



International Souris River Board
Virtual Meeting
February 24 and 25, 2021

Final Minutes

Board Members in attendance (February 24th):

John Paczkowski, Nicole Armstrong, Tom Pabian, David Pattyson, Gregg Wiche, Jeff Woodward, Col. Karl Jansen, Scott Gangl, Dave Glatt, Shelly Wepler, Russell Boals, John-Mark Davies, Debbie McMechan, Joe Goodwill, David Ashley, Lorinda Haman, John Fahlman, Mark Lee.

Board Members in attendance (February 25th):

John Paczkowski, Nicole Armstrong, Tom Pabian, David Pattyson, Gregg Wiche, Jeff Woodward, Col. Karl Jansen, Scott Gangl, Dave Glatt, Shelly Wepler, Russell Boals, David Ashley, Mark Lee, John-Mark Davies, Debbie McMechan, Joe Goodwill, Lorinda Haman, John Fahlman.

Attendees:

Maximum attendance at the board meeting on the 24th and 25th included 72 participants. IRRB Co-Chairs and some Board members attended on February 25th.

IJC Commissioners: Lance Yohe, Jane Corwin and Rob Sisson.

IJC Advisors: Wayne Jenkinson, Mark Colosimo.

1. Introduction and Opening Remarks

John Paczkowski opened the meeting at 8:30 a.m. on February 24th and extended his welcome wishes to all attendees. John P. introduced himself as the State Engineer and U.S. Co-chair of the International Souris River Board (ISRB). Nicole Armstrong, Canadian Co-chair also welcomed the attendees and echoed similar well wishes to meeting participants.

IJC Commissioners, Lance Yohe, thanked the Board members for their service. Commissioners Jane Corwin and Rob Sisson were able to join later and they too expressed their appreciation for ISRB.

John P. noted that the sessions today and tomorrow will be recorded just for ease of preparing the draft minutes. The recordings will be deleted once the draft minutes have been approved

by the Board. Other Board members and committee co-chairs also introduced themselves with brief description of their affiliation.

2. Approval of Agenda

The agenda was approved with minor modifications. The Board agreed to switch agenda 19 and 20 around for expediency for the discussion on day 2.

Motion: Russell Boals moved to accept the agenda as modified. David Pattyson seconded the motion. Carried.

3. Approval of Minutes

a. June 18 and 19, 2020 Virtual Meeting Minutes

Motion: David Ashley moved to accept the minutes. John-Mark Davies seconded the motion. Carried.

4. Review of Action Items

John P. referred to the last two pages of the minutes that show the action items assigned to different individuals or agencies. Chris K. mentioned the ISRSB review of the transition document has been completed. John P. asked Nicole A. if there were other outstanding action items that need to be addressed. Nicole A. asked if all the IJC letters (from Wayne Jenkinson) that the ISRSB co-chairs were sent to the IJC and the ISRB. Chris K. will follow-up.

Action: Chris K. will follow-up the status of the IJC letters (from Wayne Jenkinson) that were sent to the Co-Chairs of ISRB.

It was noted that Dr. Don Flatten, University of Manitoba, planned to present the result of his water quality work has since retired; hence his action item was struck off the list.

5. Review of 2020 Hydrologic Conditions, Summer 2021 Hydrologic Forecast and Planned Operations

a. Saskatchewan

Jeff Woodward, Water Security Agency (WSA), gave a presentation that included a review of the 2020-2021 hydrological conditions, the forecast for summer 2021, and the 2021 reservoir operating plans for Saskatchewan. Regarding apportionment, Jeff W. noted that based on ECCC's computations on May 31, 2020, the deficit at the Sherwood Crossing was 4554 dam³ (3692 ac-ft). With wetter conditions in the state in June, ND requested the delivery be deferred. ND made a request for the delivery in early July. Jeff W. also mentioned, on July 9, a 1.3 m³/s (46 cfs) release was initiated at Grant Devine Dam. ECCC measured this discharge twice during the release. The release was terminated on Aug. 17, releasing an estimated 4381 dam³ (3552 ac-ft). About 124 dam³ (100 ac-ft) was also released at Rafferty Dam in August. Significant losses were observed during the release with flows at Sherwood increasing by just 30-40%. Jeff W. also confirmed good measurement coverage by the USGS supported this.

Jeff W. noted flows at the Sherwood station dropped below 4 cfs (0.11 m³/s) in September and October. There were essentially no reservoir inflows at this time and as result there was no need to supplement flow to get it back above 4 cfs. Winter drawdowns at both Grant Devine

and Rafferty Reservoirs were below the February 1st Normal Drawdown Level (NDL) at Freeze-up.

- Rafferty is at 548.51 m (0.99 m or 3.2 ft below the NDL)
- Grant Devine is at 560.77 (0.23 m or 0.75 ft below the NDL. No winter release was required.

Jeff W. showed a precipitation map for the period April 1 to October 31, 2020 that illustrated well below normal growing season (about 50% of normal) that was received in 2020 in the entire basin. Jeff W. also showed a map of soil moisture conditions at freeze-up that were well below normal. There were severe drought conditions based on the North American Drought Monitor. The Saskatchewan Ministry of Agriculture assessment showed short to very short top soil conditions. The Standardized Precipitation Evapotranspiration Index (SPEI) showed very dry conditions.

The NOAA Model for Snow-Water Equivalent (SWE) showed very little snow across the Saskatchewan portion of the Souris River Basin (less than 30 mm or 1.2 inches SWE).

February 15, 2021 Forecast and Operating Plan – Jeff W. stated well below normal runoff is expected throughout the entire Souris River Basin resulting in a non-flood operations. No additional drawdowns will be required; and do not expect to fill Canadian reservoirs. As a result, it was expected to be a 50/50 split for apportionment this year (less than 1:10 year event).

2021 Reservoir Operation Plans – Jeff W. further discussed the operating plans for each of the three Canadian reservoirs as follow:

- Boundary – Fill and then divert and excess to Rafferty Reservoir.
- Rafferty – No drawdown are required. Fill and then release at a controlled rate if there is excess.
- Grant Devine – No drawdown required. Fill and then release at a controlled rate. If surcharged, return to FSL as per the Agreement. Will be used for any apportionment releases, if necessary.

Col. Karl J. asked about the requirement to return to FSL by June 1st. There was discussion about the 1989 Agreement regarding target flows. Scott Jutila mentioned the target level of FSL at June 1st are proposed by WSA and have not been officially approved by governments and do not follow the 1989 Agreement. Jeff W. mentioned he will investigate and get back to the Board. It was also suggested that the presentation be altered to remove the target level of FSL by June 1st and resubmitted to the Board which was completed shortly following the meeting. *The document was provided to the co-secretaries of the Board on March 2, 2020 by Jeff Woodward.*

b. North Dakota

Brent Hanson, United States Geological Survey (USGS), presented a summary of 2020 flow conditions for the US portion of the basin from January 1st to December 31st. According to Brent's report, the total volume of flow past the Long Creek at the Noonan gage for this period was 8,050 acre-ft (9,930 dam³). This volume is about 54% of the median flow for the past 60 years. The peak discharge for the reporting period January 1 to December 31, 2020 was 340 140 ft³/s (9.96/s) on March 11, which ranks 41th in 60 years of record.

