

INTERNATIONAL
SOURIS RIVER
BOARD



CONSEIL
INTERNATIONAL
DE LA RIVIÈRE SOURIS

International Souris River Board

Grand Hotel 1505 North Broadway
Minot, North Dakota -58703 - Phone: 701-852-3161
June 14, 2016

Final Minutes

Board Members:

Russell Boals, Todd Sando, Nicole Armstrong, Mark Lee, John Fahlman, John-Mark Davies, Scott Jutila for Colonel Daniel Koprowski, Scott Gangl, Lee Staab, Jeff Woodward, Ken Bottle, Gregg Wiche, Debbie McMechan, Lorinda Haman, Shelly Weppler.

Regrets – Joe Goodwill, Dave Pattyson, Megan Estep, Dave Glatt.

Attendees:

Lana Pollack, Mark Gabriel, Richard Morgan, Wayne Jenkinson, Steve Robinson, Joel Galloway, Frank Durbian, Laura Diamond, Allen Schlag, Clifford Issendorf, Wanda McFadyen, Garland Erbele, Frank Durbian, Darin Schepp, Heather Husband, Mike Schmidt, Dave Ashley, Ryan Ackerman.

Via conference call – Kristina Farmer.

1. Introduction and Opening Remarks.

Russell Boals opened the meeting at 8:30 a.m. Todd Sando gave a quick recap of the previous day's public meeting, mentioned that this would be his last meeting and introduced his replacement as State Engineer and U.S. Co-Chair to the Board; Garland Erbele. R. Boals invited Board members and other participants to introduce themselves. He then asked Debbie McMechan, the newest Public Board Member from Canada, to provide some additional background. Mark Lee noted that Manitoba Conservation and Water Stewardship has changed their name to Manitoba Sustainable Development.

2. Approval of Agenda.

The agenda was approved as circulated.

Motion: Mark Lee moved to accept the agenda as presented. Shelly Weppler seconded the motion. Carried.

3. Approval of Minutes:

- a. February 24, 2016 Face-to-face Meeting Minutes – John Fahlman questioned Agenda # 5 – Review of 2015 Hydrologic Conditions, Spring 2016 Hydrologic Forecast, and Planned Operations, Part a- whether the 60/40 split according to Annex B of the 1989 International Agreement based on the projected runoff volumes was accurate. R. Boals mentioned that the 60/40 split was based upon the projected runoff volumes in February, which was deemed accurate at that time. Jeff Woodward stated that how the apportionment has changed will be covered under Agenda # 7a; Saskatchewan's review of 2016 hydrologic conditions and operations and summer hydrologic forecast and planned operations. John Fahlman also noted a misspelling in Agenda # 2.

Motion: John Fahlman moved to accept the minutes as amended. Nicole Armstrong seconded the motion. Carried.

4. Public Meeting Review

Debbie McMechan observed that the public had a great opportunity to present their concerns and that they were validated, which isn't always the case. Lee Staab noted that the tour was advantageous for providing insights into the public concerns and supplied a firsthand understanding for members of the Board. He also noted that the public involved with the tour had been repeatedly submitting their concerns at past meetings and should feel that the Board has been listening to them and that some things should be able to move forward. Lee Staab also thanked those that were able to participate in the tour. Lana Pollack noted that it was the best public meeting for the Board since she started attending, mainly because the public showed up and a dialog was formed, for this she congratulated the Board. She also wanted to ensure that the momentum keeps moving forward.

R. Boals took a moment to congratulate Heather Husband on her Aquatic Ecosystem Health presentation at the public meeting. Todd Sando also gave Heather his congratulations and asked what was the basis for the objective values that vary from basin to basin. Heather Husband proposed that the values were determined from the data available at the time and consensus of the group at the time. She also stated that the Aquatic Ecosystem Health committee was reviewing the values to determine their basis and if they were still relevant today. Scott Jutila appreciated the overview of the different contribution areas to the Souris River and the complexity of flow forecasting. He reflected that the public's intents were to serve as a reminder and consideration of their concerns if an event such as the flood in 2011 should happen again.

Shelly Weppler noted that the tour provided insights to the concerns that the public has and that the people were respectful and informative, but also aware that nature plays a part that is outside of anyone's control. Todd Sando congratulated Cliff Issendorf's presentation and was glad to see that Manitoba took note and was willing to work together over his concerns. Cliff Issendorf thanked the Board for listening to the issues he brought forth.

