



# **International Rainy-Lake of the Woods Watershed Board**

---

**SECOND ANNUAL REPORT**

**TO THE**  
**International Joint Commission**

**COVERING**  
**April 2014 to March 2015**

## TABLE OF CONTENTS

<b>HIGHLIGHTS</b> .....	3
<b>1. INTERNATIONAL RAINY-LAKE OF THE WOODS WATERSHED BOARD</b> .....	4
1.1 Board Membership.....	4
<u>BOARD ACTIVITIES</u>	
1.2 Water Quality .....	6
1.2.1 Water Quality Plan of Study.....	6
1.3 Water Levels.....	6
1.3.1 Evaluation of the Rule Curves .....	6
1.3.2 Progress of the Recommended Studies for the IJC 2000 Rule Curves Evaluation..	6
1.3.3 Spring 2014 Flood Management Report.....	7
1.4 Engagement Plan.....	7
1.5 Meetings.....	8
<b>2. COMMUNITY ADVISORY GROUP</b> .....	10
<b>3. INDUSTRY ADVISORY GROUP</b> .....	11
<b>4. WATER QUALITY CONDITIONS</b> .....	11
<b>5. BASIN-WIDE DEVELOPMENT ACTIVITIES</b> .....	12
<b>6. INTERNATIONAL WATERSHED INITIATIVE PROJECTS COORDINATION</b> .....	12
6.1 <i>Rainy-Lake of the Woods State of the Basin Report, Second Edition – 2014</i> .....	12
6.2 Seine River Temperature Project .....	13
6.3 Rainy River Temperature Project – Phase II.....	14
6.4 Effect of Water Management Regime on Wild Rice Production .....	15
6.5 Effect of Water Management Regime on Cattail Invasion into Wild Rice Stands .....	15
<b>7. INTERNATIONAL WATERSHED COORDINATION PROGRAM</b> .....	16
<b>8. APPENDIXES</b> .....	17
Appendix 1 - Figure 1 .....	18
Appendix 2 - IRLWWB Work Plan 2014-15.....	19

## HIGHLIGHTS

During the spring and summer of 2014, lakes and rivers across the Rainy River watershed rose to very high levels. In some cases, peak water levels were the highest on record. In most others, they were the highest experienced in several decades. Once inflows exceeded outlet capacity in June, considerable communication efforts were undertaken by the Water Levels Committee (WLC) with the assistance of the Lake of the Woods Secretariat. These efforts included preparing numerous media releases, daily webpage updates and Special Bulletins. Members of the WLC and the Lake of the Woods Secretariat also attended several briefing calls of Emergency Management Ontario and responded to many phone calls and emails from the public, First Nations, and municipal representatives. At the request of the International Joint Commission (IJC), the Water Levels Committee of the International Rainy-Lake of the Woods Watershed Board (IRLWWB) prepared a special edition flood report which covers the hydrologic conditions leading up to the wet spring of 2014, the operation of the dams during this period, the role of the rule curves, conclusions and recommendations.

Board members, as well as Community Advisory Group (CAG) and Industry Advisory Group (IAG) members, contributed to the development of the *Rainy-Lake of the Woods State of the Basin Report, Second Edition – 2014*, which was released in July 2014, by the IJC's International Watershed Initiative and the Lake of the Woods Water Sustainability Foundation. The report provides a comprehensive review of environmental conditions and aquatic ecology in the basin. It provided a launching point for the Water Quality Plan of Study for boundary waters in the Rainy-Lake of the Woods watershed, which was developed by the IJC and transmitted to governments in January 2015. The Board and its members also contributed extensively to the development of the Water Quality Plan of Study.

The Board worked to ensure active and effective stakeholder engagement through its CAG and IAG. After hearing from members of the public and from Community Advisory Group members of their concern over the potential for increased mining activity within the Rainy-Lake of the Woods watershed to contaminate boundary waters if not properly assessed and managed, the IRLWWB reviewed environmental assessment processes in Canada and the U.S. and raised to the attention of the IJC the need for binational coordination of cumulative and transboundary effects.

Board outreach activities included an annual public meeting, held in International Falls, MN on August 12, which focused on management of the high water situation, and hosting and participation in stakeholder consultation meetings in support of the Water Quality Plan of Study development. Continuing its emphasis on First Nations/Métis/Tribal engagement, Board members met with First Nations located near Rainy Lake to hear and address their concerns related to the high water levels of 2014 and participated along with Commissioners in a meeting with Shoal Lake #39 and #40 First Nation communities.

## **1. INTERNATIONAL RAINY-LAKE OF THE WOODS WATERSHED BOARD (IRLWWB)**

In January 2013, the IJC formally merged its International Rainy River Water Pollution Board and International Rainy Lake Board of Control, consolidating the water quality and water quantity responsibilities of the former boards, to form the IRLWWB. The mandate of the IRLWWB was also expanded to include water quality responsibilities for Lake of the Woods. Water levels and flows regulation is unchanged under the IRLWWB. The Water Levels Committee of the IRLWWB has the same composition as the former International Rainy Lake Board of Control and retains authority to act independently in ensuring compliance with the terms of the Order in the matter of emergency regulation of Rainy Lake and other boundary waters in the Rainy Lake watershed.

The IRLWWB assists with binational review of water quality conditions and efforts for the boundary watershed and coordinates the management of water levels and flows on the Rainy River and Rainy Lake.

The IRLWWB works to provide opportunities for public and stakeholder input through an annual public meeting in the watershed, ongoing consultation with its CAG and IAG, as well as through Board membership which includes designated membership for First Nations, Métis and Tribal communities, and an equal number of non-government and government members.

### **1.1 Board Membership**

The Board is comprised of ten members from Canada and ten members from the United States. The IRLWWB membership underwent some changes this past year. In October 2014, the IJC recognized departing IRLWWB member Lee Grim. Lee served the IJC and the watershed in many capacities, initially as the local member for the International Rainy Lake Board of Control from 2002 to 2013, on the International Lake of the Woods and Rainy River Watershed Taskforce from 2010 to 2011 and on the Community Advisory Group and Water Levels Committee of the IRLWWB until October 2014. In November 2014, Matt Gouin, of Rainy Lake, joined the IRLWWB for a three-year term as a local member and Community Advisory Group member. In February 2015, Nolan Baratono, of International Falls, joined the IRLWWB for a three-year term as a local member and Water Levels Committee member.

