

FINAL MINUTES  
INTERNATIONAL SOURIS RIVER BOARD  
THE FORT GARRY HOTEL  
WINNIPEG, MANITOBA  
TUESDAY, JUNE 22, 2004

The meeting was called to order at 10:15 a.m. (CDT) by Mr. Boals. Mr. Boals welcomed Board members and other participants. Mr. Eaton acted as representative for Colonel Ball, Mr. Robinson acted as representative for Mr. Wiche, and Mr. Johnson acted as representative for Mr. Dybvig.

### **04-B-01 Review of Agenda**

A request was made to add an agenda item concerning the watershed initiative letter dated May 26, 2004, from the International Joint Commission. The addition was made to agenda item 10.

A request was made to add an agenda item concerning a discussion on fish kills in Lake Darling. The addition was made to agenda item 6.

A request was made to change agenda item 7 from Water Allocations in the Souris River Basin During 2004 to Water Allocations in the Souris River Basin.

It was moved by Mr. Bowering and seconded by Mr. Frink that the changes to the agenda be approved.

Carried

### **04-B-02 Approval of Minutes for February 17, 2004, Meeting**

The elevations given for Lake Metigoshe under item 04-A-09 were questioned. Mr. White will check the elevations and contact Ms. Martin as to any needed changes.

It was moved by Mr. Johnson and seconded by Mr. Frink that the minutes be approved subject to the needed changes being made.

Carried

## **04-B-03 Approval of Minutes for March 16, 2004, Teleconference Call**

It was moved by Mr. Eaton and seconded by Mr. Johnson that the minutes be approved.

Carried

## **04-B-04 Compilation of Souris River Flows to May 31, 2004**

### **(Mr. House; handout provided)**

Inflow for Long Creek at the Eastern Crossing was 4 860 dam<sup>3</sup> (3,940 acre-ft). The total outflow for Boundary Reservoir was 1 010 dam<sup>3</sup> (819 acre-ft), and the total diversion for Boundary Reservoir was 4 175 dam<sup>3</sup> (3,385 acre-ft). The total diversion for Long Creek Basin was 5 675 dam<sup>3</sup> (4,600 acre-ft).

The total diversion for Nickle Lake Reservoir was 2 610 dam<sup>3</sup> (2,116 acre-ft), and the total diversion for Rafferty Reservoir was 2 290 dam<sup>3</sup> (1,857 acre-ft). Minor project diversions in the upper Souris River Basin were 1 530 dam<sup>3</sup> (1,240 acre-ft). The total diversion for the upper Souris River Basin was 6 420 dam<sup>3</sup> (5,205 acre-ft).

The total diversion for the lower Souris River Basin was 3 190 dam<sup>3</sup> (2,586 acre-ft).

The total diversion for Moose Mountain Lake was 1 180 dam<sup>3</sup> (957 acre-ft), and the total diversion for Alameda Reservoir was 1 770 dam<sup>3</sup> (1,435 acre-ft). Minor project diversions in Moose Mountain Creek Basin were 1 450 dam<sup>3</sup> (1,176 acre-ft). The total diversion for Moose Mountain Creek Basin was 4 400 dam<sup>3</sup> (3,567 acre-ft).

Total additions from noncontributory basins were 2 080 dam<sup>3</sup> (1,686 acre-ft).

The total diversion for the Souris River Basin was 19 685 dam<sup>3</sup> (15,959 acre-ft). Recorded flow at Sherwood was 8 140 dam<sup>3</sup> (6,599 acre-ft), and natural flow at Sherwood was 25 745 dam<sup>3</sup> (20,871 acre-ft). The United States share on a 50/50 split was 12 870 dam<sup>3</sup> (10,434 acre-ft). The United States received 10 000 dam<sup>3</sup> (8,107 acre-ft). Thus, the deficit to the United States was 2 870 dam<sup>3</sup> (2,327 acre-ft).