5. Determination of Natural Flow of the Souris River at Sherwood to May 31, 2016

Jeff Woodward reported the results of natural flows determined by Environment Canada for the period ending May 31, 2016. The total diversion in the Souris Rivers basin was 10,488 dam³. Recorded flow at Sherwood was 16,746 dam³. The natural flow computed at Sherwood was 27,234 dam³. According to these computations, 50,000 dam³ was not met making it a 50/50 apportionment split between Canada and the United States at the Sherwood crossing (Saskatchewan- North Dakota). The US share at 50% was 13,620 dam³. The flow received by the US was 18,257 dam³ which constitutes a surplus delivery of 4,637 dam³. The annual flow requirement / apportionment at Long Creek has also been met with a surplus of 1,055 dam³. Jeff Woodward pointed out that the observed flows this year are well below the average and even quartile historic flows. R. Boals then summarized the criteria determining whether the flows provided a 50/50 or 60/40 split.

Motion: Jeff Woodward moved to accept the Natural Flow Computation to May 31, 2016. Lee Staab seconded. Carried.

R. Boals suggested that it may be necessary to introduce a motion for the apportionment to be set at a 50/50 split as opposed to the 60/40 split that was approved at the February 24, 2016 meeting. He noted that there was a motion made in that meeting to accept the Natural Flow Computation that included a 60/40 apportionment.

Motion: John Fahlman moved to accept a 50/50 apportionment for 2016 based on the natural flow of the Souris River at the International Boundary for the period of January 1 to May 31, 2016. Shelly Weppler seconded. Carried.

6. Hydrology Committee Update

- a. Ken Bottle reported that there was nothing new to report other than in regards to membership. Canadian Co-Chair of the Committee; Rob Kirkness will no longer be involved, Canada needs a new member and a new Co-Chair. John Fahlman recommended Nathalie Brunet for the position of Co-Chair. Jeff Woodward recommended Bruce Davison to be placed on the Committee.

Motion: Jeff Woodward moved to place Bruce Davison and Nathalie Brunet on the Hydrology Committee and Nathalie Brunet be appointed as the Canadian Co-Chair. John Fahlman seconded the motion. Carried.

- b. The Operations Plan is currently being reviewed by Hydrology Committee and that the placement of a Canadian Co-Chair on the Hydrology Committee should help it progress.

7. Review of 2016 Hydrologic Conditions and Operations and Summer Hydrologic Forecast and Planned Operations

- a. Saskatchewan

John Fahlman reported that it was a dry fall in 2015 with very little snow in the winter of 2016 resulting in little runoff into all of the Canadian reservoirs. In May, there was 50 mm to 100 mm of rainfall, but mostly below the reservoirs. Rafferty Reservoir and Alameda Reservoir were

both lowered to their respective winter operation drawdown level, which is 1.0 m below full operation level, by February 1, 2016.

As of June 13, 2016, Rafferty Reservoir is at an elevation of 549.51 m, 1.0 m below full operating level. Alameda Reservoir is at an elevation of 561.58 m, 0.42 m below full operating level. Canada is in surplus for delivery this year and Rafferty Reservoir is already at its drawdown level for next winter. Consequently, there are no releases planned until late fall, but they will work with the United States Fish and Wildlife if releases are necessary from Alameda Reservoir. Russell Boals and John Fahlman commented on how the basin has dried up since last year. It was noted that the basin is drier towards the southeast and gains water as it moves to the northwest.

b. North Dakota

Steve Robinson, provided an update on the USGS Sherwood gage with respect to how the stream bank has eroded at the gaging location. The North Dakota State Water Commission did an engineering study comparing the cost to fix the gage at its current location as opposed to moving it three quarters of a mile downstream. To rip-rap the gage at its current location the cost would be in excess of \$500,000, while moving it downstream would cost between \$150,000 to \$200,000. Funding partners will be necessary in order to maintain the gage and its robust infrastructure.

Steve Robinson reported the total volume of flow past the Souris River near Sherwood gage through May 31, 2016 calendar year was 13,576 acre-ft. (16 739 dam^3). This volume is about 28.3% of the median flow (47,930 acre-ft.) for the past 86 years. The total flow from the previous calendar year (2015) through May 31 was 144,950 acre-ft. (176 839 dam^3). Flows for the current year, based on the past 85 years of record, have ranged in the below normal to much above normal range. Peak discharge for the reporting period January 1 to May 31, 2016 is 120 ft^3/s (3.4 m^3/s) which ranks 79 in 86 years of record.