The total volume of flow past the Souris River near Sherwood gage from January 1st to December 31st was 14,430 acre-ft (17,799 dam³). The total flow is 30% of the median flow for the past 90 years. The peak discharge for the period January 1 to December 31 was about 152 ft³/s (4.3 m³/s), which occurred on March 12th and ranks 80th in the last 90 years of record.

Flow recorded at the Souris River near the Westhope gage from January 1st to December 31st was 130,630 acre-feet (161,132 dam³). This is about 108% of the median flow for the past 90 years. The peak discharge for the period January 1 to December 31 was 792 ft³/s (22.43 m³/s) on May 20th, which ranks 53rd in 90 years of record. Flows dropped below 10 ft³/s from November 6th-9th and December 9th-21st. Debbie McMechan asked the reason for such a drop in flows. Brent H. answered it could be a combination of few things in November and December such as control structures freezing due to ice formation. However, the flows were back to 16 to 20 cfs range shortly after that.

Allen Schlag provide the NWS perspective going from 2020 to 2021. Last spring there was only minor drought in the basin, then quickly degraded over time. Then, by early October we had a D2 designated drought condition. Since then, the D2 designation has extended to all of the western half of North Dakota up to and including the Souris River Basin. Therefore, drought has become quite prominent in the lower part of the Souris River Basin causing concern moving forward.

Allen S. also showed a map of soil conditions that indicated lower single percentile for soil moisture. In 2019, there was stockpile of soil moisture and the same in 2020 with abundant soil moisture which mitigated drought conditions. However, if the basin does not get significant spring precipitation, we will head into drought conditions in 2021.

Allen S. further provided another illustration showing snow pack as Snow Water Equivalent (SWE). Normally, we should have 1.5 to 2.5 inches of snow water equivalent. Now we have below 1 inch; and not much in the Souris River Basin mainly due to the warm winter.

Allen S. then showed a map of temperature and precipitation outlook for March-May 2021. There was not much indication of improvement from drought conditions. May- July predictions show above normal temperatures with below normal chance of precipitation. Therefore, expect more drought conditions to prevail in the months to come and less risk of flooding.

c. US Fish and Wildlife Service (USFWS)

Tom Pabian, with the United States Fish and Wildlife Service (USFWS), presented a summary of refuge operations and flows for 2020. Tom P. also introduced his new manager, Kyle Flannery to the group. The total provisional inflow measured at Sherwood for the first five months of the year was 9,903 acre-ft (12,215 dam³). This was only 12% of the historic January-May inflow, which was 80,975 acre-ft (99,883 dam³) for the period 1938 through 2020. Total Upper Souris Refuge pool volume increased an estimated 6,157 acre-ft (7,595 dam³) during the first five months. The total provisional outflow measured at Foxholm on the south end of the Upper Souris Refuge for the first five months of 2020 was 4,742 acre-ft (5,849 dam³). This was only 7% of the historic record for the January-May outflow, which was 69,214 acre-ft (85,375 dam³) for the period 1938-2020. Lake Darling elevation increased

0.40 ft (0.12 m) from 1596.20 ft (486.52 m), on January 1st to 1596.60 ft (486.64 m) on May 31, 2020.

The total provisional flow measured at J. Clark Salyer National Wildlife Refuge from the Souris River to the Refuge from January 1 through May 31 was 46,563 acre-ft (57,435 dam³). This was 44% of the historic January-May inflow, which was 105,620 acre-ft (130,283 dam³) for the period of 1938-2020. Total Pool volume on May 31 was 34,628 acre-ft (42,714 dam³). This was 17,350 acre-ft (21,401 dam³) less than the January 1st volume of 51, 978 ac-ft (64,115 dam³). Approximately 92,115 acre-ft (113, 624 dam³) was passed to Manitoba during the five-month period.

The average daily flow at the Westhope gauge did not fall below the minimum 20 cfs (0.57 m³/s) during the period of June 1, 2020 to October 31, 2020.

d. Manitoba

Mark Lee, with Manitoba Agriculture and Resource Development, presented a summary of the hydrologic conditions for the Souris River in Manitoba. Mark L. stated that his update of hydrologic conditions echoes the pervious presentations in that the fall was extremely dry throughout the basin relative to similar periods in 2019/2020 when the flood risk was high. With the wet antecedent conditions and high base flow, the forecast for the Souris River had slightly above normal risk flooding on the main stem. Manitoba tributaries had below normal snow and were not expecting significant flooding.

Mark L. reported that the flow at Wawanesa began declining the last week in May. The rain events in June kept the flows in the normal range throughout the summer. The tributaries had minor flow and overall saw low to no flow throughout the summer. Current flows at Wawanesa have been in the range of 15-30 cfs which is in the normal range and also helped reduce the risk of fish kills.

Mark L. noted the Canadian Drought Monitor currently has Manitoba's portion of the basin as D2 severe drought which corresponds to dry conditions with an average return period of ten to twenty years.

Spring 2021 Outlook – Mark L. stated flood risk is currently low due to below normal soil moisture and snow accumulation. The National Water Service's probabilistic forecast at the North Dakota-Manitoba border (Westhope, ND) shows the probability of spring flooding in 2021 is much lower than the historic average. Furthermore, the flood risk for Manitoba tributaries is also lower than normal. The Manitoba Hydrologic Forecasting and Coordination Branch plan to release their first 2021 conditions report this week.

6. Compilation of Souris River at Sherwood to December 31, 2020

Dan Selinger with Environment and Climate Change Canada (ECCC) provided an update on the natural flow computations and apportionment spreadsheet. The natural flow computations yielded a 50/50 split of the natural flow volume. The discharge at Sherwood went below 4 cfs from mid-September to end of October and mid-November to the end of 2020. Due to the dry conditions in the basin, Rafferty had its second lowest level in 10 years at 1.5 m below FSL. Grant Devine Reservoir was 1.2 m below its FSL, as well. Recorded flow at Sherwood was

17,799 dam³. The natural flow at Sherwood was 35,869 dam³. The US share was at 50% was 17,930 dam³. For Long Creek, the recorded flow at Western Crossing was 6,939 dam³ and the recorded flow at Eastern Crossing was 9,930 dam³ resulting in a surplus delivery of 2,994 dam³ to the United States.

John P. asked for a motion to approve the determination of natural flow presented by Dan S.

Motion: Jeff W. made a motion to approve the determination of natural flow to December 31, 2020. David Ashley seconded the motion. **Carried.**

Tim Ma, WSC, made a supplemental presentation on Souris River apportionment with a focus on evaporation. ECCC is responsible for determining apportionment volumes using standard procedures. Evaporation estimations are included in the determination of natural flow. Tim Ma showed a map of evaporation estimates for five reservoirs in the Canadian portion of the Souris River Basin which included: Larsen Reservoir, Nickel Lake, Roughbark Reservoir, Moose Mountain Lake, and Grant Devine Lake. Tim M. mentioned evaporation is not measured directly from each reservoir, instead measured indirectly from data collected at sites remotely located from the reservoirs. The two methodologies used to calculate evaporation were Pan Evaporation and the Penman Equation. Tim M. also showed the average evaporation and seepage losses for the five reservoirs from 1996-2020. There were questions why Rafferty, being a big reservoir, was not included in the evaporation estimates. This question was also flagged by the COH in the Plan of Study (POS). Additional questions were also raised how seepage was calculated or determined. The Board agreed to look at these issues in more detail in the future.