## UNITED STATES

---

**Col. Daniel Koprowski (Board Co-Chair/Water Levels Committee Co-Chair)**

St. Paul District  
U.S. Army Corps of Engineers

**Lori Dowling-Hanson (Board Member)**

Minnesota Department of Natural Resources

**Suzanne Hanson (Board Member)**

Minnesota Pollution Control Agency

**James Stark (Board Member)**

U.S. Geological Survey

**Mike Hirst (Board Member/IAG Co-Chair)**

Lake of the Woods Soil and Water Conservation District

**Nolan Baratono (Local Board Member/Water Levels Committee Member)**

International Falls, MN

**Charlene Mason (Local Board Member/CAG Co-Chair)**

Ely, MN

**Jenny Moorman (Local Board Member/CAG Member)**

Baudette, MN

**Al Pemberton (Local Board Member/CAG Member)**

Red Lake, MN

**Matt Gouin (Local Board Member/CAG Member)**

Rainy Lake, MN

## CANADA

---

**Michael Goffin (Board Co-Chair)**

Environment Canada

**Gail Faveri (Board Member/Water Levels Committee Co-Chair)**

Environment Canada

**Chief Earl Klyne (Local Board Member/Water Levels Committee Member/CAG Member)**

Seine River First Nation, ON

**Trina Rawn (Board Member)**

Ontario Ministry of the Environment

**Greg Chapman (Board Member)**

Ontario Ministry of Natural Resources

**Mark Lee (Board Member)**

Manitoba Conservation and Water Stewardship

**Kiley Hanson (Local Board Member/CAG Co-Chair)**

Nestor Falls, ON

**Dennis Brown (Local Board Member/IAG Co-Chair/CAG Member)**

Atikokan, ON

**Todd Sellers (Local Board Member/CAG Member)**

Minaki, ON

**Karen Cederwall (Local Board Member/CAG Member)**

Kenora, ON

## ENGINEERING ADVISOR/SECRETARY

---

**Scott Jutila (Secretary/Engineering Advisor)**

St. Paul District  
U.S. Army Corps of Engineers

**Matt DeWolfe (Engineering Advisor)**

Environment Canada

**Diane de Beaumont (Secretary)**

Environment Canada

## **BOARD ACTIVITIES**

### **1.2 Water Quality**

#### **1.2.1 Water Quality Plan of Study**

During the spring and summer 2014, the IRLWWB participated in the consultations on the Lake of the Woods Basin Water Quality Plan of Study led by the IJC's Plan of Study Team and promoted participation in consultation by stakeholders and the public. The IRLWWB had the opportunity to provide verbal and written comments on the preliminary and final draft reports concerning the proposed priority research projects. The IRLWWB also provided detailed feedback to Commissioners on the Plan of Study during the Board's appearance at the April 2014 Semi-Annual Meeting. The IRLWWB thanks the Lake of the Woods Basin Water Quality Plan of Study Team for their tremendous effort, under a short time frame, to produce this study plan for the Lake of the Woods basin. The Board supports the recommendations in the Plan of Study.

### **1.3 Water Levels**

#### **1.3.1 Evaluation of the Rule Curves**

In preparation for the evaluation of the Rule Curves of the 2000 Order for Rainy and Namakan Lakes and Rainy River, the Water Levels Committee Canadian Co-Chair and IRLWWB's Canadian Engineering Advisor assisted a group of experts selected by the IJC in developing a scope of work which was accepted by the Commission. The scope of work consists of four major tasks:

1. Review the many on-going and specific studies undertaken to evaluate the 1970 and 2000 rule curves (four months).
2. Determine the need for a new regulation approach to accommodate spring thaws of an earlier or later date (four months).
3. Develop an evaluation model to test the impacts of such various regulation approaches and the state-of-nature (eight months).
4. Report on the recommended regulation approach (4 months).

The evaluation, set to start by August 2015 and end in April 2017, will be led by an expert panel nominated by the Commission. It is expected that considerable public input will guide the expert panel's process to select a water management approach in the watershed which best balances economic and ecological interests in consideration of future unknown hydrology.

#### **1.3.2 Progress of the Recommended Studies for the IJC 2000 Rule Curves Evaluation**

The IRLWWB continued to work with the Voyageurs National Park project management team to provide oversight of the projects recommended in the 2009 Plan of Study for the Evaluation of the 2000 Order for Rainy and Namakan Lakes and Rainy River and supplementary studies added

by the Commission. Six of the twenty-two studies are complete and peer reviewed and four others are awaiting peer review. Eleven studies are ongoing. One study (*Identification of critical river benthic habitats at X-sections; model effects of curve change*) was not funded following a feasibility assessment. Overall, the effort is on target to provide the required information to initiate the evaluation of the Rule Curves of the 2000 Order for Rainy and Namakan Lakes and Rainy River.

### **1.3.3 Spring 2014 Flood Management Report**

The IRLWWB's Water Levels Committee prepared a report on the management of spring 2014 water levels. The report, entitled *Report on High Water Levels in the Rainy River Watershed in 2014*, was submitted to the IJC in April 2015. It covers the hydrologic conditions leading up to the wet spring of 2014, the operation of the dams during this period, the role of the rule curves, conclusions, and recommendations. The recommendations relate to: improving public awareness during periods of extremely high water levels; giving consideration to proposed alternatives to the 2000 Rule Curves that would avoid, where possible, conditions that increase the likelihood of Emergency Conditions due to high water; reviewing and improving communications and actions taken during the 2014 high water event; improving public understanding of the risk of high water levels and raising awareness of existing hazard land and zoning regulations related to setbacks and flood protection.

The IRLWWB recommends that the Commission publish the report.

### **1.4 Engagement Plan**

The IRLWWB's Outreach Committee revised the Board's engagement plan to identify critical needs, strategic communication goals, internal communication goals as well as a communications program.

Our strategic communication goals are:

#### ***Informational goals:***

- *Communicate accurately to the general public the actions of the Board and the reasons for those actions, in particular the Water Levels Committee's decisions in times of emergency.*
- *Ensure that watershed policy makers are aware of the Board reports.*

#### ***Educational goals:***

- *Increase understanding of the role of the IJC, the Watershed Board, the Water Levels Committee, the Community Advisory Group, the Industry Advisory Group, and other committees of the board to researchers, municipal officials and the general public.*

#### ***Engagement goals:***

- *Provide for an exchange of information with the following:*
  1. *General public – Increase awareness of IJC and IRLWWB roles and activities.*
  2. *Communities and Community Associations such as cottage owner and lake associations – Raise awareness on issues such as physical limitations (geography*

*and hydrology) on water levels management, and of the role the associations can play in assisting with Board activities such as restricting the spread of invasive species.*

3. *Municipal Officials – Increase awareness of the assistance available from the Board.*
4. *Indigenous Peoples*

**Internal communication goals:**

- *Full utilization of the SharePoint site to support collaboration on work products among the Community Advisory Group, the Industry Advisory Group; and the Board and its committees.*

As a first step in the development of communication products, the Outreach Committee drafted a set of five factsheets with headlines that describe the roles of the IRLWWB. The goal of this communication product is to provide Board members with consistent messaging when engaging with the public and stakeholders.

The five factsheets are:

1. *Resolves and prevents disputes over water between the U.S. and Canada in the border watershed.*
2. *Assists with binational coordination of water quality management efforts for the entire watershed.*
3. *Monitors water levels and flows on the Rainy River, Rainy Lake and Namakan chain of lakes.*
4. *Provides advice on matters related to the IJC's responsibilities for management of the watershed.*
5. *Engages the public and industry proactively to provide the most appropriate advice and information to the IJC and to the watershed's stakeholders.*

## **1.5 Meetings**

**April 29, 2014** – This face-to-face meeting was held in conjunction with the IJC's spring semi-annual meeting in Washington, D.C. The discussion centered on the following topics: preliminary draft Lake of the Woods Basin Water Quality Plan of Study; approach for reporting on water quality data; Board communications plan; statement of work for the evaluation of the Rule Curves; spring water level conditions; CAG/IAG activities; Board appearance before the Commission, and the August basin meetings.

