Final Minutes
International Souris River Board

Comfort Inn
Bismarck, North Dakota
Tuesday, February 22, 2005

The meeting was called to order at 10:05 a.m. (CST) by Mr. Frink. Mr. Frink welcomed the Board members and other participants.

05-A-01 Review of Agenda

A request was made to combine agenda item 9, Status of Enhanced Mandate Proposal, and agenda item 15, Amalgamation of Boards--Joint Meeting with the Bilateral Water-Quality Monitoring Group. The change was made as requested.

It was noted that the sub-item, Apportionment Requirements--Low Flow, for agenda item 7, Update by the Flow-Forecasting Liaison Committee, should be moved to agenda item 6, Report by the Natural Flows Method Committee. The change was made as noted.

It was moved by Mr. Boals and seconded by Mr. Wiche to approve the minutes of the June 22, 2004, meeting and the minutes of the September 21, 2004, teleconference call as submitted by email to Board members, support staff, and observers.

Carried

05-A-02 Compilation of Souris River Flows to December 31, 2004

(Mr. House; handout provided)

The total outflow for Boundary Reservoir was 4 760 dam^3 (3,859 acre-ft), and the total diversion for Boundary Reservoir was 13 790 dam^3 (11,180 acre-ft). The total diversion for Long Creek Basin was 15 200 dam^3 (12,323 acre-ft).

The total diversion for Nickel Lake Reservoir was 6 380 dam^3 (5,172 acre-ft), and the total diversion for Rafferty Reservoir was 12 420 dam^3 (10,069 acre-ft). Minor project diversions in the upper Souris River Basin were 1 530 dam^3 (1,240 acre-ft). The total diversion for the upper Souris River Basin was 19 060 dam^3 (15,452 acre-ft). The total diversion for the lower Souris River Basin was 4 420 dam^3 (3,583 acre-ft).

The total diversion for Moose Mountain Lake was 1 820 dam^3 (1,475 acre-ft), and the total diversion for Alameda Reservoir was 2 430 dam^3 (1,970 acre-ft). Minor project diversions in Moose Mountain Creek Basin were 1 450 dam^3 (1,176 acre-ft). The total diversion for Moose Mountain Creek Basin was 5 700 dam^3 (4,621 acre-ft).

Total additions from noncontributory basins were 6 550 dam^3 (5,310 acre-ft).

The total diversion for the Souris River Basin was 44 380 dam^3 (35,979 acre-ft). Recorded flow at Sherwood was 35 190 dam^3 (28,529 acre-ft). The United States share on a 40/60 basis was 29 210 dam^3 (23,681 acre-ft). The United States received 37 140 dam^3 (30,109 acre-ft) for a surplus of 7 930 dam^3 (6,429 acre-ft).

Recorded flow at the Western Crossing was 12 100 dam^3 (9,809 acre-ft), and recorded flow at the Eastern Crossing was 17 910 dam^3 (14,520 acre-ft). Thus, the surplus from the United States to Canada was 5 810 dam^3 (4,710 acre-ft).

It was moved by Mr. Wiche and seconded by Col. Pfenning to accept the calculation of natural flows as submitted.

Carried

05-A-03 Review of 2004 Hydrologic Conditions and Forecast for Spring 2005

Saskatchewan (Mr. Johnson; handout provided)

Snowfall during the winter of 2003-04 and the resulting snow cover were near or above normal. However, a slow early melt and very dry soil conditions significantly affected runoff, which was well below normal in all areas. Rainfall from mid-May until mid-June was well above normal but resulted in only moderate flows.

A release of 3 110 dam^3 (2,521 acre-ft) was made from Alameda Reservoir from April 7 to April 26, 2004, and another release of 1 460 dam^3 (1,184 acre-ft) was made from September 21 to October 2, 2004.