Michael Bart asked what information was used to estimate evaporation at Rafferty. Tim Ma explained that it is estimated based on inflows and outflows. Michael B. proceeded to ask why the calculation was not being made at Rafferty. Jeff Woodward explained that there is a lot of history behind that conversation and that some of the information being developed as part of the study could help, but currently there are no plans on updating the estimates. John Paczkowski then asked how seepage for each reservoir was determined. Tim Ma explained that a set of factors have been developed and are used on an annual basis. Each reservoir has its own set number.

7. Update from the Hydrology Committee

Ken Bottle, U.S. Co-chair of the Hydrology Committee, provided a brief update on the Hydrology Committee. Ken B. mentioned the activities of the COH remain in a state of limbo at the moment due to the work of the Study Board. It would be premature to proceed while the work of the Study Board is still in progress.

Ken B. reminded the Board that Steve Robinson (USGS) retired at the end of December 2020 and recommended Brent Hanson who has over 10 years of experience with the USGS to replace Steve.

Motion: Nicole Armstrong made a motion to replace Steve Robinson with Brent Hanson. Shelly Wepler seconded the motion. **Carried.**

8. Water Quantity Monitoring

Brent H. provided a brief overview of the water quantity monitoring program in the US. Brent H. described the gage scouring problem for the Souris River at Sherwood that has existed since

2011. A new gage has been installed for the Souris River at Minot which will be operated from March until ice buildup and targets flows in excess of 300 cfs. There were other maintenance works done on tributaries downstream of Minot, as well.

Dan Selinger, ECCC, stated that there were no infrastructure changes on the Canadian side. Some staffing changes to come include assigning Nicole Engbert to Grant Devine Estevan area and Cody Garbutt to Rafferty. Dan S. mentioned he will stay as a supervisor for the Canadian operations. There were plans to do joint measurements but these were hampered due to COVID in 2020. However, Dan S. and Brent H. aim to conduct joint monitoring in 2021. Some operational changes on the Canadian side include switching from an 8-month monitoring to a 12-month monitoring for the Canadian portion of the Souris River Basin.

9. Water Appropriations in the Souris River Basin

Chris K. gave a brief overview for the North Dakota. There were a total of 10 temporary permits issued in the Long Creek Basin and Souris River Basin in 2020. The total combined use was 1124 ac-ft ranging from summer of 2019 through fall of 2020 and two permits going into 2021.

Jeff W. provided a short status report for Saskatchewan. There are no changes from last year. Saskatchewan is the process of updating the water supply for Rafferty Reservoir. A couple of applications have been received. However, given the dry conditions in the basin no decision has been made yet.

10. Update on Water Management Projects

a. NAWS – Chris K. mentioned a bid was awarded to the Lansford Reservoir Pump Station. This bid includes a 4.3 million gallon reservoir and a 2,500 gallon/ minute operation along with a small operation centre. A bid was also awarded for a 14.5 mile long pipeline project from Souris to Bottineau. Another bid is out for the Phase 1 Biota Treatment Plant (BTP) and currently waiting for concurrence from the Bureau of Reclamation and the Garrison Diversion Conservation District (GDCCD). Design work continues for the Snake Creek Pumping Plant intake modifications and the South Prairie Reservoir and Hydraulic Control Structure.

Nicole A. provided an update on the Adaptive Management Plan for the NAWS Project. As part of the NAWS Project, the Bureau of Reclamation (BOR) agreed to setup an Adaptive Management Committee that included Manitoba, the US EPA and others. The Committee has the opportunity to review designs for the Biota Treatment Plant (BTP) and to provide input to the adaptive management plan being developed by the BOR. Nicole A. mentioned that the committee is expecting to see the draft adaptive management plan sometime in the summer of 2021 and will have an opportunity to provide input to the BOR to finalize the plan in winter 2022. Expect to talk to the Adaptive Management Committee about their progress soon. More details to follow at the June Board meeting.

b. Other Planned Developments –

John F. mentioned Saskatchewan is actively looking at solutions for the downstream railway restrictions of the Grant Devine Dam. John F. added WSA has put out calls for consultants to assess the restrictions and come up with solutions. Initial work will start by the end of March 2021 and that will provide some options to look at.

Mark Lee reported there were no major projects in Manitoba. One topic for discussion was appropriations where some people have shown interest in irrigating potatoes in the mainstem

of the Souris River. Manitoba is also doing its integrated watershed plan for the Canadian portion of the Souris River Basin.

11. Update from the Flow Forecasting Liaison Committee

Laura Diamond stated the spring runoff in 2020 was a non-flood event. Therefore, the Flow Forecasting Liaison Committee (FFLC) has had minimal formal activity since the last ISRB meeting. Laura D. added the Water Security Agency (WSA) was diligent in communicating routine operational changes at the Canadian Reservoirs to the committee. With last years' dry conditions, operational changes were minimal. With reservoirs in Saskatchewan remaining below their February 1st targets throughout the fall and winter, there was no winter drawdown. In keeping with the terms of the Canada-US Agreement on Water Supply and Flood Control in the Souris River Basin, two forecasts have been issued by the WSA thus far in 2021 (Feb 1 and Feb 15). These forecasts were developed in collaboration with the US National Weather Service (NWS) and circulated to the group via email. They are also available on www.wsask.ca.

Laura D. further explained with the expectation of below normal snowmelt runoff above Lake Darling and no operational decisions to discuss, the FFLC did not host conference calls to discuss these forecasts. Should the committee have a need to become more active in 2021 in response to high or low flow events, the co-chairs have circulated their contact list to ensure that it is up to date. Changes to the committee membership have occurred, and an updated contact list was provided to the Board by request of Girma Sahlu in December, 2020. Laura D. concluded by stating that the committee has no ongoing work items at this time. The Board declared 2021 as a non-flood year. The Board also accepted the entire FFLC membership list with new additions. The new additions were:

Brent Hanson, replaced Steve Robinson who retired in December 2020. The alternate member is Chris Laveau for the US.

In Canada, the new additions are Kevin Wingert; and Alanna Howell is the alternate members - both from the WSA.

Motion: Jeff W. motioned to declare this year as a non-flood event (less than 1:10 year event). Gregg Wiche seconded. **Carried.**

Motion: Nicole A. motioned to accept the modified FFLC membership list. Lorinda Haman seconded the motion. **Carried.**

12. Update from the Apportionment Reporting Ad-hoc Group

Russell Boals presented on behalf of the Working Group on Apportionment. Russell B. explained the reasons for his presentation were to answer several questions that were raised under Agenda Item 4 – Determination of Natural Flows of Souris River at Sherwood to May

31, 2020. Subsequently, the ISRB established the Ad-hoc Group to investigate the questions and report back to the Board. The questions raised were as follows:

- What is the process for requesting additional determinations of natural flow and hence the status of the apportionment balance between Canada and the United States for the Souris River at the Sherwood Crossing?
- What is the role of Board's Flow Forecasting Liaison Committee and the Board's Hydrology Committee in making a request or alerting the Board that additional determinations of natural flow are required?
- What are the responsibilities of the Board's Flow Forecasting Liaison Committee during non-flood operations?
- What is the process for the State of North Dakota to request a delayed release when there is an apportionment deficit?
- What is the process for determining when a call for a release or when releases to fulfill an apportionment deficit will be made as the result of a delayed release?