The total volume of flow past the Long Creek at Noonan gage through May 31, 2016 calendar year was 1,336 acre-ft. (1,647 dam^3). This volume is about 8.2% of the median flow (16,220 acre-ft.) for the past 57 years. The total flow from the previous calendar year (2015) through May 31 was 19,672 acre-ft. (24,256 dam^3). Flows for the current year have ranged from normal to above normal. Peak discharge for the reporting period January 1 to May 31, 2016 is 29 ft^3/s (0.8 m^3/s) which ranks 51 in 57 years of record.

Flows recorded at the Souris River near Westhope gage exceeded the long-term mean for the period. Flows for the current year, based on the past 87 years of record, have ranged from normal to above normal. The minimum flow for the period was 1.6 ft^3/s (0.05 m^3/s) on March 30-31. The peak discharge for the period January 1 to December 31 was 308 ft^3/s (379.8 m^3/s) which ranks 66 in 87 years of record.

R. Boals noted that if not for the rainfall event at the end of May, the Sherwood gage would have been in the 10 ft^3/s range, so if there aren't continual rains, the flow needs to be monitored for the minimum flow of 4 ft^3/s criteria.

Allen Schlag, NWS, reported that we are in a rapid transitioning period from an El Niño to La Niña weather pattern, but currently there is an equal chance of the climate going either direction. In the last 10 days, there have been two fairly substantial rain events that covered the lower

portion of the Souris River Basin making up for the early snowmelts through winter that left a drier spring. To the west in the Rocky Mountains there is a strong possibility of higher temperatures for the month of June. The three-month outlook suggests higher than normal temperatures in the Midwest, though North Dakota shouldn't see much above average weather. The climate should shift to a declared La Niña pattern by October. The fall outlook for the basin suggests lower than normal temperatures that should keep the cumulative snowpack around until next spring. There is however a positive Pacific Decadal Oscillation that will be in opposition to the La Niña weather pattern, making climate predictions challenging. This suggests that there will be swings in the weather when one pattern has a stronger influence over the other.

c. Manitoba

Mark Lee reported precipitation in the fall of 2015 was normal to above normal in Manitoba. El Niño conditions caused well below normal snow cover over the winter, resulting in below normal spring runoff potential for the Manitoba portion of the basin. The spring 2016 peak flow of the Souris River at Wawanesa was approximately 550 ft³/s (15.6 m³/s) on March 21st. This is well below the median annual peak flow and is exceeded in approximately 80% of the years on record.

Spring and early summer flows on the Souris River have been below normal with flow fluctuating between the 25th percentile and median values. Precipitation has been above normal for the month of May, improving the dry conditions and the current flow at Wawanesa is approximately 575 ft³/s (16.3 m³/s). The main stem of the Souris River is flowing at the median value while the tributaries are flowing below normal, but the recent rain events are expected increase the tributary flows back to normal.

d. US FWS

Frank Durbian presented a summary of refuge operations and flows for the first five months of 2016. The total provisional inflow measured at Sherwood for the period January to May 31, 2016 was 50,579 acre-ft. (62 364 dam³). This inflow was 16% of the historic record for the same period. The total provisional outflow measured at Foxholm on the south end of the Upper Souris Refuge for the first five months of 2016 was 8,482 acre-ft. (10 463 dam³). This outflow was 12% of the historic record for the January-May period. Lake Darling elevation increased 0.12 ft. (0.04 m) from 1595.93 ft. (568.33 m) on January 1st to 1596.05 ft. (568.37 m) on May 31, 2016. Lake Darling was at 1596.05 ft. (568.37 m) on June 1st 2016. Lake Darling has not meet its summer target and achieved a peak elevation of 1,596.20 ft. (568.43 m). No future releases are planned at this time, unless conditions warrant otherwise. The emergency spillway for Dam 96 has some integrity issues and Pool 96 will be kept approximately 1.5 ft. (0.53 m) lower than the crest spillway elevation.

With regards to the J. Clark Salyer National Wildlife Refuge; the total provisional inflow for the period January to May 31, 2016 was 28,279 acre-ft. (34 882 dam³). This inflow was 26% of the historic record for the same period. The total outflow measured at Westhope for 2016 was 44,169 acre-ft. (54 482 dam³). Currently the US FWS is in the process of working with Canada to minimize flows at Dam 357 during the last week of September in an effort to draw down Pool 357 as much as possible to allow for repair of the low flow gate. The low flow gate received damage during the 2011 flood, but above normal flows haven't allowed the Army Corps of

Engineers, who is responsible for repairs, to inspect the gate and perform repairs. During the repair period there would be no flow into Manitoba.