No releases were made from Rafferty Reservoir during 2004. However, from May 14 to June 14, 2004, 640 dam^3 (519 acre-ft) was pumped from Rafferty Reservoir to Boundary Reservoir. On December 31, 2004, the level of Rafferty Reservoir was 548.85 m (1,800.66 ft), virtually unchanged from at the beginning of the year.

No significant precipitation has been reported in the Souris River Basin in Saskatchewan since February 1, 2005. Temperatures in the basin have been above normal.

Spring runoff for 2005 is expected to vary from below normal in the Long Creek Basin to near normal in the Souris and Moose Mountain Creek Basins. Fall precipitation for 2004 varied from near normal in the northern part of the basin to slightly below normal in the southern and western parts of the basin. Winter precipitation for November 1, 2004, to February 1, 2005, was near normal.

On February 2, 2005, Boundary Reservoir was at an elevation of 559.59 m (1,835.90 ft) or 1.23 m (4.04 ft) below its full supply level. Nickel Lake was at an elevation of 562.77 m (1,846.34 ft), 0.23 m (0.75 ft) below its full supply level, on January 6, 2005.

On February 3, 2005, Rafferty Reservoir was at an elevation of 548.85 m (1,800.67 ft). No releases for apportionment purposes were planned. Moose Mountain Reservoir was at an elevation of 619.92 m (2,033.83 ft), and no releases for apportionment purposes were planned. Alameda Reservoir was at an elevation of 560.93 m (1,840.30 ft).

North Dakota (Mr. Robinson; handout provided)

Spring runoff for 2004 was well below average. The spring runoff peak of 140 ft^3/s (3.96 m^3/s) at Sherwood on April 5, 2004, was ranked 65th in 75 years of record. Monthly mean flows for Sherwood were well below the period-of-record monthly mean for all months until the end of May. For the remainder of the year, flows were above the long-term mean.

Flows were below 4 ft^3/s (0.113 m^3/s) from January 1 to March 24, 2004, due to natural conditions. The flows then increased to more than 4 ft^3/s (0.113 m^3/s) as a result of melt water from the snowpack. Flows fell to less than 10 ft^3/s (0.283 m^3/s) from May 7 to May 12, 2004, and then remained above 10 ft^3/s (0.283 m^3/s) until August 30, 2004. From August 30 until December 31, 2004, flows were less than 10 ft^3/s (0.283 m^3/s) except for a short period from September 24 to October 7, 2004.

The low-flow monitoring program on the Souris River near Towner, North Dakota, was expanded. Two gages were installed and a series of measurements was made to quantify flows to the Eaton Irrigation Project.

January 2005 flows were less than or near normal.

North Dakota (Mr. Ziemer; handout provided)

Spring runoff in the Souris River Basin in 2004 commenced in late March and early April. Precipitation totals for 2004 ranged from 13.12 in. (333.25 mm) at Fortuna, North Dakota, to 24.74 in. (628.40 mm) at Rolette, North Dakota. Those totals were about 90 to 140 percent of normal.

Snowfall for the winter of 2004-05 is below normal and considerably less than for the winter of 2003-04. Snow depths for the first week of February varied from 10 in. (254 mm) along the Canadian border to about 1 in. (25.4 mm) in the southern areas of the basin.

With near-normal moisture conditions in 2004, drought conditions for 2005 have improved slightly.

Manitoba (Mr. Boals; handout provided)

Flows in the lower Souris River were unusually low in early 2004. River levels and flows began to rise in late May 2004 in response to heavy rainfall and were well above average during June and July 2004. Flows continued to be above average for most of the fall. Significant fluctuations in flow occurred in November 2004 when flows declined to near zero at Coulter. Flows then rose to 180 ft^3/s (5.10 m^3/s) in late November and December 2004 and then decreased sharply to near zero by mid-December 2004.

On February 18, 2005, flows for the Souris River in Manitoba ranged from a trickle at Coulter to about 10 ft^3/s (0.283 m^3/s) at Wawanesa. The spring 2005 outlook is for average runoff in most areas of the basin.