Russell B. further elaborated the discussion paper and its current status which included:

- Outline of the discussion paper with background section noting relevant clauses contained in the IJC - ISRB Directive, 1989 Agreement conditions, and Annex B of the ISRB Directive
- Draft was shared to the Working Group members in July 2020 or comment (WSA, ECCC, NDSWC, USGS, and USFWS)
- Call held on August 31, 2020, the discussion paper was updated as the result of the call, and circulated to the WG on September 12, 2020
- Draft outline of the processes to address the questions related to the frequency of the determination of natural flow and the processes associated with a delayed apportionment release
- Recommendations have been developed with some requiring further discussion
- Remains as 'work-in-progress'

Russell B. concluded by sharing several draft recommendations:

- ToRs for the FFLC requires updating to ensure its responsibility related to the requirements for additional determination of natural flow are clearly stated with a supporting process flow chart
- The ToRs for the Hydrology Committee should be reviewed and, if required, updated.

Russell noted that further discussion is required on the process for requesting the delay of a apportionment release and then issuing a call for the requested delayed apportionment release.

Much of the remaining text in the discussion paper relates to the interpretation of clauses in the 1989 Agreement.

The ad-hoc group plans to complete the discussion paper before the June 2021 meeting of the ISRB.

Laura Diamond asked Russell B. to expand on the first recommendation related the FFLC regarding the additional forecasting support – what was the discussion; what was envisioned? Russell B. responded what was envisioned was the FFLC has certainly been very active in the moderate to high flow years. The FFLC has responsibility in low flow years and ensuring coordination of operations during low flows (4 cfs requirement). How does the Board become aware of such low flow conditions and if one of the operating parties need some guidance of natural flow calculations? FFLC is in the best position to carry out those kinds of discussions not only during high to moderate flow conditions but also during low flow conditions i.e. less than 4 cfs. FFLC can also advise the Board.

Laura D. stated the FFLC has a communication plan developed and defined earlier on. Is there a plan to adopt what has been developed already from a communication or forecast perspective? Do you see the need for a different kind of forecasting to support low flows or conditions outside the snowmelt driven runoff periods? Russell B. responded the communication piece is part of the process flowchart. At this time we don't see a requirement from the FFLC because of the dry conditions. The Board needs support in low flow years to ensure the requirements for the 50/50 split at Sherwood has been met. Try to give the responsibility to one of the committees for watching the flow conditions and FFLC is the best suited for that job.

Gregg Wiche enquired about the discussion regarding the interpretation of the 1989 Agreement – how does it differ from the POS. Does it run in a parallel process in the Plain Language Review in trying to clarify or roll-up to the IJC in the 5-6- questions to be submitted tomorrow. Russel B answered his view that it is a recognition of which clauses in the Agreement refer to these low flow conditions and the roles of the various organizations during that period of time and have some understanding. The Plain Language Review dealt with high flow type of operations. Agree that the 1989 Agreement is not easy to read. However, what is important is we have a bunch of people who are newer to the process and who have not worked during drier periods. Therefore, it is about having a common understanding about the roles and responsibilities.

Chris K. echoed some of Russell's comments about the fact that the Board has not dealt with dry periods for a long time and staff turnover raised largely the questions. Being the one who asked for the delayed delivery of the apportionment, Chris's interpretation of the language in "Annex B" was that ND needs to inform Saskatchewan through the Board and how to complete that process. Last year the decision was made that simply sending an email to Saskatchewan and copying the Co-Chairs of the Board kind of fulfilled that role. Document the process about what to do next time to ensure Saskatchewan is informed about what ND wishes to do about the release and making sure Board members know what is going on. Annex A and Annex B are good but, some of the background historical knowledge may have been lost and not documented well. Also, some portions of the Agreement have been flexed before. Learning how to use the Agreement started all these discussions.

Jeff W. reiterated what Russell B. mentioned emphasizing the monitoring side of activities. Low flows are the hardest to monitor. Therefore, we need to pay extra attention to the conditions in the basin right now and deal with them as best as we could. That can be done through good monitoring given that we are facing a relatively drier period than usual. The limited runoff and request for early delivery could be challenging as we usually run into a timing problem. The calculations, tentative and final, could cause an over-delivery or under-

delivery. Using the FFLC to do an interim calculation might be an option. However, requesting ECCC to do another interim calculation and having the numbers ready before the June Board meeting could be problematic due to resource issues. Russell B. agreed with the issue timing problem between the finalization of apportionment and delivery. The potential for over or under-delivery is evident and makes management problematic. However, using the expertise of the FFLC to do additional apportionment calculation prior to the June meeting could remedy the problem. There was a question whether the Board needs to make a formal request to the FFLC to do the interim calculations. Russell B. responded that was one of the key considerations and said yes to the question and FFLC is the place to have that conversation.

John P. added that monitoring is very important and, as ND State Engineer, expressed his desire to be part of the conversation in future discussions.

No specific action came out of these discussions. However, there was a general consensus to watch the dry conditions in the basin and the FFLC will do that. No need to involve ECCC at this time. Two forecasts to be made (March 1st and March 15th) which could help us to decide whether we need to do additional calculations to determine natural flows. It is about time to switch our thinking from high flows to low flows concluded Russell B.

13. Update from the Aquatic Ecosystem Health Committee (AEHC)

a. Report on activities of the Aquatic Ecosystem Health Committee

Heather Husband, Paul Klawunn, and Joel Galloway provided a three-part update on the activities of the AEHC. Heather H. mentioned there was some departure from past practices in terms of reporting to the Board. February has proven to be problematic for data presentation. Therefore, AEHC has decided to change the format of its presentation by using the February meeting to report on projects and the June meeting to present data. At the moment there is very little to report on since most were busy transitioning to the new COVID work place. AEHC continued to work on IWI grants and preparing an article for the IJC newsletter as part of their approval for the grant to be submitted this week. Future steps include discussion on data analysis for the annual report and timeline for milestones and submission to secretaries.

b. Update on IWI projects

Continuous Dissolved Oxygen Monitoring (first IWI Project)

Joel Galloway with the USGS provided an update and presentation on the Souris River Continuous Dissolved Oxygen (DO) Monitoring IWI project.

- Monitors were installed in May 2019 at Sherwood, Minot and Westhope
- Sensors were removed during freeze up and spring breakup to avoid damage to the sensors
- Daily minimum DO was at or below the WQO of 5 mg/L from May 2019 through December 2020 as follows:
 - Sherwood- 194 days
 - Minot -20 days
 - Westhope – 146 day

- Sensor removed at Sherwood on January 6, 2021 because it was frozen from low flow conditions.
- Different factors affected DO at various times of the year
- Large diurnal fluctuations observed, particularly at Sherwood
- Data can be viewed at: <https://waterdata.usgs.gov/nd/nwis/rt> (go to statewide water quality real time table and select the site).

Joel G. also showed a chart that displayed the relationship between DO and Discharge.

Souris River at Sherwood – There were 51 days when daily minimum DO was at or below the WQO in 2019 (May-Dec); and 143 days when minimum DO was at or below the WQO in 2020.