**July 8, 2014** – This teleconference was organized to plan the final details of the Board's meetings in the basin in August. At the request of the IRLWWB, the Water Levels Committee provided an update on the water levels situation in the basin.



**August Basin Event 2014** – From August 11 to the 13 the IRLWWB travelled to Fort Frances, Ontario, for its third in-person meeting, as well as meetings with the Couchiching First Nation and stakeholders. It also held a public meeting in International Falls. Details as follows:

- August 11 – The CAG and IAG held concurrent meetings and then regrouped to hear a presentation on the draft Water Quality Plan of Study and provide feedback. The IRLWWB also held its first meeting with the CAG and IAG. Later that day, the Water Levels Committee met with Couchiching First Nation to go over the high water levels situation of the past spring. The Canadian Engineering Advisor gave a presentation on the high water event and the Water Levels Committee answered questions from the audience.
- August 12 – The Water Levels Committee met with dam operators H2O Power LP and Boise Inc. to discuss the spring 2014 high water levels and communications. A meeting of the IRLWWB was also conducted that day. Agenda items included: an orientation session for new members, the development of a Board work plan, as well as updates on International Watershed Initiative projects, proposed terms of reference for the Water Quality Plan of Study, Water Levels Committee activities, and Community Advisory Group and Industry Advisory Group activities. In the evening, the Water Levels Committee held a public meeting centered on the spring 2014 high water levels. The American co-chair of the IRLWWB and WLC gave a presentation on the high water event and answered questions from the audience, which numbered about 90 persons.
- August 13 – The IRLWWB met with the project managers of the Rule Curves evaluation studies for an update on the studies and the approval of the project management budget for the current fiscal year. The IRLWWB also met with resource management agency representatives to discuss basin activities and listen to presentations on various agency projects. The Board Canadian Co-Chair traveled to Kenora with the Water Quality Plan of Study Team and a Water Levels Committee member to attend a public consultation meeting on the Plan of Study.

**October 17, 2014** – The IRLWWB held a teleconference to prepare for the IJC’s Fall Semi-Annual Meeting and advance Board activities related to: the preparation of a Board letter to the IJC on environmental assessment of mining projects in the basin; the preparation of a report by the Water Levels Committee on the spring 2014 high water levels; reporting on water quality monitoring data; and, the development of a communications plan. The Board also discussed the merit of a proposed IWI project on water levels/gauging on Lake of the Woods.

**January 28, 2015** – At the request of the IRLWWB, the Minnesota Pollution Control Agency gave a presentation on the Minnesota Nutrient Management Strategy and relevance to the Rainy-Lake of the Woods watershed. Other topics discussed at this teleconference included: draft report on the assessment of the spring 2014 flood management; U.S. spokesperson replacement; Board Communications Plan; Board annual report; IWI proposals (Lake of the

Woods Water Level Management Review and HPAB Review of human health risks and impacts in the Rainy River and LOW watersheds); updates on the Lake of the Woods Basin Water Quality Plan of Study; mining letter; and the International Watershed Coordination Program.

**March 16, 2015** – This meeting was held by teleconference to hear updates on the Rule Curves evaluation, the IRLWWB Engagement Plan, the spring 2014 Semi-Annual Meeting, the Community Advisory Group and the 2015 International Rainy-Lake of the Woods Watershed Forum, and to advance work on a number of activities such as: the Report on High Water Levels in the Rainy River, the Board annual report, the Board work plan, and the Board annual basin meetings.

### **List of Board Meetings**

For a detailed summary of Board meetings, please consult the IRLWWB website at:

<http://ijc.org/en /RLWWB>

## **2. COMMUNITY ADVISORY GROUP**

The membership of the CAG now consists of the public members of the Watershed Board (six persons), the designated members of the Watershed Board (three persons) and nine local members (five from the United States and four from Canada). These members come from all parts of the Rainy-Lake of the Woods watershed, as far north as Kenora and as far south as Ely; as far east as Gunflint Lake and as far west as Baudette. All come with perspectives which provide wide-ranging input into meeting discussions and email exchanges.

During the 2014/2015 year, the CAG held five meetings: teleconferences were held in April and June followed by a face-to-face meeting in August at which time the CAG also met with the Watershed Board. In November, the CAG met again via teleconference. An additional teleconference took place in early March 2015 and those members of the CAG attending the March 2015 Watershed Forum met informally.

The focus for the first part of the year was to review and provide input to both the *Rainy-Lake of the Woods State of the Basin Report, Second Edition – 2014* and the *International Lake of the Woods Basin Water Quality Plan of Study* (WQPOS). The entire April teleconference was spent reviewing and providing input to the draft WQPOS. During the CAG August meeting, members met with WQPOS Team Members to provide further input and information to the public draft. In addition, many CAG members participated in the WQPOS public meetings in their areas. While recognizing the importance of all issues in the WQPOS, those of particular interest to members of the CAG were contaminants (especially those associated with mining and transfer of hazardous materials) and aquatic invasive species.

The August meeting also included a presentation by Kelli Saunders, International Watershed Coordinator, Lake of the Woods Water Sustainability Foundation, and Michael Kennedy, Watershed Project Manager, Minnesota Pollution Control Agency (MPCA) on the Civic

Engagement Program of the MPCA. The discussion of this program revealed a desire among CAG members to meet with lake associations in the watershed to learn about other programs and ways to help each other.

Over the course of the year, the CAG met with Jim Stark, U.S. Geological Survey, for an update on mining research conducted by United States and Minnesota agencies; discussed with Gail Favari, of Environment Canada, the IRLWWB's evolving communication strategy, and received regular updates on IRLWWB issues and meetings.

### **3. INDUSTRY ADVISORY GROUP**

The current IAG membership reflects a wide range of industrial interests in the watershed, such as hydroelectric power, paper production, agriculture, forestry, fisheries, bait industry, mining, recreation and tourism. Membership is open to any industry operating in the Rainy-Lake of the Woods watershed.

The IAG met three times in the period covered by this report. First, the IAG met via teleconference to discuss the draft *International Lake of the Woods Basin Water Quality Plan of Study* (WQPOS) on April 22, 2014. Then on August 11, the IAG met face to face during the IRLWWB's annual meeting in Fort Frances. The IAG held another conference call at the end of March 2015.

The April meeting was facilitated by Michael Goffin, Canadian Co-Chair of the IRLWWB. The IAG members discussed their concerns with various parts of the WQPOS and also asked questions for clarification. All comments were forwarded on to the WQPOS Team. At the August meeting, the IAG met throughout the day in Fort Frances and held joint discussions with the Community Advisory Group and the IRLWWB. Much of the discussion revolved around the high water levels experienced in the watershed, the WQPOS and other concerns of the IAG and CAG members.

### **4. WATER QUALITY CONDITIONS**

In order to meet its mandated requirement for reporting to the IJC on water quality issues, the IRLWWB wrote to relevant agencies to formally request up-to-date water quality information related to the Rainy-Lake of the Woods watershed. The Board requested information pertaining to monitoring and compliance activities from 2012 to 2014, and information on point and non-point sources under the respective jurisdictions, as well as details on by-pass events and spills to the environment. The Board also asked for water quality data, any summaries of data that may be readily available, and information on any new or expanded facilities that discharge into the watershed that may affect international waters.