R. Boals asked if during the repairs would the 20 cfs flow to Manitoba requirement be maintained. Frank Durbian replied that there is a possibility that the flow requirement may not be met. R. Boals then stated that he's pleased to see the cooperation between the US FWS and Manitoba, but noted that it is the Board's responsibility to be involved with the discussions if the flow variance is below the 20 cfs as per the requirement of the interim measures. The only time that the Board can vary the 20 cfs flow requirement is when the Drought Criteria is invoked. The Drought Criteria is when the storage in the refuges, including Lake Darling, is less than 56 000 dam³ (45,418 acre-ft.). Mark Lee mentioned that he is working with various departments in Manitoba to gather feedback on any consequences that may arise from low flows during that timeframe to ensure that problems don't arise. Frank Durbian stated that, if there is found to be any issues with the possibility of varying flows, the scheduling will be pushed back until after October 1st.

8. Flow Forecasting Liaison Committee Update

Laura Diamond provided an update on the spring forecast process. There was collaboration on the three separate spring forecasts that occurred on February 1st, February 15th and March 1st. Those forecasts did not change very much so all correspondence was done over email rather than hosting conference calls. At the last meeting, a forecast process and integrated communication plan was delivered.

R. Boals mentioned that he was pleased that the committee was able to meet three times and also mentioned that the committee served the purpose of flow forecasting during periods of high flow and when there is little to no flow.

John Fahlman elaborated on potential releases that may be required from the Canadian reservoirs, and would arrange for a Flow Forecasting Liaison Committee meeting, if any issues could potentially arise with flows into the United States.

9. Aquatic Ecosystem Health Committee (AEHC) Update

- a. Heather Husband reported that the AEHC had two conference calls to discuss the Section V summary of the IJC Report for the Water Quality Objectives and to formulate action items for the next year. A committee meeting was held on June 13, 2016 to review the activities of the AEHC. The summary for Section V of the IJC Water Quality Objectives report has been drafted and was presented at the June 13th meeting. The summary is intended to provide short and long term goals for the objectives and identify concerns that the Board may have. The AEHC also began a draft outline for the review process that is to be completed every five years. The outline is intended to be a guide for the process of identifying data gaps, short and long term goals, and funding requirements. There was also a request for Board members to provide input or concerns.
- b. A request for the addition of an E. coli objective was sent to the Board for approval. R. Boals stated that the Board must approve the request for the inclusion of the E. coli objective, then make a recommendation to the IJC and the Governments involved. Heather Husband provided a brief overview of the request.

Fecal Coliform is the current Water Quality Objective, however current research suggests that E. coli, a form of Fecal Coliform, is a better indicator for where there may be human health concerns. North Dakota, Saskatchewan, and Manitoba have already began using E. coli as an indicator. The AEHC investigated standards used by Manitoba, Saskatchewan, North Dakota, Climate Change Canada, and the EPA to assess values for an E. coli objective. The objective would be two tier; the first objective would be 129 units/100mL as a seasonal geo-mean with no less than five samples, the second objective would be a max limit of 400 units/100mL. The addition of the E. coli objective would replace the analysis for Fecal Coliform.

Greg Wiche asked if the five samples fit into the regular monitoring and if E. coli has ever exceeded the proposed limits in the Souris River.

Heather Husband stated that the sampling does fit into the regular monitoring and while it has never been a set objective, samples have been tested for E. coli for the last two years. The values determined from the samples have been well below the objective values.

Mark Gabriel asked when the Board would be submitting the request to the IJC. R. Boals answered that if the motion was approved it would be submitted by the following week.

Scott Gangl asked if the test is included in the Water Quality Objective for other Boards. Heather Husband noted that the Souris River and Red River Boards have many more Water Quality Objectives than other International Boards. Christina Farmer stated that the Red River has an E. coli Water Quality Objective.

Motion: Nicole Armstrong moved that the Board accept the recommendation from the Aquatic Ecosystem Health Committee to propose the revised E. coli two tiered objective for consideration by the IJC. Shelly Weppler seconded the motion. **Carried.**

Heather Husband then reported that the Spill Communication Protocol has been updated with alternates and has been distributed. The Spill Communication Protocol is intended as a communication document between jurisdictions and not an emergency response document.

The initial data analysis has been completed for the 2015 annual report and will be ongoing throughout the summer. A section on invasive species and how provinces and the state are dealing with them. Other modifications are to follow with intentions to make the water quality portion of the annual report more informative and encompassing of the entire watershed.

Duplicate discrepancies in sample values are being investigated. It is believed the discrepancies arise from the differences in how jurisdictions sample and analyze, but they still need to be documented.

The AEHC would like to perform winter Dissolved Oxygen monitoring at Sherwood, especially with low flows this year, and are working out details on how to accomplish that.