Souris River at Minot – There were 17 total days when daily minimum DO was at or below the WQO in 2019 (May – Dec); and 3 total days when daily minimum DO was at or below the WQO in 2020.

Souris River at Westhope – There were 35 total days when daily minimum DO was at or below the WQO in 2019 (May-Dec); 112 total days when minimum DO was at or below the WQO in 2020.

In addition to DO, temperature and specific conductance were also monitored at the same time. Joel G. explained the significance of temperature in affecting DO levels in water bodies.

John P. asked if there would be a report to be published at the end of the IWI projects. Joel G. answered it would be a good idea. However, publishing a report is not specifically part of the IWI project.

Souris River Water Quality Trend Analysis (second IWI Project)

Joel G. presented the water quality trend analysis project led by Rochelle Nustad (USGS).

Project Tasks:

- Compile water quality and flow data,
 - US Data: water quality portal
 - Canadian Data: multiple agencies
- Perform trend analysis for site with sufficient data for selected constituents,
- Integrated analysis of trends using R-QW trend: describe flow-related variability and flow-normalized concentrations for selected constituents and sites, and statistically describe data from sites with insufficient data for trend analysis.
- Evaluate exceedance rates for the 5 Water Quality Objectives (WQO) that were consistently being exceeding at the transboundary stations,
- Write and publish USGS scientific investigation report, and
- Develop interactive story map.

Once complete, the project results will be published in USGS report. Different sample collection and analysis methods by the parties involved (Canada and US) pose some challenges and need to be resolved as part of the project.

Progress to date:

- Have been working with US data,
- Received water quality and flow data from Manitoba,
- Expect to be receiving data from Saskatchewan in the next two weeks,
- Next steps for 2021:
 - Prepare Canadian data for trend analysis, and
 - Develop trends and statistical summaries.

Joel G. concluded by presenting the benefits of the trend analysis as summarized below:

Benefits of Trend Analysis Work

- Fills a critical knowledge gap on the status and trends of rivers and streams basin-wide in the Souris River watershed,
- Trend analysis provides an understanding of how water quality has changed spatially and temporally which provides supporting information for evaluating WQOs,
- Trend analysis provides a foundation for the next step in trend attribution (or why water quality is changing),
- From trend attribution, factors responsible for exceedances can be identified so the ISRB can consider revising WQOs and/or inform potential mitigation measures.

There were questions regarding the number of sites available with long-term data. Nicole A. responded Manitoba has sites with long-term water quality data. Debbie McMechan asked if these data were shared with the Souris River Study Board. Joel G. responded these data will eventually be shared once organized in a uniform format. The only issue is that the IWI project will not be complete in time to be used by the Study Board.

John P. (Co-Chair) proposed to move items 16 & 17 for discussion today. Also, convene the meeting at 9:00 a.m. tomorrow starting with item 15 – Public Member Update. That will be followed by items 18, 20 and 19 in that order. IRRB Co-Chairs and Board members have been invited to attend the discussion on the International Souris River Study Board particularly dealing with Indigenous Engagement.

14. Water Quality Monitoring Plan

Paul K. and Heather H. presented an overview of the Souris River Water Quality Monitoring Program conducted by ECCC, USGS and ND DEQ for 2021.

Heather H. and Paul K. further explained the water quality monitoring plans for 2021.

Sherwood – Heather H. mentioned sampling continued on schedule throughout 2020. The plan is to maintain the same monitoring program in 2021 which includes 6 samples during open water and 2 samples under ice conditions. The parameters monitored are: pH, conductivity, dissolved oxygen, nutrients, major ions, metals, organics, and *E. coli* bacteria. Pesticides are also included and are monitored by ND Department of Agriculture.

Westhope - Paul K. stated ECCC stopped all field work deemed non-essential under the department's Business Continuity Plan at the onset of the COVID pandemic in March 2020. Sampling resumed again in September but, was moved to the Coulter site due to the Canada/US border closure. Laboratory services did not resume immediately since lab instrument calibration and restarting was delayed. In 2021, sampling at the Coulter site, located 7 miles

or 11 km north of Westhope will continue 8 times per year for the usual parameters. There are still some provincial restrictions but that should not affect the Souris monitoring program.

Items for discussion with the Board – Heather H. asked the Board whether the AEHC should add a summary of the IWI projects to the annual report in the water quality section or as a section on its own. There was consensus that the IWI projects should be reported as separate items. Heather H. asked for comments on the IWI projects from the Board for inclusion in the news article for the IJC.

16. Update on the Communications and Outreach Committee

Russell B., who is the only formal member at this time, provided an update on the Communication and Outreach Committee since the June meeting. The presentation included the committee's terms of reference, outreach activities, communication activities, and the next steps for the committee. The committee's next steps include review of the ISRB microsite, updating the hydrology infographics, outreach, and placing members on the committee. Currently committee members are not confirmed as most of the proposed members are active with the Study Board, PAG, and RAAG.

Gregg W. enquired about the broken links on the stream gauges (USGS). ECCC and USGS will look into the broken links. The USGS still has a two-year commitment which would allow for a timely repair of the broken links. Transitioning and the addition of the hydro-visualization tool was considered to be a useful feature to include on the microsite.

17. Work Plan

Nicole Armstrong shared with the Board the latest work plan for 2020-2021. Some of the highlights were – Under Result 1 was the development of a simple procedures manual by the COH. The Ad-hoc Committee is also engaged and working on apportionment. Under Result 3, the AEHC plans to complete a review of the joint water quality monitoring program with a focus on reporting and recommending adjustments to the monitoring program.

Note for tomorrow's meeting - The meeting will start at 9:00 a.m. The Virtual meeting will open an hour early to allow people to chat and converse before the meeting starts. Chris K. will conduct a Doodle Poll to determine the dates for the June Board meeting.

The meeting adjourned on February 24th at 12:18 pm.

Day #2

18. Public Member Update

Nicole A. started the meeting at 9:00 a.m. and welcomed attendees. John P. similarly extended his greetings to the group. Nicole A. also invited IJC commissioners to extend their greeting to attendees. Commissioner Lance Yohe extended his well wishes to the Board and all participants. This was followed by a brief introduction the ISRB Public Members.

David Pattyson of Tribune, Saskatchewan, introduced himself and talked about recent conditions in his area including the 5 inches of precipitation received recently. The warm and dry conditions in that part of the basin raises some concern for water supply in the coming

months. David P noted typical Souris River characteristics include moving from very wet to very dry conditions in a short period of time.

Lorinda Haman lives in the middle of McHenry County, North Dakota and reported extreme dry conditions in her area. Most producers are concerned about their water supply in the coming months. Just like the Tribune area, her county received about 6 inches of wet snow which was welcomed given the dry conditions. Lorinda H. mentioned she was told the county had not been this dry since 1925.

David Ashley joined the ISRB recently and has been an active participant as an observer at Board meetings and is quite familiar with ISRB. Just like the two previous public members, David A. expressed his concern about the dry conditions that could affect pasture and water supply for domestic use. David A. added he has extensively travelled throughout the basin and that he worries about reservoir management and how it affects flood control.