Due to the late submission of data from some agencies, the Board was unable to provide a detailed account of water quality conditions in the basin in this report. The Board is currently

analysing the data and determining a suitable approach for presenting monitoring results, and plans to submit a report on water quality conditions to the IJC in 2015.

## **5. BASIN-WIDE DEVELOPMENT ACTIVITIES**

The IRLWWB is charged with monitoring and reporting on the ecological health of the Rainy-Lake of the Woods watershed boundary waters' aquatic ecosystem, including water quality.

In accordance with this charge, the IRLWWB raised to the attention of the Commissioners in a letter dated October 2014, the large number of proposals for mining operations within the Lake of the Woods drainage basin, in various stages of development and review, in both Canada and the United States.

The IRLWWB heard from members of its Community Advisory Group and from members of the public that there is concern over the potential for increased mining activity within the Rainy-Lake of the Woods watershed to contaminate boundary waters if not properly assessed and managed.

The IRLWWB noted that the recently released 2014 Rainy-Lake of the Woods State of the Basin Report identified high levels of contaminants in bottom sediments, including arsenic and barium, believed to be the direct result of past mining activities in the region. The IRLWWB also noted that the potential impacts of mining activities on water quality and ecosystem health is a subject addressed in the Water Quality Plan of Study developed for the Lake of the Woods basin and submitted to Commissioners in 2014. Project #24 of the Plan of Study proposes to assess vulnerability of boundary waters to contamination from mining.

After careful consideration of the environmental processes in place in Canada and the United States, the IRLWWB recommended the Commissioners request of the governments an explanation of how binational coordination of cumulative and transboundary effects assessment will be accomplished in the Rainy-Lake of the Woods watershed.

In a January 2015 letter to the IRLWWB, the IJC indicated that it *"agrees that current and projected impacts of mining activities on water quality and ecosystem health in the Basin are areas that warrant close examination and that the management of transboundary regulations for these mining activities is a subject that requires further investigation"*. The IJC concurrently submitted a letter to governments requesting a briefing from them at the April 2015 Semi-Annual Meeting on how the binational cumulative effects of mining will be determined in the Rainy-Lake of the Woods watershed.

## **6. IWI PROJECTS COORDINATION**

### **6.1 *Rainy-Lake of the Woods State of the Basin Report, Second Edition – 2014***

The *Rainy-Lake of the Woods State of the Basin Report, Second Edition – 2014*, was released July 8th, 2014 jointly by the IJC and the Lake of the Woods Water Sustainability Foundation. The report was developed as a first step and launching point for the development of the Lake of the Woods Basin Water Quality Plan of Study.

The report provides a comprehensive review of environmental conditions and aquatic ecology in the binational Rainy-Lake of the Woods watershed. It provides details on a wide range of topics, including: drainage basin characteristics, water chemistry, nutrients and harmful algal blooms, biotic communities, aquatic invasive species, emerging threats and an overview of the information gaps and monitoring needs.

Development of the State of the Basin report began in the fall of 2013 as a collaborative effort, funded by the International Watershed Initiative of the IJC and by the Lake of the Woods Water Sustainability Foundation, with in-kind editorial and data support from universities and the state, provincial and federal agencies in the watershed.

The report is available in two versions: a detailed report of 228 pages, written for a technical audience and a companion summary report of 22 pages, highlighting key findings and written for a general audience. It is available at: [www.ijc.org/en/RLWWB/Publications](http://www.ijc.org/en/RLWWB/Publications) and [www.lowwsf.com/sobr](http://www.lowwsf.com/sobr).

## **6.2 Seine River Temperature Project**

This project started in 2011 and is anticipated to continue until 2015. Partners include: Seine River First Nations, Shooniyaa Wa Biitong, Department of Fisheries and Oceans, Ontario Ministry of Natural Resources and Forestry, H2O Power, Kenora Resource Consultants.

The purpose of the Seine River Temperature Project is to help define the spring spawn season for Seine River sturgeon through surrogate environmental indicators and note any effects of peaking on spawning.

With the listing of the north-western Ontario lake sturgeon population as threatened by the province of Ontario, protection of the habitat for this species has become a priority for resource managers, power corporations, water management boards, and First Nations. One of the major threats to lake sturgeon is the impact of peaking hydroelectric facilities on the water levels during the spring spawning season. If the water downstream of the dam fluctuates dramatically at any time during the gestation period and results in stranded eggs or the drying out of the spawning area, the success of the spawn will be dramatically reduced. Using environmental indicators to define the spawning season as opposed to preset calendar periods is felt to be important to ensure that the efforts made to protect this species provide the maximum benefit while not adversely impacting upon the electricity needs in the area during periods when lake sturgeon spawning habitat is not being utilized.

The most striking result of the 2014 field season was the drastic increase in the number of adult lake sturgeon found at the spawning sites. This is consistent with the knowledge held in the community that the Seine River lake sturgeon population has a much stronger run of adult fish every four or five years.

The traditional ecological indicators appear to have a consistent relationship with the spawning timing of lake sturgeon in Seine River. Both the size of the poplar leaves and presence of tiger swallowtails could have proved historically valuable for the people of Seine River who would have depended on being present at the timing of the sturgeon spawn for survival. The timing appears to be such that if you needed to be at the spawning sites on Seine River when the sturgeon were spawning, noticing that the poplar leaves were the size of beaver's ears (or quarters) would have indicated it was time to begin making your way to the spawning habitat in Seine River and observing tiger swallowtails would have indicated that you needed to be at the spawning site as soon as possible. Alternatively, it is possible that these two indicators are for different lake sturgeon populations in the traditional territory of Seine River First Nation. The Turtle River lake sturgeon population was historically also important for Seine River First Nation and reports from knowledge holders in the community indicate that the lake sturgeon in Turtle River spawn approximately one to two weeks prior to the lake sturgeon in Seine River. It could be possible that the size of the poplar leaves is an indicator of spawning activity in the Turtle River system and the presence of tiger swallowtails is an indicator of spawning activity in the Seine River system.

With the continued training of three technicians from Seine River First Nation, the continued monitoring of the traditional ecological indicator surveys and the documentation of both the lake sturgeon spawning activities and larval drift timing, it is felt that the season was a success and the capacity developed in the community will ensure that there is an excellent base to build upon in future years.

The extreme high water levels in 2012, 2013 and 2014 have provided an opportunity to learn how lake sturgeon adjust to high flows in Seine River. It is hoped that future field seasons will provide information on the lake sturgeon spawning activities during average and low flow conditions.

### **6.3 Rainy River Temperature Project – Phase II**

The objective of the work in Phase II is to help define the spring spawn for Rainy River walleye and sturgeon through surrogate temperature indicators and to utilize temperature to guide the prohibition period for peaking in the Rainy River system. This is the second phase of the project which was initiated in 2009. Three water temperature gauges were co-located with the streamflow gauges to measure water temperatures during the open water season. The data collected at these sites require analysis and a report will be prepared to help regulatory agencies and operators develop tools to support improved dam operations.

The project's final report is due in March 2015. The project's outcome will be summarized in the next Board annual report.