10. Compliance with Water Quality Objectives for 2016

Heather Husband also presented a summary of the water quality monitoring program. A total of eight samples were collected by Environment Canada in 2015 – seven samples were collected at Westhope (triplicate in March, April, May, June, July, September and October) and one joint sample was collected with the USGS at Sherwood (triplicate in September). The results are provisional.

The highlights included:

- Total Phosphorus exceeded its Water Quality Objective 0.10 mg/L for all the samples collected in 2015. Values ranged from 0.126 mg/L on May 14 to 0.328 mg/L on April 14 at Westhope.
- Sodium exceeded its objective of 100 mg/L for 5 of the 7 samples in 2015. Results ranged from 81.6 mg/L on September 1 to 184 mg/L on March 5.
- Sulphate exceeded its objective of 450 mg/L in 4 samples collected in 2015. The Maximum concentration of 544 mg/L was observed on March 5. Concentrations were under the objective value in April and May, but near or exceeding the objective value in all remaining samples.
- Total Dissolved Solids exceeded the Water Quality Objectives of 1000 mg/L three times with a maximum value of 1349 mg/L. The minimum value was 690 mg/L, observed on April 4.
- Total iron exceeded its water quality objective of 300 $\mu\text{g}/\text{L}$ three times in 2015, with a maximum value of 602 $\mu\text{g}/\text{L}$ on April 14.
- pH exceeded the Water Quality Objective of 8.5 pH units in 6 out of 7 samples. The maximum value of 9.13 was observed on September 1.
- The Dissolved Oxygen (DO) concentrations remained at or above the 5 mg/L Water Quality Objective for all samples in 2015, with the exception of one sample with a value of 4.91 on March 5.
- Fecal coliform did not exceed its Water Quality Objective of 200 colonies/100mL in 2015.
- E. coli did not exceed its proposed Water Quality Objective of 200 colonies/100mL in 2015.
- Chloride did not exceed the Water Quality Objective of 100 mg/L in 2015.
- Total Boron did not exceed its objective of 0.50 mg/L in 2015.

Heather Husband noted that pesticide samples were added and stated that the North Dakota Department of Agriculture does a statewide pesticide sampling program which includes sites along the Souris River including Sherwood. They tested for 101 different pesticides with 92 of them being non-detects. Of the 9 detected pesticides, only 4 were detected in more than 1 sample and the values were extremely low and non-persistent throughout the sampling period.

Environment and Climate Change Canada normally does pesticide sampling, but there were issues and pesticide samples could not be provided for 2015. Pesticide sampling by Environment and Climate Change Canada is expected to resume for 2016.

Mark Gabriel noted that investigations involving exceedances would be ideal, whether it's through a literature review or collecting data through departments or agencies, and would be an excellent next step in the process.

11. International Watershed Initiative Projects

a. Mark Gabriel provided an overview of the status of the Water Quality Objectives Review and Report. Currently the Report is planned for internal use by the IJC to communicate to the Governments and for Board members to better understand Water Quality Objectives. The first four sections have been developed; 1. The Rational for the Water Quality Objective Review, 2. The History and Genesis of the Water Quality Objectives, 3. Current Trends and Exceedance Issues, and 4. Relevance of Water Quality Objective Levels. The first draft of these four sections has been submitted to the watershed boards (the Red River, Rainy River, St. Croix River and Souris River) for review with a deadline for comments by June 2, 2016. There was difficulty gathering Board members together for discussion and that date has passed, so a new deadline has been set for June 30, 2016. The Boards were also asked to submit a narrative for section 5, which reflects the Boards view on water quality changes and parameters over the short and long term. Once the reviews for the first four sections and the narrative for section 5 are received, advisors will draft a conclusion section. The Boards will have an opportunity to review the report before it is submitted to the Commissioners.

The schedule for the Report is as follows:

- June 30, 2016 – Review of sections 1 to 4 and section 5 Narrative
- July 15, 2016 – Draft of section 6
- July 29, 2016 - Sections 5 and 6 feedback
- August 19, 2016 - Report in entirety feedback
- August 26, 2016 – Commissioner's Review
- September 2, 2016 - Final review

Heather Husband stated that comments on sections 1 to 4 and the section 5 narrative were completed by her and are with John-Mark Davies for his review.

Nicole Armstrong mentioned that the Red River Board had provided their comments and narrative as well.

Mark Gabriel mentioned that the 5-year review cycle of the Objectives would be an excellent comment to include in case other Boards weren't aware of the stipulation.