05-A-04 Water Appropriations in the Souris River Basin During 2004

Saskatchewan (Mr. Johnson)

Diversions for two projects were made for a total of 531 dam^3 (430 acre-ft).

North Dakota (Mr. White; handout provided)

No surface-water permits were added. Two ground-water permits were added for a total of 282.2 acre-ft (348.0 dam^3).

05-A-05 Operation of U.S. Refuges and Reservoirs on the Souris River

(Mr. Knauer; handout provided)

On January 1, 2004, the water level of Lake Darling was 1,595.82 ft (486.41 m). Storage was 97,613 acre-ft (120 406 dam^3) and all gates were closed. At the end of May, Lake Darling was at a level of 1,596.81 ft (486.71 m) and all gates were closed. Total provisional inflow at Sherwood for January through May 2005 was 6,603 acre-ft (8 145 dam^3).

Total provisional inflow at Sherwood for January through December 2004 was 28,538 acre-ft (35 202 dam^3). This was 28 percent of the historic average annual inflow (water year) for the 65- year period from 1938 through 2002. Total provisional outflow for 2004 for the Souris River near Foxholm was 28,298 acre-ft (34 906 dam^3). This was 29 percent of the historic average annual outflow (water year) for 1938 through 2002. On December 31, 2004, Lake Darling was

at a level of 1,595.79 ft (486.40 m). Storage was 97,330 acre-ft (120 057 dam^3) and all gates were closed.

Total inflow at Bantry for January through May 2004 was 20,959 acre-ft (25 853 dam^3).

Total outflow at Westhope for 2004 was 138,778 acre-ft (171 183 dam^3). Total outflow was 6,025 acre-ft (7 432 dam^3) less than total inflow.

On January 1, 2004, Lake Darling was completely frozen and had an ice depth of at least 36 in. (0.91 m). The lake was mostly free of ice by April 23, 2004, about 1 week later than normal. Oxygen samples taken from Lake Darling in March indicated lowered levels of oxygen in the lake, but no fish kill was observed. However, dead fish were observed below Dams 41, 83, 87, and 96. Lack of light penetration may have contributed to the fish kill, but past winter kills did not extend as far south into the deeper impounded water. Provisional data indicate dissolved oxygen levels at Sherwood were less than 4 milligrams per liter between March 10 and March 14, 2004. The lowest recorded level was 2.93 milligrams per liter on March 12, 2004.

05-A-06 Report by the Natural Flows Method Committee

(Mr. White; handout provided)

The handout provided by Mr. White showed several scenarios for the interpretation of the natural flow computation. Past discussions have centered on how the split should be calculated. According to the agreement (in the notwithstanding clause), "Notwithstanding the annual division of flows that is described in (a), in each year Saskatchewan will, so far as is practicable as determined by the Board, deliver to North Dakota prior to June 1, fifty percent of the first 50 000 cubic decametres (40,500 acre-feet) of natural flow which occurs during the period January 1 to May 31. The intent of this division of flow is to ensure that North Dakota receives fifty percent of the rate and volume of flow that would have occurred in a state of nature to try to meet existing senior water rights." If the flow volume is greater than 50 000 dam^3 (40,500 acre-ft) and the current year June 1 elevation of Lake Darling is greater than 486.095 m (1,594.8 ft), the United States would receive 40 percent of the flow volume.

The Natural Flows Method Committee was charged with developing suggestions on how the wording in the agreement should be interpreted. A report from the committee is to be presented at the June 2005 meeting.

(Mr. Yee)

An annotated table of contents for the procedures manual was sent out on June 26, 2004. Comments on the table of contents were incorporated and an updated version will be sent to Board members.

05-A-07 Update by the Flow-Forecasting Liaison Committee

(Mr. Ziemer; handout provided)

The Souris River near McTaggart should be removed from the list of hydrometric stations (table 1 in the "Membership and Networks Update, February 2005" handout provided by the Liaison Committee).