#### **6.4 Effect of Water Management Regime on Wild Rice Production**

This project aims to quantify water level fluctuations on wild rice productivity at critical stages of phenological development. The research will involve the wild rice harvest areas utilized by the Seine River First Nation. This is a two year project expected to be completed in spring 2016.

Water level management in the Rainy-Namakan System has detrimental effects on the existing and historical stands of wild rice within the Rainy Lake and Seine River sections of this system. This has been an ongoing concern of the Seine River First Nation (SRFN) as well as other First Nations in the basin. Elders of the SRFN report that rice stands have disappeared or declined in size in much of their traditional ricing areas. In 2013, no wild rice was harvested from Rainy Lake or the Seine River. This compares to historical commercial sales of wild rice from Rainy Lake and the Seine River of up to 150,000 pounds and over 1,000,000 pounds on Lake of the Woods. These figures do not include personal use by community members in the First Nation which was considerable and an important part of their diet. Lack of product has recently prompted the only wild rice processing facility in Ontario, located in Keewatin, Ontario to close and move to Manitoba. The loss of the wild rice harvest is primarily attributed by the wild rice industry to high water levels on Rainy Lake and Lake of the Woods. Furthermore, the existing stands harvested by SRFN seem to be decreasing in area at a rapid rate.

The project will be conducted by the SRFN with assistance from Lakehead University (Dr. P.F. Lee) and the University of California (Dr. D. Marcum). Both scientists are specialists in wild rice. These scientists will work in co-operation with Dr. Jean Morin, Chief Scientist, Hydrology and Ecohydraulic Section, Environment Canada, to integrate the results into Dr. Morin's Integrated Habitat Model. Both controlled and field studies will be conducted within the traditional wild rice harvesting areas of the SRFN on Wild Potato Lake and Rainy Lake and are designed to reflect the depth gradients in the wild rice stands as well as the normal changes experienced by the stands as the water levels are increased within the water system.

#### **6.5 Effect of Water Management Regime on Cattail Invasion into Wild Rice Stands**

This project aims to determine the effectiveness of cattail removal based on rule curve regulations in the Rainy-Namakan system and the corresponding survival of wild rice stands. This is a two year project expected to be completed in spring 2016.

A particular recent concern in the Rainy-Namakan system has been the invasion of the exotic perennial narrow leaf cattail (*Typha angustifolia* or the hybrid, *Typha glauca* = *T. latifolia* x *T. angustifolia*) into wild rice stands in Northwestern Ontario. The problem with this exotic species is that, unlike the native *T. latifolia*, it can tolerate depths normally occupied by wild rice. These exotic cattails are able to form dense monospecific stands and thus essentially dominate a wetland and greatly reduce its diversity level. The competitive advantage of cattails over wild rice has not been quantified, but the outcome for wild rice certainly seems to be detrimental.

On Rainy Lake itself, there seems to be recognition of the detrimental effects of these cattails on wild rice.

This is a two year project with the first year of the project being preparation of the sites when cattails will be cut at various times of the growing season. In the second year of the study, the effectiveness of these cuttings on wild rice regeneration will be quantified. It will be conducted by the SRFN with assistance from Lakehead University (Dr. P.F. Lee). The cattail study will be conducted within the traditional wild rice harvesting areas of the SRFN on Wild Potato Lake and Rat River Bay, Rainy Lake.

## **7. INTERNATIONAL WATERSHED COORDINATION PROGRAM**

The International Watershed Coordination Program (IWCP) has continued to provide binational coordination and communication of research, management and citizen engagement for the basin. The IWCP was established in 2012 by the Lake of the Woods Water Sustainability Foundation (LOWWSF), with the support of the IJC, Manitoba Conservation and Water Stewardship, and Minnesota Pollution Control Agency, through the Koochiching Soil and Water Conservation District.

During 2014, the International Watershed Coordinator, Kelli Saunders, served as the Plan of Study Secretary, alongside study team co-chairs Mark Brigham (U.S. Geological Survey) and Glenn Benoy (IJC-Canadian Section), assisting in the development of the Lake of the Woods Basin Water Quality Plan of Study. The IWCP Coordinator facilitated consultations with resource agencies, basin experts, indigenous communities and the public to determine the top priority research projects and activities needed in the basin.

The IWCP Coordinator continued to provide secretariat support to the International Multi-Agency Arrangement (IMA), including managing the update of its five year Operational Plan, linking IMA expertise and projects to the Plan of Study development, and providing a link between the IMA and the IRLWWB.

The IWCP Coordinator has been working with the Koochiching Soil and Water Conservation District, Minnesota Pollution Control Agency and members of the Board's CAG to develop a variety of tools and opportunities that promote civic engagement in water stewardship throughout the basin. Examples include the planning of a binational Lake Association Network event for summer 2015; the development of a partnership between the citizen monitoring programs in Minnesota and Ontario to compare data and recruit new members; and, the investigation of opportunities to collaborate on prevention planning for aquatic invasive species. The quarterly Rainy-Lake of the Woods Watershed News continues to be circulated regularly as a way to highlight the watershed stewardship initiatives at the international, regional and local level.



**8. APPENDICES**

Appendix 1      Rainy-Lake of the Woods Watershed  
Appendix 2      IRLWWB Work Plan 2014-15

APPENDIX 1



APPENDIX 2

IRLWWB WORK PLAN 2014-15 (updated March 2015)			
BASED ON "Directive to International Rainy-Lake of the Woods Watershed Board; Draft: April 1, 2013"			
MANDATE OVERVIEW: The Board's mandate is to ensure compliance with the Commission's Order pursuant to the Rainy Lake Convention, to monitor and report on the ecological health of the Lake of the Woods and Rainy Lake boundary waters aquatic ecosystem, including water quality, and to assist the Commission in preventing and resolving disputes regarding the boundary waters of the Lake of the Woods and Rainy River watershed. The Board shall accomplish its mandate by exploring and encouraging the development of local and regional capacity to prevent and solve problems locally, applying the best available science and knowledge, and maintaining an awareness of the needs, expectations and capabilities of residents of the Lake of the Woods and Rainy River watershed.			
WHAT WE HAVE BEEN DIRECTED TO DO:	WHAT WE ARE GOING TO DO TO CARRY OUT THIS DIRECTION:	ACTIONS TO DATE:	STATUS:
<b>Water Quality / Aquatic Ecosystem Health Objectives</b>			
<p>1. (Directive 4.a) <b>Recommend, as appropriate, water quality and/or aquatic ecosystem health objectives</b> for the boundary waters of the Lake of the Woods and Rainy River watershed.</p> <p>1a. (Directive 4.a) <b>Maintain continuous surveillance over the quality of water and health of the Lake of the Woods and Rainy River boundary waters aquatic ecosystem</b> (with particular focus on priority issues within the basin such as water quality, alien aquatic invasive species, climate change indicator and adaptation, and ground and surface water contamination, as identified by the International Lake of the Woods and Rainy River Watershed Task Force's Study).</p>	<p>1. Request for IWI funding for the State of the Basin Report Update</p> <ul style="list-style-type: none"> <li>• As part of the State of the Basin Report Update, assemble existing water quality and aquatic ecosystem health objectives for the boundary waters of the watershed</li> <li>• As part of the State of the Basin Report Update, analyze gaps and approaches in the responsible jurisdictions where specific objectives do not exist</li> </ul> <p>2. Request relevant agencies to conduct review of data in relation to their jurisdiction's objectives and provide data and analysis</p> <ul style="list-style-type: none"> <li>• Assemble recent water quality and ecosystem health monitoring information               <ul style="list-style-type: none"> <li>○ request input from relevant agencies / IMA</li> <li>○ analyze in relation to water quality objectives and trends</li> <li>○ focus on priority issues</li> </ul> </li> </ul>	<p>1. The <i>Rainy-Lake of the Woods State of the Basin Report, Second Edition</i>, was released on July 8, 2014.</p> <ul style="list-style-type: none"> <li>• Part 3 of the report addresses existing water quality and aquatic ecosystem health objectives and gaps for the boundary waters of the watershed.</li> </ul> <p>2. - Established a sub-group for tracking and reporting on environmental issues in the basin.            - Requested data from Environment Canada, Ontario Ministry of the Environment and Climate Change, Ontario Ministry of Natural Resources, Manitoba Department of Conservation and Water Stewardship, U.S. Environmental Protection Agency, Minnesota Pollution Control Agency, Minnesota Department of Natural Resources, and U.S. Geological Survey.            - Initiated analysis of data.</p>	<p>SOBR Update Completed - July 8, 2014</p> <p>Detailed report on water quality conditions to be provided to the IJC in 2015.</p>
<p>2. (Directive 4.a.i) <b>Continue to carry out evaluations</b></p>	<p>1. Where exceedences of relevant objectives identified</p>	<p>1. and 2.</p>	<p>Detailed report on</p>