Recorded flow for Long Creek at the Western Crossing was 2 740 dam<sup>3</sup> (2,221 acre-ft). The surplus from the United States to Canada was 2 120 dam<sup>3</sup> (1,719 acre-ft).

Estimated figures to June 22, 2004, are as follow:

Inflow for Long Creek at the Eastern Crossing—13 000 dam<sup>3</sup> (10,539 acre-ft);

Storage change for Nickle Lake Reservoir—5 200 dam<sup>3</sup> (4,216 acre-ft);

Inflow for Rafferty Reservoir—11 500 dam<sup>3</sup> (9,323 acre-ft);

Storage change for Alameda Reservoir—3 100 dam<sup>3</sup> (2,513 acre-ft);

Addition from Yellow Grass Ditch—5 700 dam<sup>3</sup> (4,620 acre-ft);

Addition from Tatagwa Lake Drain—100 dam<sup>3</sup> (81 acre-ft);

Recorded flow at Sherwood—19 140 dam<sup>3</sup> (15,517 acre-ft);

Deficit to United States on a 60/40 split—1 450 dam<sup>3</sup> (1,176 acre-ft).

Questions arose as to how the 40/60 share is calculated. For example, does the United States receive 50 percent of the first 50 000 dam<sup>3</sup> (40,500 acre-ft) and then 40 percent of anything over 50 000 dam<sup>3</sup> (40,500 acre-ft)?

Clause A of the Agreement states that Saskatchewan will deliver a minimum of 50 percent of the annual natural flow volume at the Sherwood Crossing in every year except those when the conditions given in (i) or (ii) apply. Conditions given in (i) are that the annual natural flow volume at the Sherwood Crossing is greater than 50 000 dam<sup>3</sup> (40,500 acre-ft) and the current year June 1 elevation of Lake Darling is greater than 486.095 m (1,594.8 ft). Conditions given in (ii) are that the annual natural flow volume at the Sherwood Crossing is greater than 50 000 dam<sup>3</sup> (40,500 acre-ft) and the current year June 1 elevation of Lake Darling is greater than 485.79 m (1,593.8 ft) and, since the last occurrence of a Lake Darling June 1 elevation of greater than 486.095 m (1,594.8 ft), the elevation of Lake Darling has not been less than 485.79 m (1,593.8 ft) on June 1.

Comments were made that the intent of the original language in the Agreement was that the United States would receive 50 percent of the first 50 000 dam<sup>3</sup> (40,500 acre-ft) and 40 percent of anything over 50 000 dam<sup>3</sup> (40,500 acre-ft).

The long-term effect would be that the United States would receive less water if the split was 40/60 for the year.

Ms. Estep and Mr. White will review the original language of the Agreement to determine the original intent concerning the split. Board members also will check the Agreement and initiate discussions before the September 21, 2004, conference call to allow a decision at the time of the conference call.

## **04-B-05 Review of Current Flow Conditions**

### **Saskatchewan (Mr. Johnson; handout provided)**

Communication between Canada and the United States concerning the spring runoff situation was good.

The 2003 fall precipitation was well below normal throughout the basin. The winter precipitation varied from well above normal in the southern areas of the basin to slightly below normal in the northern areas of the basin.

Precipitation was minimal during April 2004 and the first part of May 2004. However, since May 10, 2004, precipitation has been extreme. Most areas in the Souris River Basin in Saskatchewan have received precipitation amounts of 170 mm (6.7 in.), and many areas have received as much as 250 mm (10 in.).

Spring snowmelt runoff across the entire Souris River Basin was well below normal. However, heavy rains during May 2004 and early June 2004 generated significant runoff across much of the basin. The largest amounts of runoff were in the Long Creek and lower Souris River Basins.