R. Boals noted that the Objective work is a great foundation and hopes that the data collection evolves over time to provide indicators of changes that may have occurred so that the Board may be able to identify causes and effects in order to diagnose and maintain the health of the system.

The Board had a discussion over the possible implications and ramifications of this idea comparing the mechanics of using objectives versus indicators in the management of the watershed and the possible evolution or incorporation of objectives into indicators. Indicators may be more understandable by the general public..

Wayne Jenkinson requested that time be spent at the next meeting to do an overview of the SPARROW model. The SPARROW model, used for modeling nutrient loads over the entire Red River / Assiniboine River Basin, has been completed for about six months and academic papers should be published in the next couple of weeks.

b. Wayne Jenkinson reported that the last IWI Multi-Board Workshop was held in April in Washington D.C. Members from a number of the Boards were brought together to discuss the impacts of climate change on transboundary issues. The summary workshop was distributed to the Co-Chairs and Secretaries, and is available. The participants at the workshop were organized into two teams; one for water quality issues, and the other for water quantity issues as influenced by climate change. At the end of the workshop the two groups reported what was discussed and remarkably came to almost identical conclusions, which was; A good assessment is needed across the transboundary identifying the risks, who or what is going to be impacted, what is associated with climate change in each of the jurisdictions, itemize those risks, then prioritize them and cross-reference them with the IJC's current mandate. Some of the risks that come up may not fall directly under the IJC's mandate, so they are looking to form a Multi-Board committee to investigate the risks due to climate change across the transboundary and perform an analysis to identify what those risks are and how they relate to the IJC's current mandate. It was noted that this proposal will be going to the Commissioners next week and that there should be a discussion about it at the next meeting.

The IWI is currently looking into how to address IWI Multi-Board Workshop participant's questions pertaining to information management of geospatial data across the transboundary. Either a webinar or meeting is proposed to cover this topic along with other transboundary data management challenges as coordinating data is an ongoing problem between jurisdictions because of the diversity in data collection and processing.

Jeff Woodward commented that the Souris River Basin is unique in the tremendous amount of variability that occurs, causing the basin to deal with climate change issues in the natural mechanics of how the basin functions. The Souris River Board has a lot to offer to the process of climate change risk identification and assessment as well as coordinating data between jurisdictions.

c. Wayne Jenkinson thanked the Board for submitting their IWI Proposal, but unfortunately it was found not to fit within IWI goals. The proposal, titled; "International Souris River Board Annual Report Improvements", was intended to automate portions of the yearly report in order to lessen the workload of the creation of the report. The IWI's concerns were that the effort did not demonstrate enough collaboration in the creation of the automation tool between the agencies involved on the Board. It was noted that for future proposals that the demonstration of more collaboration between the entities involved adds greater weight to the proposal because it provides technology transfer and improves process understanding. This type of insight further develops all parties involved and becomes more aligned with the IWI's intentions. Demonstrations of the proposed tool's capabilities and how it could be used or modified would also increase the chances of successful funding from the IWI. Demonstrating the ability of the proposed tool to be utilized or adapted to other areas outside of the Souris River Basin would also garner momentum towards successful funding.

The IJC's Communications Team has volunteered to work with the Secretaries of the Souris River Board to streamline the process of generating the Annual Report and investigate ways to reduce the effort required. This would involve both looking into ways to minimize the time and effort required of the Secretaries to produce the report, as well as taking a closer look at the above proposed tool for possible restructuring in order to re-submit the proposal for a successful outcome.

Mark Gabriel commented that beta-testing the process of the tool in the transference of data between the two governments prior to re-submitting the proposal could also add credence towards getting the proposal approved.

Wayne Jenkinson also encouraged the development of communication tools for the translation of scientific technical jargon into ideas more easily digestible by the general public.

R. Boals mentioned that the Aquatic Ecosystem Health Committee is currently working on a proposal for submittal to the IWI.

John Fahlman noted that discussions were ongoing regarding public education and engagement and the possible ways to formulate and initiate procedures for doing so.

Wanda McFadyen stated that the Assiniboine River Basin Board would be willing to assist in facilitating such procedures for engaging the public in outreach and awareness.

12. Plan of Study

a. John Fahlman provided an overview of the Core Committee and reported that the development of the Reservoir Regulation Manuals for Canadian reservoirs has been submitted to the Canadian Government for review and it is hoped to be returned by the end of the year. Once it is received they can then finalize their plans for dam safety aspects.