<p><b>and assessments from time to time</b> as the Board considers necessary or desirable to ascertain the extent to which existing water quality objectives, such as approved by the Governments for the Rainy River in 1965, are being met.</p> <p>2a. (Directive 4.a.ii) <b>Notify the Commission of instances where existing water quality objectives are not being met and of actions being taken</b> by those responsible for sources of pollution and by the regulatory agencies to meet these water quality objectives.</p>	<p>request relevant jurisdictions to indicate action taken</p> <ul style="list-style-type: none"> <li>Assess adequacy of actions taken</li> </ul> <p>2. Report to the IJC on items 1, 1a, 2</p>	<ul style="list-style-type: none"> <li>Established a sub-group for tracking and reporting on environmental issues in the basin.</li> <li>Requested data from Environment Canada, Ontario Ministry of the Environment and Climate Change, Ontario Ministry of Natural Resources, Manitoba Department of Conservation and Water Stewardship, U.S. Environmental Protection Agency, Minnesota Pollution Control Agency, Minnesota Department of Natural Resources, and U.S. Geological Survey.</li> <li>Initiated analysis of data.</li> </ul>	<p>water quality conditions to be provided to the IJC in 2015.</p>
<p>3. (Directive 4.a.iii) <b>Review boundary waters water quality and aquatic ecosystem health from time to time</b> and recommend to the Commission such amendments and additions to water quality or aquatic ecosystem health objectives as might be appropriate.</p> <p>3a. (Directive 4.a.iii) At minimum, within one year after completion of, or updates to, major water studies and plans, <b>review existing objectives and present a report</b> to the Commission recommending whether or not to establish new or adjusted objectives, and any such objectives and their levels, so the Commission can consider bringing them forward to Governments for approval. (One example of a major water study or plan is a binational comprehensive basin water management plan for Lake of the Woods and Rainy River watershed, which could have subsequent major updates, anticipated each decade.)</p>	<p>1. Identify changes to water quality and aquatic ecosystem health objectives required in order to achieve desired outcomes</p> <ul style="list-style-type: none"> <li>to follow completion of Water Quality Plan of Study</li> <li>for recommendation by the IJC to Governments</li> </ul>	<p>1. Established a sub-group for tracking and reporting on environmental issues in the basin.</p>	<p>To follow completion of Water Quality Plan of Study.</p>
<b>Water Quality / Aquatic Ecosystem Health Alert Levels</b>			
<p>4. (Directive 4.b) <b>Select, determine, establish, and report on water quality and/or aquatic ecosystem</b></p>	<p>1. Request for IWI funding for the State of the Basin Report Update</p>	<p>1. The <i>Rainy-Lake of the Woods State of the Basin Report, Second Edition</i>, was released on July 8, 2014.</p>	<p>1. SOBR Update Report Completed –</p>

<p><b>health alert levels</b> within the waters of the Lake of the Woods and Rainy River watershed in order to identify potential problems for boundary waters for which water quality objectives have not been established (with particular focus on priority issues within the basin such as water quality, alien aquatic invasive species, climate change indicators and adaptation, and ground and surface water contamination).</p> <p>4a. (Directive 4.b.i) <b>Continue to identify water quality problems on the Rainy River</b> through a process based on comparisons of monitoring data with alert levels selected by the Board as the most stringent water quality guidelines being used by local, state, provincial or federal agencies for such pollutants.</p> <p>4b. (Directive 4.b.ii) <b>Establish alert levels for biological, physical and chemical constituents</b> the Board deems important within the Lake of the Woods and Rainy River watershed.</p> <p>4c. (Directive 4.b.iii) Thereafter, <b>report annually to the Commission on alert levels, exceedences and implications, actions being taken by those responsible for drivers of exceedences</b>, if any, and actions being taken by regulatory agencies, if appropriate.</p> <p>4d. (Directive 4.b.iv) <b>Review alert levels from time to time</b> and make such amendments and additions as might be appropriate.</p>	<p>a. As part of the State of the Basin Report Update, assemble existing information on alert levels</p> <p>b. As part of the State of the Basin Report Update, analyze gaps and approaches in responsible jurisdictions where specific objectives or alert levels do not exist</p> <p>2. Analyze alert levels in relation to recent water quality and environmental health monitoring information provided by relevant agencies /IMA</p> <p>a. determine actions being taken by relevant agencies to address causes of alert exceedences</p> <p>b. develop recommendations for additional actions as appropriate</p>	<p>a. Part 3 of the report addresses existing information on alert levels and gaps.</p> <p>2. - Established a sub-group for tracking and reporting on environmental issues in the basin.  - Requested data from Environment Canada, Ontario Ministry of the Environment and Climate Change, Ontario Ministry of Natural Resources, Manitoba Department of Conservation and Water Stewardship, U.S. Environmental Protection Agency, Minnesota Pollution Control Agency, Minnesota Department of Natural Resources, and U.S. Geological Survey.  - Initiated analysis of data.</p>	<p>July 8, 2014</p> <p>2. To follow completion of Board's first detailed report on water quality conditions.</p>
<b>Monitor Developments/Conditions and Inform IJC</b>			
<p>5. (Directive 4.d) <b>Keep the Commission informed of boundary waters aquatic conditions and plans,</b></p>	<p>1. Charge Board, IAG and CAG with bringing forward relevant information</p>	<p>- Opportunities provided to Board members, CAG/IAG and watershed coordinator to bring forward such information at all</p>	<p>Completed</p>