05-A-08 Discussion and Update on Water-Management Projects

NAWS (Mr. Frink)

Another 15 miles of pipeline will be laid. Less than half of the construction has been completed. Water for the project is disinfected at Max, North Dakota, and then filtered at the water-treatment plant in Minot, North Dakota.

The lawsuit between Manitoba and the Department of the Interior was remanded back to the State for an Environmental Impact Statement (EIS). The State can appeal the decision, complete an EIS, or do both.

Status Report for Lake Metigoshe Project (Mr. White)

Nothing has been received from the attorney who represents the Oak Creek Water Board.

2001 Flood Report (Mr. Eaton)

The draft will be sent out within several weeks.

Other

No comments.

05-A-09 Status of Enhanced Mandate Proposal and 05-A-15 Amalgamation of Boards

The State Department has sent a diplomatic note to the Ministry of Foreign Affairs. No response has been received.

Legal personnel from the State Department and the Ministry of Foreign Affairs are meeting on February 24, 2005. The International Joint Commission (IJC) would like to see the amalgamation completed by the time of their spring meeting in April. North Dakota entities were contacted to reaffirm their support, but the Canadian entities have not yet been contacted. Letters were sent to reaffirm support from the North Dakota entities.

The IJC will develop directions on how to proceed with the amalgamation.

Ideas concerning a work plan and budgeting for the amalgamation include the following:

Prepare information bulletins/fact sheets on the background of the Boards.

Prepare bulletins on the mandate, the role of the Boards, and Board contacts.

Conduct a review of information requirements and assess the need to generate data to gain information.

Develop a procedures manual for the determination of natural flow.

Develop revised methods for the consumptive use of reservoirs in North Dakota and Canada and determine the effect on natural flow.

Study fish kills in the Souris River Basin.

Investigate the cause and effect of flooding in Manitoba (reservoir operation).

Identify the need for technical and secretarial support for the Board.

Gages for special issues could be funded through the work plan. This idea should be presented as a priority and promoted at the IJC meeting. Funds are available.

Further discussion on the amalgamation centered on questions as to how active the Board should be, is a half-time secretariat needed, and who would be responsible for developing the work plan. The amalgamation should involve strategic planning for 2 to 3 years into the future.

It was suggested that a team be put in place to develop a directive and a work plan in anticipation of the amalgamation being approved. The team would include representatives from North Dakota, the U.S. Fish and Wildlife Service, the Corps of Engineers, Saskatchewan Watershed Authority, Manitoba, and Environment Canada. Team leaders would be from the U.S. Army Corps of Engineers and Environment Canada.

It was decided that Mr. Frink would arrange a conference call between the Chairs of the two Boards before the April 12-14, 2005, IJC meeting. The purpose of the conference call will be to discuss the amalgamation and the work plan before the IJC meeting presentation.

05-A-10 Preparation of ISRB 2004 Annual Report

(Ms. Martin)

Emails will be sent to those responsible for supplying the data and information needed for the annual report. The report will be prepared and a draft provided for review within the next couple of weeks.

05-A-11 IJC Spring Meeting Update

The meeting will be held on April 12-14, 2005, in Washington, D.C

05-A-12 Other Business

Lake Darling has been removed as a forecast point for the National Weather Service. Inflows for the lake will be forecast, but stage will no longer be forecast.

The U.S. Army Corps of Engineers is developing a model for the Souris River to verify discussions to regulate flows during the flood season.

05-A-13 Date and Location of June 2005 Meeting

The June 2005 meeting was scheduled for Tuesday, June 28, 2005, at 10:00 a.m. CDT. The meeting will be held in Minot, North Dakota. A tour of Lake Darling will be on the agenda.

05-A-14 Date of September 2005 Conference Call

The September 2005 conference call was scheduled for Wednesday, September 21, 2005, at 10:00 a.m. CDT.

The meeting was adjourned at 3:05 p.m. CST.