The Army Corps of Engineers, United States Fish and Wildlife Service, Water Security Agency of Saskatchewan, and Manitoba Sustainable Development met in Denver in April to review the language of the 1989 Agreement and perform wording updates or correction as needed. The Water Security Agency of Saskatchewan is currently compiling the list of corrections and plans to be able to provide the document to Board Members prior to the next meeting.

b. Wayne Jenkinson thanked the Core Committee and Plan of Study Committee for cataloging the work that had been done on the scope of the Plan of Study and how it has moved forward. By doing this, the Souris River Board's Plan of Study was placed well ahead of other Plans of Study in consideration. The Canadian Government mentioned IJC studies in their budget, which was announced in March, specifically the Souris River Plan of Study, with a budget corresponding to the amount estimated by the IJC for the studies. The IJC is waiting for both Governments to forward to the IJC a reference.

R. Boals noted to the IJC members that the International Souris River Board has had discussions about the Plan of Study moving forward and would like to petition the IJC that the Board wants to have a very strong role in the management of the Plan of Study, which would involve more than an advisory review, and would have more of a guiding hand in its development.

Wayne Jenkinson stated that the Plan of Study Board would largely be populated by members of the Souris River Board, include Study Managers to assist the Board Members and also Study Directors.

13. Update on Water Management Projects

a. NAWS is still in litigation and there is nothing new to report.

14. Other Business

- a. Lee Staab introduced Mike Schmidt, with CDM Smith, who presented a Decision Support Tool that would encompass the entire Souris River Basin to the Assiniboine River Basin. The Tool is a STELLA modeling tool that includes the mainstem of the Souris River, all of its tributaries, all of the reservoirs and refuges operating agreements, the effects of agriculture, rural and city developments, and how to address potential climate change. The model is essentially the culmination of all available data for the basin that will determine how any changes at a point, portion or whole of the basin will affect the entirety of the Basin and perform a cost/benefit analysis for any man-made projects. The model will also look at efficiencies in development in the basin and how to efficiently utilize natural changes that may occur. This project is being developed as part of the City of Minot's Natural Disaster Resilience Competition Grant.

R. Boals noted that the tool that was being created aligned very well with projects proposed in the Plan of Study and that when the Plan moves forward the Board will have conversations with the City of Minot, who owns the intellectual property.

- b. The DU Study presentation could not be presented at this meeting and needs to be included in the agenda for the next meeting of the Board.
- c. Wanda McFadyen informed the Souris River Board that the Assiniboine River Basin Initiative was there to assist the ISRB with anything that they needed and that a model of the entire Assiniboine River Basin was being created by Agriculture and Agri-Food Canada, which is scheduled to be completed in March of 2018. A technical committee has been set up to provide input to the model. White papers in regards to water quality and economic impact are also being developed for the Assiniboine River Basin. The Assiniboine River Basin Initiative will have their next board meeting in Estevan, SK during the week of June 20th, a face -to -face meeting in August, and a conference in November 9-10 in Minot, ND.

15. Next meeting

The next face-to-face meeting is scheduled to be held on February 23, 2017, in Regina, SK. The Saskatchewan Water Security Agency will host and coordinate.

Action: Saskatchewan Water Security Agency will coordinate the hosting of the next face-to-face meeting.

16 Adjournment

The meeting was adjourned at 12:23 p.m. on June 14, 2016 (Minot, ND).