<p><b>policies, and developments, actual or anticipated,</b> which have the potential to affect the quantity and quality of the water and the health of the Lake of the Woods and Rainy River watershed boundary waters aquatic ecosystem.</p> <p>5a. (Directive 4.e) <b>Maintain awareness of basin-wide developments and conditions which might affect water quantity and quality and ecosystem health,</b> and the people living within the Lake of the Woods and Rainy River watershed, and recommend appropriate strategies to the Commission, if appropriate.</p>	<ul style="list-style-type: none"> <li>○ standing item on all agenda</li> <li>○ Watershed Coordinator to assist with advising the Board of developments in the watershed</li> <li>○ Board to identify items which require further investigation</li> <li>○ Board to develop recommendations as appropriate for communication to the IJC</li> </ul> <p>2. Review and assess status, plans and policies and recommend appropriate strategies to the Commission as appropriate</p>	<p>meetings.</p> <p>- Board heard from members of the CAG and IAG and from members of the public that there is concern over the potential for increased mining activity within the Lake of the Woods drainage basin to contaminate boundary waters if not properly assessed and managed. The Board collected information on the large number of proposals for mining operations within the basin and researched environmental assessment processes in Canada and the US. In an October 2014 letter to the IJC, the Board recommended the Commissioners request of the Governments an explanation of how binational coordination of cumulative and transboundary effects will be accomplished in the basin. The IJC concurred with this recommendation and requested that Governments brief the Commission at the 2015 Spring Semi-Annual Meeting on how cumulative effects of mining will be determined in the basin.</p>	
<b>Coordinate Activities</b>			
<p>6. (Directive 4.f) <b>Coordinate activities with appropriate agencies and institutions as may be needed or desirable,</b> including inter-agency working groups and other research groups conducting sound science within the watershed, and consider designating specific Board members to liaise with specific groups where useful.</p>	<ol style="list-style-type: none"> <li>1. Identify agencies and institutions</li> <li>2. Designate Board members to liaise and provide regular updates to Board; Watershed Coordinator will assist.</li> </ol>	<p>Resource management agencies/institutions are invited to attend a meeting with the Board each August to provide updates on their activities in the basin.</p>	<p>Completed</p>
<b>CAG and IAG</b>			
<p>7. (Directive 4.g) <b>Establish and maintain a Community Advisory Group (CAG)</b> for the purpose of keeping the Board aware of any water resource management issues that may arise in the basin and providing feedback and input to the Board's products and processes, such as the Board's work plan.</p>	<ol style="list-style-type: none"> <li>1. Establish CAG</li> <li>2. Seek CAG assistance in identifying resource management issues</li> <li>3. Consult CAG on Board products and processes</li> <li>4. CAG to meet as appropriate</li> </ol>	<p>The CAG meets about four times a year. The CAG submitted a list of issues for Board consideration, which was discussed at the August 2014 Board meeting and joint CAG-IAG/Board meeting. The issue of impact of mining activities in the basin was raised and, in an October 2014 letter to the IJC, the Board recommended the Commissioners request of the Governments an explanation of how binational coordination of cumulative and transboundary effects will be accomplished in the basin.</p>	<p>Completed</p>
<p>8. (Directive 4.h) <b>Establish and maintain an Industry</b></p>	<ol style="list-style-type: none"> <li>1. Establish IAG</li> </ol>	<p>The IAG meets about four times a year. The IAG submitted a list</p>	<p>Completed</p>

<p><b>Advisory Group (IAG)</b> for the purpose of making the Board aware of industries' perspectives.</p>	<ol style="list-style-type: none"> <li>2. Seek IAG input on industries' perspectives</li> <li>3. IAG to meet as appropriate</li> </ol>	<p>of issues for Board consideration, which was discussed at the August 2014 Board meeting and joint CAG-IAG/Board meeting. The issue of impact of mining activities in the basin (from a recreational perspective) was raised and, in an October 2014 letter to the IJC, the Board recommended the Commissioners request of the Governments an explanation of how binational coordination of cumulative and transboundary effects will be accomplished in the basin.</p>	
<b>Meetings and Reporting</b>			
<p>9. (Directive 4.j) The Board shall <b>organize a joint meeting of the Board with the CAG and IAG once a year.</b></p>	<ol style="list-style-type: none"> <li>1. Hold joint Board, CAG, IAG meetings</li> </ol>	<p>The first joint meeting of the Board with the CAG and IAG took place in August 2014.</p>	<p>Completed</p>
<p>10. (Directive 4.k) <b>Involve the public in the work of the Board; facilitate provision of timely and pertinent information on Board activities within the watershed in the most appropriate manner [...]. Meet publically at least once a year with invitations to First Nations, Métis, and Native Americans and all water users groups and stakeholders</b> to seek advice and hear concerns, such as on a binational comprehensive basin water management plan or other issues. (Locations of such meetings shall be moved around the basin, generally alternating between locations in Canada and the United States.)</p>	<ol style="list-style-type: none"> <li>1. Post meeting summaries, reports, newsletters, notices, and any other pertinent information, to Board website</li> <li>2. Develop communications plan</li> <li>3. Hold public meetings</li> </ol>	<ul style="list-style-type: none"> <li>- In August 2013, the Board held one public meeting in Kenora and another one in International Falls.</li> <li>- In August 2014, the Board held a public meeting on water levels in International Falls. It also participated in a public meeting on the WQPOS in Kenora. The Water Levels Committee also met with the Couchiching First Nation.</li> <li>- Developed draft communications plan which identifies a number of strategies to reach out to the public and indigenous communities in the basin.</li> </ul>	<p>Completed</p>
<p>11. (Directive 4.m) <b>Submit a report covering Board activities annually to the Commission, at least three weeks in advance of the Commission's spring semi-annual meetings,</b> and submit such other reports as the Commission may request or the Board may desire.</p>	<ol style="list-style-type: none"> <li>1. Prepare annual report</li> </ol>	<p>The Board submitted its first Annual Report to the IJC in April 2014.</p>	<p>Completed</p>
<p style="text-align: center;"><i>IJC Report to the Governments of the United States and Canada on Binational Water Management of the Lake of the Woods and Rainy River Watershed, January 2012.</i></p> <p>1. Recommendation 2: The Commission recommends that the governments authorize the <b>development of a Water Quality Plan of Study (WQPOS) for the Lake of the Woods Basin for those priority issues identified by the Task Force for watershed governance action.</b></p> <ul style="list-style-type: none"> <li>• The Task Force identified the following areas for watershed governance action: nutrient enrichment and harmful algal blooms; aquatic invasive species; climate change</li> </ul>			