A total of 641 dam<sup>3</sup> (520 acre-ft) was pumped from Rafferty Reservoir to Boundary Reservoir between May 14, 2004, and June 14, 2004. Boundary Reservoir was at an elevation of 560.72 m (1,839.61 ft), just 0.11 m (0.36 ft) below full supply level, on June 20, 2004.

No releases for apportionment requirements are planned for Boundary Reservoir.

Snowmelt runoff in the upper Souris River Basin was limited. Rafferty Reservoir rose only 0.05 m (0.16 ft) by the end of April 2004. However, rainfall runoff from the May-June 2004 rains generated sufficient runoff volumes to fill Nickle Lake and raise Rafferty Reservoir an additional 0.1 m (0.33 ft). Rafferty Reservoir was at an elevation of 549.11 m (1,801.52 ft), 0.39 m (1.28 ft) below its interim full supply level, on June 21, 2004. No releases for apportionment requirements are planned for Rafferty Reservoir.

Early spring runoff in the Moose Mountain Creek Basin also was limited. Spring rains generated some runoff in the basin, but runoff volumes were significantly less than in other areas of the Souris River Basin. Alameda Reservoir was at an elevation of 561.25 m (1,841.35 ft), 0.75 m (2.46 ft) below its full supply level, on June 21, 2004.

No additional releases required for apportionment are planned from Alameda Reservoir.

Based on the additional recorded runoff to date, Saskatchewan would be in an apportionment deficit to North Dakota. Because of the high flows in the lower Souris River Basin and no requirements for the water in North Dakota or Manitoba, North Dakota has asked Saskatchewan to retain the apportionment flows at this time. The need to meet apportionment will be assessed as summer progresses.

## **North Dakota (Mr. Robinson; handout provided)**

Spring snowmelt runoff in the Souris River Basin in North Dakota was much less than during 2003. The peak of 140 cfs (3.96 m/s) at Sherwood on April 5, 2004, was ranked 65<sup>th</sup> in 74 years of record. Flows were less than 4 cfs (0.11 m/s) from January 1, 2004, to March 24, 2004.

## **Manitoba (Mr. Warkentin; handout provided)**

Snowmelt runoff in the Manitoba portion of the Souris River Basin was below average as a result of dry soil and subsoil conditions from the 2003 drought.

Precipitation during May in the Manitoba portion of the Souris River Basin was 150 to 250 percent of normal. Above normal precipitation continued in June 2004. Flows at Westhope increased from 20 cfs (0.56 m/s) in early May 2004 to about 1 700 cfs (48.14 m/s) on June 21, 2004. The Souris River rose 5 ft (1.5 m) in the Coulter area from May 16, 2004, to June 18, 2004, and flooded haylands from the United States-Canada border to near Melita. Some cropland in the Napinka area also was flooded.

The wet weather was beneficial from a hydrologic perspective. Subsoil moisture was replenished and aquifer levels rose from low to at least average.

On June 21, 2004, flows in the Souris River ranged from 1 700 cfs (48.14 m/s) at Coulter and Melita to about 1 500 cfs (42.47 m/s) at Souris and Wawanesa.

The outlook for the remainder of 2004 is good except for flooding of low-lying haylands in the Coulter area. With normal precipitation, flooding should be greatly diminished by mid-July. Water supplies for the remainder of 2004 should be very good.

## **04-B-06 Operation of U.S. Fish and Wildlife Refuges and Reservoirs on the Souris River, 2004**

### **(Ms. Estep; handout provided)**

Total provisional inflow measured at Sherwood for January 1, 2004, through May 31, 2004, was 6,605 acre-ft (8 147 dam<sup>3</sup>). The elevation of Lake Darling increased 0.97 ft (0.30 m) from 1,595.82 ft (486.41 m) on January 1, 2004, to 1,596.79 ft (486.70 m) on May 31, 2004.

Total measured flow to J. Clark Salyer National Wildlife Refuge for January 1, 2004, through May 31, 2004, was 30,549 acre-ft (37 682 dam<sup>3</sup>).