Joe Goodwill mentioned that he has been a public member for Manitoba for 5 years. In the past ten years, the issue was too much water; and now the area is so dry one could see bare/dry ground. Last fall was very dry with very little snow. No wet snow like the other areas mentioned previously. Joe G. added he is a member of a watershed district in his area that is currently developing an Integrated Watershed Management Plan that looks at water management across the watershed including related to aquatic life and river flows. Similar dry conditions prevail throughout the whole basin hence; there are opportunities to work collaboratively to seek joint solutions. Nicole A. expressed her interest to share more about the work of the Watershed District from Joe G. and suggested including a presentation on a future agenda.

Shelly Wepler is a member for the US, she echoed what David A. and Lorinda H. mentioned regarding dry conditions. Shelly W. is serving her second term representing the Ward County Commission in North Dakota. Shelly W. also represents and is President of the St. Joseph Health Foundation working with eleven counties and non-profit organizations that look after the mental and emotional well-being of the people they serve. Shelly W. also noted water quality and quantity are certainly have big impacts in both areas of her work.

Debbie McMechan is a public member for Canada and lives in a community that borders a portion of the US and Saskatchewan. Debbie M. chairs the PAG section of the Study Board and thanked the IJC for extending the study to allow for a more robust public consultation. Currently, the study managers are setting up the dates for a webinar for the week of March 15. PAG members will discuss the preliminary recommendations including the results of the Plan Formulation Committee who have been working on the HEC-RAS modelling of the basin. Once the draft report is shared in May, there will be an opportunity for the public to provide input. Soon after that, things will be wrapping up. There will be lots of opportunity for the public to provide comments directly to the Study Board. Closer to home, Debbie M. expressed her concern about exceedances of water quality objectives at the Westhope site and where she could find more information. Debbie asked if the water quality experts need to take a close look at these exceedances. Nicole A. responded there are couple of places to find information on water quality. The first one is the ISRB Annual Report that documents water quality and quantity information. Paul K. added that water quality is monitored at the Coulter site some 7 miles (11 km) north of Westhope and exceedances are tracked as they occur. As a side note, Nicole A. suggested Debbie M. and Joe G. have an offline discussion together with

Nicole A to discuss water quality monitoring, low flows and the activities of the Watershed District. All agreed.

Nicole A. reminded participants again that the meeting is being recorded to enhance secretarial duties and will be deleted once the minutes have been completed. Nicole A. also welcomed Commissioner Rob Sisson from the IJC. Commissioner Rob S. extended his well wishes and thanked the ISRB.

18. International Souris River Study Board Update

Michael Bart, US Co-Chair of the Study Board, provided an update of the work of the Study Board. A and Darrell Corkal, consultant for the IJC, also provided additional updates. Michael B. updates included: recommendations on monitoring networks, engagement overview and recommendations, plain language overview and recommendations, alternative reservoir operations, public engagement and next steps. Michael B. next outlined the study purpose and objectives based on the September 2017 Directive issued to the Study Board.

Michael B. also briefed the ISRB about the time and budget extension for the Study Board. On June 21, 2020 the Study Board sent a letter to the IJC to be transmitted to governments requesting an extension and additional funding for the study. The realities of COVID-19 forced agencies involved with the study to divert attention resulted in delays. On December 21, 2020 the IJC received response from governments granting extension by 6 months but, governments were unable to provide additional financial support. Without additional funding, no additional technical work on alternatives combinations is possible to complete and the study tasks are being brought to an orderly conclusion. Michael B. also noted that the IJC issued further guidance to issues related to dam safety. The IJC views dam safety as outside of the scope of the study. Furthermore, governments have separately provided direction to the designated entities to begin technical discussion on the hydrology of the basin. The study board's final report is to be delivered to the IJC no later than August 31, 2021.

Michael B. further explained the four main work plan areas and their current status. The Operating Rules Review (OR1) has been completed. Data Collection and Management group tasks (DW1-DW4) are mostly complete. The majority of Hydrology and Hydraulics group tasks (HH1-HH10) are underway or completed. Plan Formulation tasks (PF1-PF4) are at various stages of progress. Michael B. noted there were several Public Advisory Group (PAG) and Resource and Agency Advisory Group (RAAG) meetings since June 25, 2018 in Estevan and each group has provided input to the study. There are plans to hold a webinar in early March 2021 for each group. Several RAAG meetings were impacted by COVID-19. There was a virtual webinar with RAAG in July 2020 to update members with Phase 5 alternatives. There was also a virtual webinar with PAG to recap and update members on Phase 5 alternatives.

Al Pietroniro provided an update on the Climate Advisory Group (CAG). The CAG is helping identify future climate states such as precipitation, temperature and evapotranspiration used to estimate future hydrologic conditions. A literature review has been completed. ECCC is

working on completing a write-up of the literature review and will send out the draft for review.

Al Pietroniro also gave a brief status report on the Independent Review Group (IRG) led by Bob Halliday and Lisa Bourget.

Michael B. presented the key recommendations on monitoring networks and artificial drainage impacts. Work through the ISRB with the engagement of other agencies to reduce identified gaps in precipitation gaging stations within the Souris River Basin. ISRSB also recommends that ISRB shares scientific understanding of Souris River artificial drainage every two years to advance expert and public knowledge.

Al Pietroniro further explained the PAG and RAAG recommendation for continued engagement. The goal of the extension is to build collaborative PAG and RAAG engagement and dialogue beyond the study.

Darrell Corkal stated the goal of Indigenous engagement is to build collaborative long-term IJC- Indigenous Nations relationships in the Souris River Basin. Indigenous groups were identified in both Canada and the US for potential participation in the activities the study. There were two workshops in November and September 2020 held to seek input from indigenous groups. Darrell C. noted Indigenous Nations are interested in creating an Indigenous Advisory Group that would represent Indigenous Nations with current and ancestral interests in the Souris River Basin; and also becoming members of the ISRB. The recommendation being proposed by the Study Board to the IJC for Indigenous Board membership include two from Canada (1 First Nations and 1 Metis member) and two from the US Indigenous Tribes.

Al Pietroniro provided a brief status report on the Plain Language Review and Recommendations. The goal of the Plain Language Review is to clarify the language in the 1989 Agreement. The recommendation requests the IJC to consider supporting the agreed-upon plain language changes to the 1989 Annex A. These changes represent clarifications of wording in 1989 Annex A put forward by ISRSB. For the six language items not agreed-upon by the OR1 Review, the ISRSB recommends the IJC consider the suggested options for resolution. Michael B. added the Plain Language Review needs to be reviewed by governments as well. Nicole A. asked if other members on the Study Board had additional comments to make. Mark Lee and John Fahlman agreed to what was presented and had no additional comments. Russell Boals commented on the recommendations and suggested engagement process. On the recommendations, the ISRB reports to the IJC. The report of the ISRSB also goes to the IJC which makes it prescriptive. The ISRB is not an institution with defined budget rather a collection of volunteers drawn from various agencies to advance water management in the Souris River Basin. How would the ISRB ensure continuity of the recommendations? Al Pietroniro responded the recommendations are to the IJC and governments. Al P. expressed a need to talk to Wayne Jenkinson and Mark Gabriel how to move this forward. Ensure the wording in the recommendations reflect the expected actions. Michael B. stressed the need to differentiate between and general and specificity. The decision to continue with the engagement of the PAG and RAAG are in the hands of the IJC and governments.