International Souris River Board
ACTION ITEMS – progress updated June 14, 2016

PERSONS OR COMMITTEE RESPONSIBLE	TOPIC	MINUTE	ACTION	STATUS As of June 14, 2016
Doug Johnson	Development of an International Souris River Board Procedures Manual	Sep 25/09-3 Feb 27/09-10a.	Doug Johnson to coordinate and call a meeting of a Canadian team for production of a draft procedures manual. At the Feb 23, 2010 meeting, Doug reported this was incomplete.	Ongoing
Bob Harrison Martin Graczyk Ed Eaton	Report on the spring 2009 flood.	Sep 25/09-3 June 18/09-10d.	SRFFLC to write a report on the spring 2009 flood. The report is to document what happened, provide a chronology of events, examine why the forecast (at Minot) was too high, lessons learned, and make recommendations for improvements for the future.	Completed
AEHC	Compliance with Water Quality Objectives	September 14, 2011	AEHC to recommend actions to be taken by the Board to address exceedances of water quality objectives	Closed
John Fahlman	Winter release from mid-level outlet for better water quality	June 20, 2012	J. Fahlman to check with his staff if releases could be made from the mid-level out of Rafferty Reservoir to improve water quality downstream and respond to Mike Sauer.	Closed
Flow Forecasting Liaison Committee	New Communication Strategy	June 20, 2012	The Flow Forecasting Liaison Committee will create a formal communication strategy	ongoing
AEHC	New E. coli objective	June 20, 2012	AEHC will prepare a short report detailing the justification/reasons for adding E. coli to the ISRB Water Quality Objectives	Closed
AEHC and HC	Varying flow rates for winter releases	June 20, 2012	AEHC and HC will develop a plan for testing various winter release rates to determine the optimum flow rate to maintain DO levels	Closed
ISRB	Engaging the Upper Souris Watershed Association with Board activities	June 20, 2012	As an IWI Board, the ISRB would continue to seek opportunities to engage watershed associations and the public	Closed
AEHC	Terms of Reference	February 20, 2013	AEHC Co-chairs to send their TOR to the Board	Completed
Water Security Agency	90-day volume - Souris River at Sherwood	February 20, 2014	WSA will prepare an estimate of the 90-volume for the Souris River at Sherwood for March 20 meeting	Completed
ISRB	Flood event determination	February 20, 2014	The Board will determine the return period/flood event for Spring 2014	Completed
Co-Secretaries	Membership update	February 20, 2014	Co-Secretaries will send an updated list of all committees to the Board	Completed
ISRB	Communication Protocol	February 20, 2014	Board to review and approve the “Communication Protocol for Fish Kills in the Souris River on March 20, 2014	Completed
Co-Chairs	Mike Laitta's support	February 20, 2014	Co-Chairs will send a joint letter requesting the IJC for Mike Laitta's assistance.	Closed
ISRB	Potential Public Board members	February 20, 2014	Board will prepare a list of potential NGOs to establish a pool to draw public candidates for Board membership	Closed

International Souris River Board
ACTION ITEMS – progress updated June 14, 2016

PERSONS OR COMMITTEE RESPONSIBLE	TOPIC	MINUTE	ACTION	STATUS As of June 14, 2016
ND SWC	Next Face-to-Face Meeting	February 20, 2014	ND SWC will host the June 2014 Public and Board meeting	Completed
IJC	IWI template	June 25, 2014	Mark Colosimo will send the IWI template to H. Husband for submission of the proposed changes to the Water Quality Objectives.	Completed
ISRB Co-Chairs and Co-Secretaries	Public membership on Board	June 25, 2014	Board will prepare a list of potential NGOs to establish a pool to draw public candidates for Board membership	Closed
Dan Selinger	Determination of Natural Flows to May 31, 2014	June 25, 2014	Dan Selinger, WSC, to submit his calculations to the Board for review and approval at the Sept. 25 conference call	Completed
Manitoba Water Conservation & Stewardship	Next face-to-face meeting	June 25, 2014	Manitoba Water Conservation and Stewardship will coordinate and host the next Board meeting.	Completed
Megan Estep	Synopsis of the adequacy of the hydrometric network in the Souris River Basin	February 26, 2015	Megan Estep volunteered to provide a synopsis to the IJC regarding the adequacy of the hydrometric network in the Souris River Basin.	Completed
ISRB Co-Chairs	Request for support letter to the City of Minot NDRC application submission	February 26, 2015	Co-Chairs to review and endorse the support letter on behalf of the Board.	Completed
Saskatchewan Water Security Agency	Host the Summer 2015 Public and Board meeting	February 26, 2015	Saskatchewan Water Security Agency will coordinate the Summer 2015 Public and Board meeting in Estevan, SK	Completed
ISRB Co-Secretaries	Doodle poll to set-up a webinar	February 26, 2015	The Co-secretaries will conduct a Doodle Poll to set-up a webinar for Gregg Wiche's presentation on Climate Analysis and Water Balance Report as part of the POS	Completed
ISRB Co-Secretaries	Next face-to-face meeting June 18-19, 2015	February 26, 2015	Co-Secretaries will coordinate with EC and WSA to setup the logistics for the Summer 2015 meeting in Estevan, SK	Completed
ISRB	Submit an IWI Project Proposal	February 24, 2016	Board to prepare and submit an IWI proposal to improve communication and display of the Annual Report and website.	Completed
Joel Galloway	Discrepancies of results of water quality sampling	February 24, 2016	Joel Galloway will investigate the reason for the discrepancies of the results of the joint water quality sampling between Canada and the USGS	Ongoing
Pascal Badiou	DU Nutrient Project	February 24, 2016	Pascal Badiou to present the results of the DU Nutrient Project to the Board	Ongoing
Mark Gabriel	IJC - Review Water Quality Objectives	February 24, 2016	Mark Gabriel will present the results from his review of the Souris River Water Quality Objectives	Ongoing

Note: When two or more meetings are referenced to an item; that indicates a carry-forward of an action item from previous meetings.