Spring peak flow at the border was 114 cfs (3.23 m/s). The peak flow occurred on April 5, 2004. Saskatchewan released 25 000 dam<sup>3</sup> (20,275 acre-ft) to the United States before June 1, 2004.

The elevation of Lake Darling on June 1, 2004, was about 1,596.65 ft (486.66 m).

On January 1, 2004, the surface of Lake Darling was completely frozen over and ice depth was at least 36 in. (0.91 m). The lake was mostly ice free by April 23, 2004, which was about 1 week later than normal. Oxygen samples taken from Lake Darling in March revealed lowered oxygen levels, but no fish kill was observed. However, dead fish were observed below Dams 41, 83, 87, and 96.

Lack of light penetration because of a deep snow cover may have contributed to the fish kill. However, past winter kills in the Souris River above the refuge are not known to have extended south into the deeper impounded water above Dam 41. Another possible cause of low oxygen at the north end of the refuge may have been the late-fall release of water from the low-level outlet at Alameda.

Provisional data indicate dissolved-oxygen levels were less than 4 mg/L on March 10, 2004, and remained at less than that level until March 14, 2004. The lowest level recorded was 2.93 mg/L on March 12, 2004.

Total Souris River flow at Bantry through May 2004 was 20,959 acre-ft (25 853 dam<sup>3</sup>). Flow at Bantry peaked at 449 cfs (12.7 cm/s) on May 17, 2004. Total measured inflow for the J. Clark Salyer National Wildlife Refuge through May 2004 was 30,549 acre-ft (37 682 dam<sup>3</sup>). Total outflow through May 2004 was 7,409 acre-ft (9 139 dam<sup>3</sup>).

Total pool volume on May 31, 2004, was 54,900 acre-ft (67 719 dam<sup>3</sup>), which was 12,691 acre-ft (15 654 dam<sup>3</sup>) greater than the June 1 target. Outflow at Westhope peaked at 301 cfs (8.5 cm/s) on May 29, 2004.

If the J. Clark Salyer National Wildlife Refuge needs water during August for management purposes, it is hoped that the dates of the Saskatchewan fall releases can be coordinated to maximize water usage. Saskatchewan and North Dakota should explore summer low-flow releases if it will expedite the release of water that must be released from storage before February 1, 2005.

## **04-B-07 Water Allocations in the Souris River Basin**

**(Mr. White; handouts provided)**

A list of permits for the Souris River Basin was provided to give a point-of-reference year for “nothing new to report” statements. Saskatchewan will submit its list at a later date.

## **04-B-08 Report by the Natural Flows Method Committee**

**(Mr. White)**

The end-of-month storage and evaporation data will be revised (Mr. Yee and Mr. White are working on this issue).

## **04-B-09 Update by the Flow-Forecasting Liaison Committee**

**(Mr. Warkentin; handouts provided)**

There is little change from the report presented in February. Climate stations that cannot report by computer will be discontinued.

Liaison between the agencies was very good.

## **04-B-10 Update on Water-Management Projects**

**NAWS (Mr. Frink)**

A hearing on the lawsuit filed by Manitoba is scheduled for July 29, 2004. The lawsuit is for a full environmental impact statement rather than the environmental assessment that has been completed.

About 19 mi (30.58 km) of pipe are in the ground. A contract has been awarded for another 10 mi (16 km), but construction for the 10 mi (16 km) has not yet started.

**Lake Metigoshe (Mr. White)**

A letter has been written to the Director of the Office of Canadian Affairs and the Deputy Director of the United States Transboundary Division on behalf of the Oak Creek Water Board requesting direction on how to proceed with obtaining approval for the dam. A response has not yet been received.

The approval process could be from government to government or could be referred to the International Joint Commission. If the process is referred to the Commission, the International

Souris River Board may have a role in the licensing of the project. The application procedure in place in the Agreement usually is used for proposed projects but may also be applicable to the Lake Metigoshe situation.