FINAL AGENDA
INTERNATIONAL SOURIS RIVER BOARD
Comfort Inn
Bismarck, North Dakota
Tuesday, February 22, 2005

1. Review of agenda

2. Compilation of Souris River flows to December 31, 2004

3. Review of 2004 hydrologic conditions and forecast for spring 2005
   Saskatchewan
   North Dakota
   Manitoba

4. Water appropriations in the Souris River Basin during 2004

5. Operation of U.S. refuges and reservoirs on the Souris River

6. Report by the Natural Flows Method Committee
   Apportionment requirements--low flow

7. Update by the Flow-Forecasting Liaison Committee

8. Discussion and update on water-management projects
   NAWS
   Status report for Lake Metigoshe project

2001 flood report
Other

9. Status of enhanced mandate proposal
   Projects and work plan activities

10. Preparation of ISRB 2004 annual report

11. IJC spring meeting update

12. Other business

13. Date and location of June 2005 meeting

14. Date of September 2005 conference call

15. Amalgamation of Boards--Joint meeting with Bilateral Water-Quality Monitoring Group (scheduled for 2:00 p.m.)

FINAL MINUTES DISTRIBUTION LIST
INTERNATIONAL SOURIS RIVER BOARD
Comfort Inn
Bismarck, North Dakota
Tuesday, February 22, 2005

*Indicates attendance at meeting

MEMBERS FOR CANADA

*Russell Boals, Chief, Water Survey Division, Environment Canada, Regina, Saskatchewan

*Wayne Dybvig, Vice President Operations, Saskatchewan Watershed Authority, Moose Jaw, Saskatchewan

Rick Bowering, Manager, Surface Water, Manitoba Stewardship, Winnipeg, Manitoba

MEMBERS FOR UNITED STATES

*Gregg Wiche, District Chief, U.S. Geological Survey, Bismarck, North Dakota

*Dale Frink, State Engineer, North Dakota State Water Commission, Bismarck, North Dakota

*Michael Pfenning, Commander, U.S. Army Corps of Engineers, St. Paul District, St. Paul, Minnesota

SECRETARY OF THE BOARD

*Cathy Martin, Technical Editor, U.S. Geological Survey, Bismarck, North Dakota

OTHERS

*Randy House, Hydrometric Supervisor, Water Survey Division, Environment Canada, Regina, Saskatchewan

*Brian Yee, Acting Manager, Water Survey Division, Environment Canada, Regina, Saskatchewan

*Doug Johnson, Director, Basin Operations, Saskatchewan Watershed Authority, Moose Jaw, Saskatchewan

*Steve Robinson, Chief, Hydrologic Records, U.S. Geological Survey, Bismarck, North Dakota

*Robert White, Water Resource Engineer, North Dakota State Water Commission, Bismarck, North Dakota

*Edward Eaton, Chief, Water Control Section, U.S. Army Corps of Engineers, St. Paul District, St. Paul, Minnesota

*Kari Layman, Hydraulic Engineer, U.S. Army Corps of Engineers, St. Paul District, St. Paul, Minnesota

*Mark Ziemer, Senior Hydrologic Forecaster, National Weather Service, Chanhassen, Minnesota

*Cliff Hanretty, Chairman, Eaton Irrigation District, Towner, North Dakota

*Dean Knauer, Refuge Manager, U.S. Fish and Wildlife Service, Foxholm, North Dakota

*Megan Estep, Regional Private Lands Hydrologist, U.S. Fish and Wildlife Service, Denver, Colorado

Bruce Holliday, District Officer, Water Survey Division, Atmospheric Environment Branch, Environment Canada, Regina, Saskatchewan

Richard Kellow, Executive Director, Environment Canada, Regina, Saskatchewan

E. A. Bailey, Engineering Advisor, Canadian Section, International Joint Commission, Ottawa, Ontario, Canada

Lisa Bourget, Secretary, United States Section, International Joint Commission, Washington, DC

*Mark Colosimo, Engineering Advisor, United States Section, International Joint Commission, Washington, DC