Russell B. commented on the engagement process and expressed his concern with the desire to add more members to the ISRB and mixing technical space with ethical space. With the

addition of ethical space, the Board opens itself up to people with different values, beliefs and interests which could be potentially problematic. Although adding more board members could be positive, it has its own drawbacks that could affect the Board's ability to function as a technical entity. If the issue is building relationships, it should be done more often than just twice a year. Not clear about the whole engagement process discussion and how the recommendations were made. Al Pietroniro agreed it is a complex process and the Study Board will be thoughtful about the recommendations. Darrell C. agreed with the comments and observations made by Russell B.

Catherine Lee-Johnson reminded the ISRB that Indigenous Engagement is a top priority for the IJC and should be expedited as soon as possible, preferably by mid-March. The IJC also expects to get the comments back from the Board as soon as possible.

Lisa Lone Fight, ND, shared her experience with Indigenous Engagement. Lisa L. also stressed the value of traditional knowledge and the stories passed from generation to generation to sustain healthy ecosystems. Stories about water, plants and the environment provide valuable information to augment our scientific knowledge in the basin.

Al Pietroniro then provided a brief update on the possible alternative operations to the 1989 Agreement. Changes to the 1989 Agreement were analyzed for improved flood protection and water supply. Al Pietroniro also showed a chart with Phase 5 Operational Changes with various options. The study board notes that:

- The 1989 Agreement is a good and balanced agreement which maximizes flood protection and water supply,
- The 1989 Agreement can be improved with changes (due to the natural and infrastructure constraints of the Souris River and its basin, improvements are beneficial but marginal; they will achieve greater operational flexibility), and
- The Plan Formulation Committee of the ISRSB has selected possible alternative operations to the 1989 Agreement. The Committee prioritized the Top-ranked, Second-ranked, and Third-ranked changes, and indicated that No Changes to the 1989 Agreement is ranked Fourth. The Study Board has not yet met to decide on possible operational alternatives.

The Study Board next steps are:

- Virtual Indigenous Engagement workshop in early March
- PAG and RAAG workshop in early March to provide details on final recommendations reached in principle and outline status of alternative operation recommendations.
- Complete draft final report and submit to PAG, RAAG, IAG, IRG, and ISRB for review in May 2021
- Hold a Special ISRB Meeting to cover ISRSB Recommendations
- Study Board public consultation period in July 2021
- Submit Study Board Final Report by August 31, 2021

- Transition of Study Tools and Recommendations from the Study Board to the River Board.

Al Pietroniro presented the transition and future plan of the Study Board. Nicole A. thanked the members of the Study Board and asked if input / comments were required today. Additional meetings are also planned for the near future during the March – June period. ISRB members are reminded to send their comments to Nicole A., John P., Chris K., or Girma S. by next week. Gregg W. suggested for a special meeting with the ISRB. Nicole A. asked if ISRB members are invited to the webinar in mid-March. The RAAG invite will be extended to the ISRB.

Al Pietroniro concluded by stating that the Study is on track to submit the Study Report in August 2021. Virtual webinars with PAG and RAAG to present alternative operation recommendations are scheduled for mid-March 2021.

20. Updates from the IJC

Catherine Lee-Johnson restated that Indigenous engagement is a high priority for the IJC and should be expedited as soon as possible. The Study Board is working hard to move Indigenous engagement forward which includes seeking feedback from the ISRB. Catherine J. also mentioned plans are underway for the next Indigenous engagement webinar for mid-March. Furthermore, the IJC is expecting a progress report on Indigenous engagement at its upcoming spring semi-annual hearing in April. Wayne J. asked other IJC staff for additional comments and there were none. ISRB members are welcome to attend the upcoming webinar in mid-March.

Mark C. and Catherine J. provided an update on IWI and stated that requests for IWI proposals will be out within a month or so asked the Board to make its submissions. So far, two projects have been funded by IWI. Board designation change from pilot to watershed status is still under discussion with governments.

Wayne J. provided a brief update on information technology that the IJC is working on. The Study Board migrated to a new share-point platform recently and has used it extensively. All board will eventually be moved to the new share-point platform which will be a major technological upgrade. IJC has talked to few boards already and asking them for comments and feedback regarding implementation of the new share-point platform. Nicole A. asked for volunteers- Girma S., Chris K., Russell B., and Heather H. have expressed interest to participate in the IT training to be provided by the IJC. Other Board members and committee members are also encouraged to participate; and contact the co-secretaries to register. There was additional discussion about the existing micro-site and the information posted. Missing reports, irregular naming of reports, etc. were cited for future correction. Russell B. was identified to examine and solve the micro-site problems and also consider updating the ISRB factsheet.

Wayne J. the IJC noted the semi-annual meeting is scheduled for the week of April 19. The agenda will be sent out soon; and Indigenous engagement and dam safety will be topics of interest.

19. Basin Hydrology and Dam Safety

Michael B. presented an overview the recent technical discussions that were built on direction and guidance received from governments. The governments asked the Study Board to initiate and engage in hydrologic discussions to further our dialogue with each other on the issue of updated hydrology which could affect dam safety. The first meeting was on December 4, 2020 followed by second one in January 15, 2021. The third meeting is planned for March 5, 2021 to discuss a variety of topics which include the hydrology update that Water Security Agency has accomplished followed by the hydrology update the US has initiated for Lake Darling – exploring what the dam safety guidelines/standards are in both countries. Each country shared the presentations made in December and January with each other for a more in-depth discussion. Each country has submitted a series of detailed questions that the group is trying to answer for the next meeting. The conversation thus far has been productive and informative with more to discuss in the future per the instruction and guidance given by governments.

Jeff W. explained the dam safety issue is a very complicated and complex subject. It started after the 2011 Flood when the WSA updated the hydrology on the Canadian side of the Souris River Basin. Three pathway were considered – dam safety involves looking at the maximum precipitation, maximum flows and what flows are going to be used to design dam safety or operations and landing at a common understanding as to what the hydrology should look like. The updated hydrology by Saskatchewan was updated and shared with the Board in 2016. Dam safety in general has not been a topic of discussion at the board and is not part of the ISRSB work. Hence, its complexity and implications were initially underestimated. Through the current Canada-US conversation, information sharing is taking place and progress is being made in understanding the different hydrologic studies conducted in Canada and the US. From a dam safety perspective, there are two constrictions on the Canadian side that have been identified. The first one is the railroad embankment downstream of the Grant Devine Dam. WSA is in the process of developing solutions to mitigate/solve the first problem. Also, landing at a common understanding of the differences in approach and information between Canada and US and figuring out a path forward and carrying on the conversations to arrive at solutions is critical.

Michael B. commented we are learning a lot in the dialogue on how both countries go about their hydrology studies. For Lake Darling, as a result of efforts in Canada on Rafferty and Grant Devine, Corps was able to secure funding to analyze Lake Darling. We have some significant concerns about the Probable Maximum Flood (PMF) at Lake Darling. We continue a multi-agency approach with FWS and the State of ND. The work is very complex and detailed. US has a different approach that is basically pursued at the federal level. There is a different process in Canada that deals with the Canadian Dam Association. We are diving into the details on what each county has done.

John Fahlman added we are sorting through the hydrology and the nuances. We all have to work on understanding and an arrangement that works for all of us. That will take some time.

Chris K. noted the conversation with the group has been beneficial. The issues that came up were very complex and having this dialogue and understanding the differences in approach in both counties shows the strength of the group to seek solutions to these complex problems.