### **Other (Mr. Boals)**

Members of the Flood Operations Committee are as follow:

Dale Frink, North Dakota State Water Commission;

Wayne Dybvig, Saskatchewan Watershed Authority;

Colonel Michael Pfenning, U.S. Army Corps of Engineers; and

Dean Knauer, U.S. Fish and Wildlife Service.

Members of the Technical Liaison Committee are as follow:

Bob White, North Dakota State Water Commission;

Doug Johnson, Saskatchewan Watershed Authority;

Ed Eaton/Ferris Chamberlain, U.S. Army Corps of Engineers;

Megan Estep, U.S. Fish and Wildlife Service; and

Alf Warkentin, Manitoba Water Stewardship.

No committee meetings have taken place.

The mid-level release at Alameda should be up and running later this summer.

## **04-B-11 Status of ISRB Enhanced Mandate Proposal**

### **(Mr. Bailey)**

The governments have not responded formally but do favor the merging of the groups. A plan will be developed by the International Joint Commission to carry on discussions between the provinces and the State of North Dakota. The State Department is working on the matter and is checking on the level of support that is needed.

It may be possible to use diplomatic notes rather than to revise the Agreement.

## **Mr. Boals (handout provided)**

A letter dated May 26, 2004, from the International Joint Commission indicated Commissioners had approved a set of principles regarding the watersheds initiative. The Board was encouraged to review and implement the principles, as appropriate, in carrying out Board responsibilities.

Funding needs to be procured to support the initiative and the activities of the Boards. Therefore, the International Joint Commission requested Board assistance in identifying specific projects/activities that the Board would like to undertake in support of the watersheds initiative. Specific work plan activities should be submitted to the Commission by the end of July 2004.

The Commission would like to identify what could be useful in each basin and would like to know if additional funds would help agencies address issues in a more timely manner.

Examples of what could be undertaken are as follow:

Education

Monitoring

Model Development

Caution is needed on how much to undertake. If duties are expanded, a full-time secretariat probably would be needed.

Action item: Mr. Boals will draft a list of projects/activities to share with Board members, Mr. Sauer, and Mr. Kellow.

## **04-B-12 Status of 2001 Flood Report**

**(Mr. Eaton)**

Funding is now available and work on the report will continue. The report should be completed by September 30, 2004.

## **04-B-13 Status of 2003 ISRB Annual Report**

**(Ms. Martin)**

The report has been printed and will be distributed by July 2, 2004.

## **04-B-14 Other Business**

None.

## **04-B-15 Date and Location of Winter 2005 Meeting**

The 2005 winter meeting was scheduled for Tuesday, February 22, 2005, at 10:00 a.m. CST. The meeting will be held in Bismarck, North Dakota.

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

FINAL MINUTES DISTRIBUTION LIST  
INTERNATIONAL SOURIS RIVER BOARD  
THE FORT GARRY HOTEL  
WINNIPEG, MANITOBA  
TUESDAY, JUNE 22, 2004

\*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 Water 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 Saskatchewan, Environment Canada, Regina, Saskatchewan

\*Brian Yee, Acting Manager, Water Survey Saskatchewan, 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, Project Manager, International Waters Studies, U.S. Army Corps of Engineers, St. Paul District, St. Paul, Minnesota

\*Bob Harrison, Senior Hydrologist, Manitoba Water Stewardship, Winnipeg, Manitoba

\*Alf Warkentin, Hydrologic Forecaster, Manitoba Water Stewardship, Winnipeg, Manitoba

\*Megan A. Estep, Hydrologist, U.S. Fish and Wildlife Service, Denver, Colorado

\*Mike Sauer, Senior Scientist, North Dakota Department of Health, Bismarck, North Dakota

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

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

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

Lisa Bourget, Engineering Advisor, International Joint Commission, Washington, DC