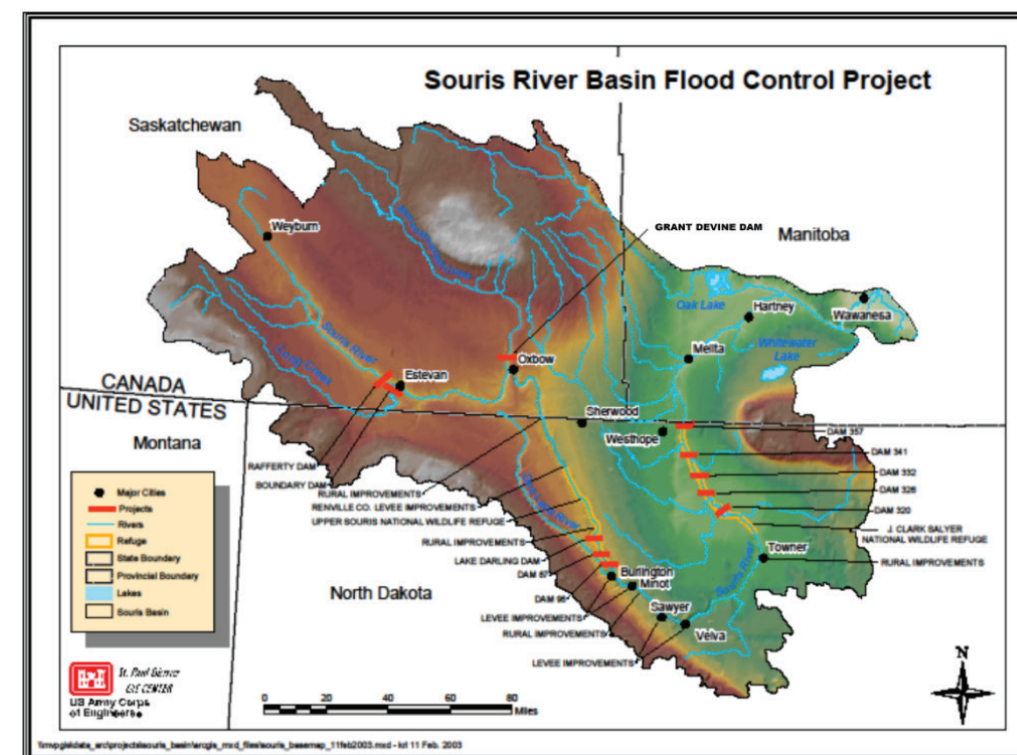


Figure 1

The total basin area is about 61,770 square kilometres (23,850 square miles). (Figure 1)

Click [here](#) to see a map with links to all the gages in the basin on the United States Geological Survey (USGS) website.

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International Souris River Study Board

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Figure 2

Souris River Basin Project

Four dams constitute the majority of the Souris River Basin Project: Rafferty, Grant Devine, Boundary and Lake Darling. The Rafferty – Grant Devine Project (including Boundary Reservoir) in the province of Saskatchewan works in coordination with Lake Darling Dam in North Dakota to provide flood control to rural areas in Saskatchewan, rural areas in North Dakota, and the City of Minot, ND (Figure 1). The flood project includes several smaller dams and bank improvements along the Souris River downstream of Minot, North Dakota.

The reservoirs are operated under the Operating Plan in Annex A of the 1989 Agreement between the governments of Canada and the United States of America.

The objectives of the Operating Plan are to:

- » provide 1% (100 year) flood protection at Minot, North Dakota, based on data available when the operating plan was developed;
- » provide flood protection to urban and rural areas downstream from Rafferty Dam, Grant Devine Dam, and Lake Darling Dam; and
- » ensure, to the extent possible, that the existing benefits from the supply of water in the Souris River Basin are not compromised.

Grant Devine Reservoir

Grant Devine Reservoir, previously known as the Alameda Reservoir, is part of a series of reservoirs in the Souris River Basin. Grant Devine Dam is located on Moose Mountain Creek approximately 5 km (2.5 mi) northwest of the town of Oxbow, Saskatchewan. The confluence of Moose Mountain Creek and the Souris River is 56 km (35 mi) downstream of Rafferty Dam.

The Reservoir provides 138,900 dam³ (112,610 acre-feet) of flood control storage. Figure 3 shows the operating plan for the reservoir.

The Saskatchewan Water Security Agency (WSA) owns, operates, and maintains the Rafferty-Grant Devine Project. Grant Devine Dam is operated in conjunction with Rafferty Dam. The system provides downstream flood prevention and supports water supply for local communities as well as the Shand and Boundary Dam power stations near Estevan, Saskatchewan.

Non-Flood Operations

Grant Devine Reservoir is operated by the WSA under Annex B of the 1989 Agreement. The reservoir is typically held as near full supply level after spring runoff and during the summer. In the fall and winter, usually by February 1, the reservoir is lowered to its target drawdown level.

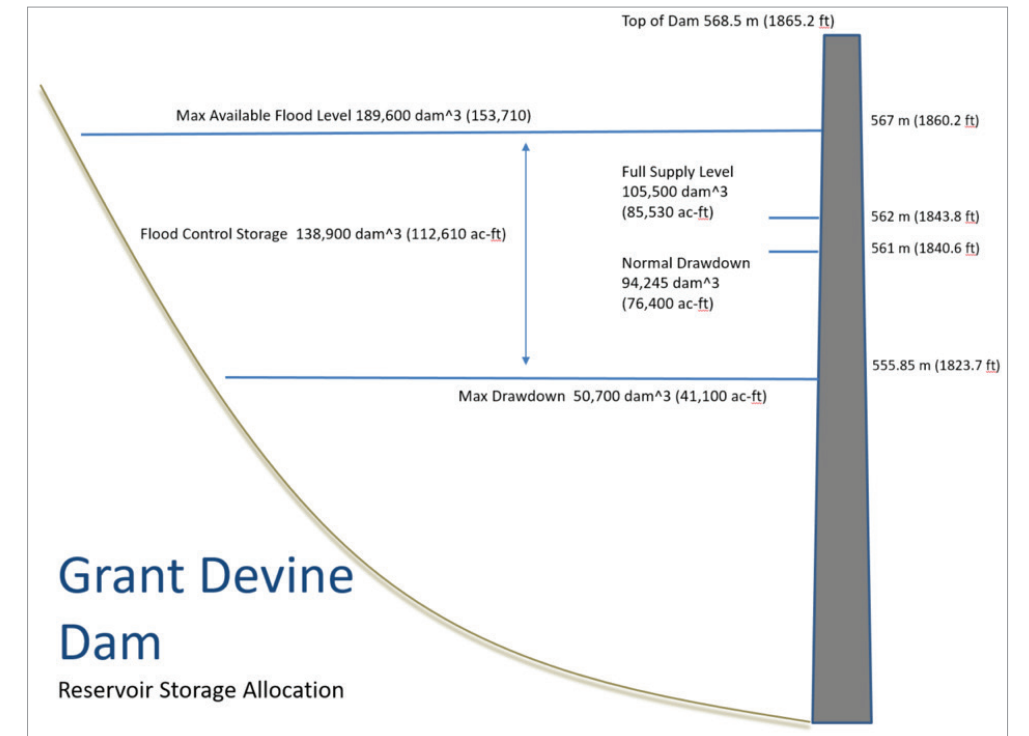


Figure 3

What is a drawdown?

Drawdown means lowering the elevation of the reservoir pool. This is done, for example, to increase capacity for flood storage, provide water supply downstream during a drought, for environmental reasons, support of law enforcement, and other purposes.