

Water Management

International Souris River Board

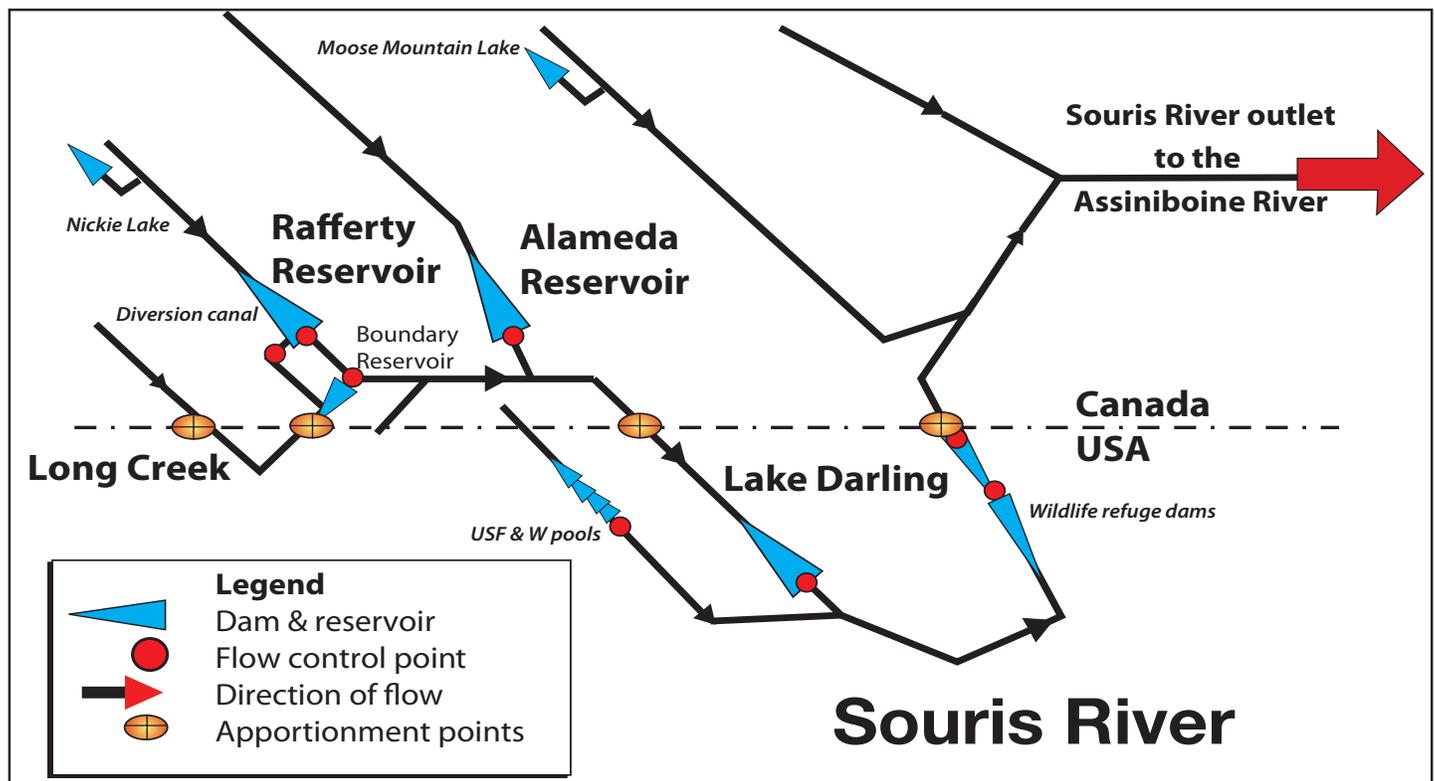
of the International Joint Commission



No. ISRB-2009C

The International Souris River Board has a role in managing the waters of the Souris River basin through its mandates for flow apportionment and flood control. The ISRB monitors the flows and levels in the rivers and the elevations of the reservoirs. Sometimes monitoring shows that flows and levels will exceed or fall below values set by the International Joint Commission (IJC) administering the Boundary Waters Treaty. In such instances, the ISRB advises the operators of the control dams to make adjustments.