Nicole A. commented on the discussion as an important issue to the ISRB. Those who are not part of the Study don't have the details and background information on the subject. Nicole A.

requested if the group discussing the updated hydrology and dam safety classifications could make a presentation to the ISRB at the June meeting; and the request was accepted to present a high level summary of the discussions.

Action: The hydrology updates and dam safety classification group will provide a high level summary report to the ISRB at the summer meeting.

Col. Karl J. suggested changing the topic from dam safety to “basin hydrology” might be more appropriate to deal with the current issue and Jeff W. agreed. Jeff W. also mentioned the return to full supply level (FSL) was never to suggest deviation from the 1989 Agreement. The wording in the Agreement does request we return back to FSL at some point and the target flows have to be abided by. Jeff W. agreed to change the wording on his slide to the represent the Agreement better.

Action: Jeff W. to make changes on his presentation slide to reflect what was discussed at the Board meeting and share it with the co-secretaries for a revision.

Michael B. provided a brief update on Lake Darling. The US ACE was able to undertake an investigation of Lake Darling in collaboration with agency partners like the US FWS to figure out the original hydrological analyses done in the mid-1980s. The purpose was to see whether those analyses needed some updates. The initial results indicated the US would have some concerns regarding Lake Darling and what the updated PMF would look like. Michael B. mentioned this will be incorporated in the June update to the ISRB. The US investigation looked at moving storms around like the 2011, 2014 and others that were in the historic records. Within the US ACE, the “Extreme Storms Group” out of Omaha was involved to help in the analyses. Still working on the draft of the investigation and will share the preliminary results as they become available.

21. Other Business

New Business

Girma S. reminded committee members to send in their updated membership list to the co-secretaries. Ken B., US Co-Chair for the COH, requested to replace Scott Jutila with Michael Weir.

Motion: Jeff W. motioned to accept and replace Scott Jutila with Michael Weir. Gregg W. seconded the motion. **Carried.**

22. Next Meeting

Nicole A. thanked Chris K. for the Doodle Poll conducted. The majority of Board members favour June 22-23, 2021 for the summer meeting therefore, save both days for the meeting. The Board meeting will be split into two half days. The first half day, June 22, will be Board meeting followed by a Public Session in the evening. The following half day, June 23, will be Board meeting. Both Board and Public Session will be virtual. Consult with the Communication Committee and the IJC. Russell B. has volunteered to help in the planning.

Action: Chris K., Girma S. and Russell B. to consult with the IJC and organize the summer Board and Public meeting.

Closing Remarks – Nicole A. invited IJC Commissioners to provide closing remarks. Lance Yohe, Rob Sisson, and Jane Corwin all thanked the Board and its committee members and also the Study Board for their commitment and dedication for a cooperative water management work in the Souris River Basin. John P., US Co-chair, also extended his thank you note to all participants at the meeting.

23. Adjournment

The meeting was adjourned at 11:45 a.m. on February 25, 2021.

International Souris River Board
ACTION ITEMS – progress updated February 25, 2021

PERSONS OR COMMITTEE RESPONSIBLE	TOPIC	MINUTE	ACTION	STATUS AS OF May 25, 2021
Joel Galloway	Discrepancies of results of water quality sampling	24-Feb-16	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	24-Feb-16	Pascal Badiou to present the results of the DU Nutrient Project to the Board	Ongoing
COH and COC	Coordinate and determine infographics for the Souris	26-Jun-19	COH and OCC coordinate and determine the necessity of generating a Souris Basin Hydrology Infographics and generate an IWI Proposal if deemed necessary.	Ongoing
COH	Natural Flow Reporting	26-Jun-19	The Hydrology Committee to investigate the Natural Flow reporting dates and make recommendations for adapting them to provide more guidance based on existing basin conditions for quicker responses to apportionment needs. An Ad-hoc Working Group was formed at the June 2020 Board meeting that will take over this responsibility	Ongoing
ISRB	Provide Comments on 2020-2025 IWI Plan	21-Feb-20	The ISRB is to provide comments to Catherine Lee-Johnston on the IJC's 2020-2025 IWI Work Plan by March 10th, 2020	Complete
ISRB Secretaries	Reach out to the Dr. Don Flatten for presentation at the next upcoming meeting	21-Feb-20	Reach out to Dr. Don Flatten with the University of Manitoba in regards to presenting his water quality presentation to the ISRB.	Close

International Souris River Board
ACTION ITEMS – progress updated February 25, 2021

ISRB Committee Co-chairs	Provide comments on ISRB work plan	21-Feb-20	Committee Co-chairs are to provide comments to Nicole Armstrong on the ISRB's work plan by March 6th, 2020	Complete
ISRB Canadian Co-Secretary	Hosting of next meeting	21-Feb-20	Girma is to coordinate the upcoming ISRB meeting in Manitoba	Complete
ISRB Committee Co-chairs	Meet with IJC advisors about dam safety	19-Jun-20	John P. and Nicole A. will meet with Wayne J. and Mark G. in two months to determine where the dam safety issue is at and provide an update to the ISRB on the dam safety issue	Close – basin hydrology dam safety is being addressed through technical discussions between Canada and the US – update to be provided during June 2021 board meeting
Wayne Jenkinson	Provide the letter the ISRSB co-chairs sent to the IJC to the ISRB.	19-Jun-20	Provide the letter the ISRSB co-chairs sent to the IJC to the ISRB. Wayne will also cc' the ISRB on the IJC's response	Complete
ISRB	ISRB review of ISRSB/ISRB transition document	19-Jun-20	The ISRB is to review the ISRSB/ISRB transition document and provide comments to Girma and Chris by July 24th. Chris will compile the Board's comments and resend the document to the ISRB and ISRSB Study Managers the following week.	Complete
ISRB U.S. Co-Secretary	Send Indigenous engagement meeting doodle poll to ISRB	19-Jun-20	Chris K will send Catherine's doodle poll to the ISRB for the September Indigenous peoples engagement meeting.	Complete
ISRB U.S. Co-Secretary	Send doodle poll for public meeting	19-Jun-20	Chris K will send out a doodle poll for a public meeting for late October/early November.	Complete
ISRB U.S. Co-Secretary	Send doodle poll for winter meeting	19-Jun-20	Chris K will send out a doodle poll for the ISRB winter meeting the week of February 1st, 8th, and 22nd.	Complete

International Souris River Board
ACTION ITEMS – progress updated February 25, 2021

Chris K.	IJC letters	25-Feb-21	Chris K. will follow-up the status of the IJC letters (from Wayne Jenkinson) that were sent to the Co-Chairs of ISRB and the IJC.	Ongoing
Jeff Woodward	Saskatchewan presentation on hydrology	25-Feb-21	Jeff Woodward to send his revised version of the presentation dealing with return to FSL by June 1 st .	Complete
Co-secretaries & Russell B.	Summer virtual board and public meetings	25-Feb-21	Chris K., Girma S. and Russell B. to consult with the IJC and organize the summer Board and Public meeting.	Ongoing
Study Board Members	Basin hydrology/dam safety	25-Feb-21	Group involved in technical discussions on basin hydrology/dam safety to provide a presentation to the IRSB at the June 2021 meeting.	Ongoing