indicators and adaptation measure development; and sulphide and heavy metal ground and surface water contamination.			
<p>A Water Quality Plan of Study (WQPOS) would identify needed scientific research to understand the underlying causes of current concerns and establish what remedial actions might be most appropriate. The intent would also be to assess the costs of any actions and the roll of governments and the public in this regard.</p> <ul style="list-style-type: none"> <li>Developing the WQPOS would include an analysis of what work is being done in these areas, its timing, as well as what work is needed</li> <li>The Commission sees an important link between the IWI Board and the IMA's efforts and work plan</li> <li>The funding for preparing the WQPOS would come from the IJC's IWI funding.</li> </ul>	<ol style="list-style-type: none"> <li>Form a committee to develop Terms of Reference and recommendations for the Plan of Study <ul style="list-style-type: none"> <li>Present Terms of Reference and recommendations to IJC in Fall 2013</li> <li>Implement IJC directions</li> </ul> </li> <li>Update 2009 State of the Basin Report <ul style="list-style-type: none"> <li>Request IWI funding – Sept. 2013</li> <li>Progress report – Jan. 2014</li> <li>Draft report – March 2014</li> <li>Final report – May 2014</li> <li>Public summary – June 2014</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>The Board submitted a proposed approach for the Plan of Study to the IJC in September 2013.</li> <li>The technical report and summary for the State of the Basin update were released on July 8, 2014.</li> </ol>	Completed
<b>IRLWWB Water Levels Committee DRAFT WORK PLAN</b> <b>BASED ON “Directive to International Rainy-Lake of the Woods Watershed Board; April 1, 2013”</b>			
MANDATE OVERVIEW: The Water Level Committee is a committee of the IRLWWB. The Water Levels Committee is delegated by the Board with the task of ensuring compliance with the terms of the 2001 Consolidated Order in the matter of regulation of Rainy Lake and other boundary waters in the Rainy Lake watershed. The Board, through the Water Levels Committee, acts as a technical adviser to the Commission on the matter of water levels regulation in the Rainy Lake watershed.			
<b>WHAT WE HAVE BEEN DIRECTED TO DO:</b>	<b>WHAT WE ARE GOING TO DO TO CARRY OUT THIS DIRECTION:</b>	<b>ACTIONS TO DATE/LEAD:</b>	<b>COMPLETION DATE:</b>
<b>2001 Consolidated Order Requirements – Core Activities</b>			
1. (Directive 4.c) <b>Ensure compliance with the terms of the Order in the matter of emergency regulation of Rainy Lake and other boundary waters in the Rainy Lake watershed and act as technical adviser to the Commission on this matter.</b>	1. The Water Levels Committee's Engineering Advisors will regularly monitor water levels and flows in the basin and evaluate compliance with the terms of the Order for the levels of Rainy Lake and Namakan Lake. The Committee and its advisers will provide technical advice to the Commission as requested, and as needed to keep the Commission apprised of any	Ongoing	Completed



	<p>current or potential non-compliance with the terms of the Order.</p> <ol style="list-style-type: none"> <li>2. Obtain hydrologic/hydraulic data as necessary to monitor water levels and flows.</li> <li>3. Support the proper functioning of the gauge network.</li> <li>4. Support the identification/resolution of equipment and data errors.</li> <li>5. Analyze data, maintain communications with the dam owners, and provide advice/direction to dam owners as required.</li> <li>6. Support studies to inform the assessment of the impact of the 2000 rule curve change on Rainy/Namakan Lakes.</li> </ol>		
<p>2. (Directive 4.c.i) <b>Whenever, in the opinion of the Water Levels Committee, the terms of the Order are not being complied with, the Water Levels Committee shall so inform dam owners and operators and make such recommendations as it considers appropriate.</b></p>	<ol style="list-style-type: none"> <li>1. The Water Levels Committee’s Engineering Advisors will notify the Committee and dam owners and operators of any potential or existing non-compliance with the 2001 Consolidated Order.</li> <li>2. In keeping with the directive, “At the earliest opportunity, the Water Levels Committee shall report to the Commission directly such apparent lack of compliance with the Order, the circumstances under which it occurred, the action taken by the Board, and the action, if any, taken by or on behalf of the dam owners and operators and inform the Board through the Board Co-chairs.”</li> </ol>	<p>Ongoing</p>	<p>Completed</p>

<p>3. (Directive 4.c.ii) <b>The Water Levels Committee may, on behalf of the Commission:</b></p> <p><b>1. authorize the reduction of the outflow from Rainy Lake for periods of up to ten days if necessary to raise the headpond level at International Falls-Fort Frances to ensure an adequate water supply for plant fire protection purposes or to permit the passage of watercraft from the headpond to Rainy Lake, provided the outflow shall not be less than the flows prescribed in paragraph numbered 2(c) of the Order, and</b></p> <p><b>2. authorize the reduction of the outflow from Rainy Lake and/or Namakan Lake for periods of up to ten days if necessary to meet emergency conditions such as machinery breakdowns at the Kettle Falls or International Falls-Fort Frances dams, fires or other accidents, provided the outflow shall not be less than the flows prescribed respectively in paragraphs numbered 1(c) and 2(c) of the Order.</b></p>	<ol style="list-style-type: none"> <li>1. The Water Levels Committee’s Engineering Advisors will monitor basin conditions on a regular basis, and advise the Water Levels Committee on recommendations to reduce outflows consistent with this directive.</li> <li>2. The Water Levels Committee will evaluate conditions and direct the Companies as appropriate, advising the Board of any actions it takes. The Committee Co-chairs shall inform the Commission forthwith and as soon as practicable thereafter shall forward a written report to the Commission, describing the circumstances in which such action was taken. The report shall be posted on the IJC website following Commission approval.</li> </ol>	Ongoing	Completed
<p>4. (Directive 4.c.iv) <b>When, in the opinion of the Water Levels Committee, conditions either exist or are likely to occur which make it advisable to deviate temporarily from the strict application of the Order, the Board Co-chairs shall refer the matter to the Commission by the fastest practicable means, together with the Water Levels Committee’s recommendation; the Commission will inform the Water Levels Committee of its decision as expeditiously as possible</b></p>	<ol style="list-style-type: none"> <li>1. The Water Levels Committee’s Engineering Advisors will monitor basin conditions on a regular basis, and advise the Water Levels Committee on recommendations to deviate from the strict application of the Order</li> <li>2. If, based on a review of basin conditions, the Water Levels Committee determines that a deviation from the strict application of the Order is advisable; it will notify the Commission by the fastest practicable means.</li> <li>3. Lead the coordination of participants in the Rainy River sturgeon spawning assessment protocol each spring as conditions warrant.</li> </ol>	Ongoing	Completed
<p>5. (Directive 4.c.vi) <b>The Water Levels Committee shall meet face-to-face with the operators of the dam at International Falls-Fort Frances annually to discuss</b></p>	<ol style="list-style-type: none"> <li>1. The Water Levels Committee will carry out the annual meeting as described in the Directive.</li> </ol>	Annual Requirement	Completed

water level issues that have occurred during the previous year and keep the Board informed of important issues discussed at the meeting.			
<b>• Meetings, Reports and Information Exchange</b>			
1. The Board shall conduct its public outreach activities in accordance with the Commission's public information policies.	<ol style="list-style-type: none"> <li>1. Maintain communications as appropriate with the media and public, especially regarding water level and flow regulation. Issue public news releases and web site advisories, as needed, in keeping with the Commission's public information policies.</li> <li>2. Meet with the public, associations and interest groups on various issues, as required.</li> <li>3. Maintain the Board's web-based data on lake levels and basin flows for use by the public.</li> <li>4. Respond to public, agency, and IJC information requests or letters of complaint.</li> <li>5. Periodically conduct basin tours.</li> <li>6. Appear before the IJC at its semi-annual meetings, as requested.</li> <li>7. Annually update the Water Levels Committee Work Plan.</li> </ol>	Ongoing	Completed
<b>Monitor Developments/Conditions and Inform IJC</b>			
	1. Track proposed hydropower developments in the Rainy basin which may impact trans-boundary waters and report developments to the Board.	Ongoing	Completed