The schematic below shows the main features of the Souris Basin:



The Rules for Apportionment of the water

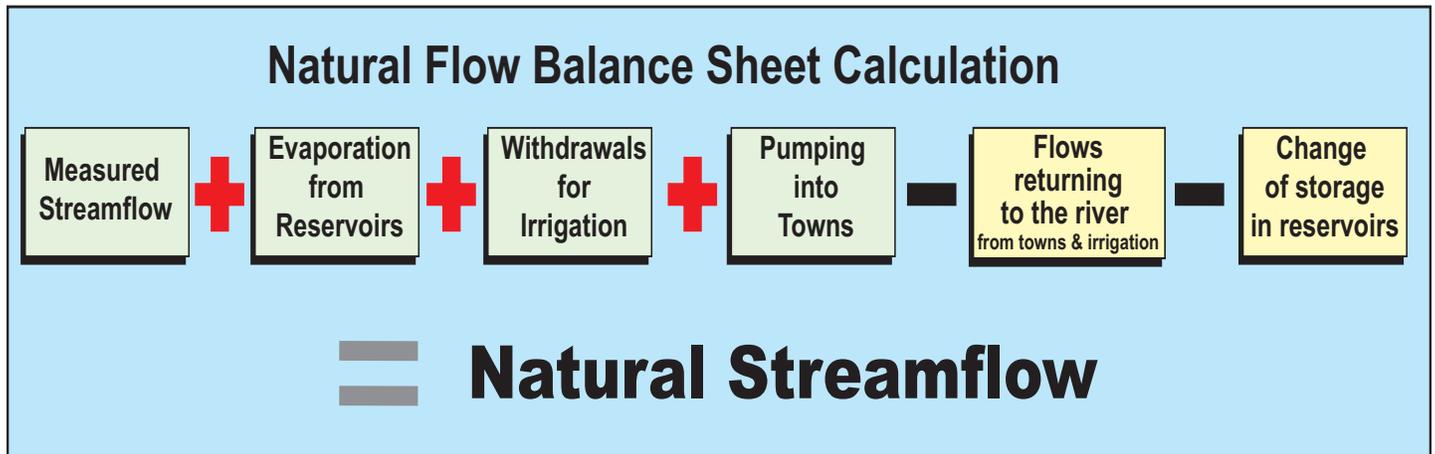
A set of rules negotiated through the IJC governs the sharing of the water of the Souris Basin. The main points are:

- The annual flow of Long Creek from North Dakota into Saskatchewan shall not be less than Long Creek's flow from Saskatchewan into North Dakota.
- The annual flow of the Souris River from Saskatchewan to North Dakota shall be at least 50 percent of flow that would have occurred naturally. In wet years it may be only 40 percent to account for evaporation from the reservoirs in Saskatchewan and for the flood control benefits to North Dakota.
- There shall be a minimum flow of the Souris River of 4 cubic feet per second (cfs) or 0.113 cubic meters per second (m3s) flowing from Saskatchewan to North Dakota. Minimum flows may fall below 4cfs if it would have occurred naturally without Boundary, Rafferty, and Alameda reservoirs.
- The timing of the flows of the Souris River from Saskatchewan to North Dakota should be close to natural conditions or for the most beneficial use of North Dakota, which could include holding back flows to reduce flooding, or until they would be more useful.
- From May to October, at least 20 cfs (0.566 m3s) shall flow in the Souris River from North Dakota to Manitoba. During severe drought conditions, the ISRB can set a lower number.

continued

What is Natural Flow?

Several of the rules are based on “natural flows.” Because of the reservoirs, irrigation and towns the flows are not entirely “natural”. To determine what flows would have occurred naturally in the creeks and rivers, hydrologists use natural flow balance sheets (see box). They monitor and record the conditions, making calculations every two weeks. At the end of December they calculate the annual tally.



Decision factors

The ISRB meets several times a year. Many factors are considered in their deliberations, among them:

- Possibility of floods or droughts
- Levels in main reservoirs
- Compliance of flows to the apportionment targets
- Accumulated apportionment deficits
- Needs of towns and agriculture
- Optimum flows and levels for the wildlife reserves
- Minimum flows for water quality
- Changes in any water use projects in the basin.

The board sends its decisions to the agencies that operate the valves and flow gates at the control dams.

Broader issues of water management do arise, including diversion projects, water quality, and flood forecasting. They are reviewed by the ISRB to give recommendations to the IJC.

The International Souris River Board is a board of the International Joint Commission of the Boundary Waters Treaty

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