

## **CAMPP 2008/09 Activity Report**

### **Background**

Associated with the Wuskwatim Generating Station licencing process, an aquatic environmental monitoring program was deemed desirable in order to help assess over time, the effects of water management within Manitoba Hydro's system. Accordingly, the "*Memorandum of Understanding about Program of LWR/CRD Monitoring Activities, dated October 16, 2006*" between the Province of Manitoba and Manitoba Hydro was signed (**Attachment 1**) and a Coordinated Aquatic Monitoring Pilot Program (CAMPP) was developed.

### **Meetings**

In October 2007 the "Working Group" (established under the MOU) endorsed a conceptual framework for aquatic ecosystem monitoring and directed staff to develop and "pilot" a Coordinated Aquatic Monitoring Pilot Program (CAMPP) in 2008/09.

Development of the CAMPP necessitated the standardization of sampling methodologies for water quality, lower trophic levels (i.e. benthos), forage fish and large bodied fish communities. Accordingly, technical experts from MB Hydro, MB Water Stewardship and North South Consultants met twice (see **Attachment 2**) to establish and track the actions necessary for a standard protocol to be developed and implemented.

On April 25, 2008 a draft CAMPP 2008/09 was presented to the Working Group that contained: 1) Water Quality, 2) Lower Trophic Level, 3) Fish (small and large bodied) components and that accompanied hydrometric monitoring that was for the most part longstanding at chosen CAMPP waterbodies. CAMPP 2008/09 was subsequently accepted with minor revisions.

To ensure that the aquatic ecosystem parameters were sampled consistently, and that the protocol unfolded efficiently, additional meetings were held to address technical issues (July and September; **Attachment 2**). Numerous smaller, issue specific meetings and conversations also occurred to ensure a coordinated and consistent program.

Upon completion of open-water sampling a "Wrap Up Workshop" was held to update all involved on the status of the program activities, discuss issues and advise the development of the next year's program (see **Attachment 3**).

### **Activity Summary**

Hydrometric - additional flow/water level stations were requested and one was established at Setting Lake. The Hayes River site was not established owing to weather / logistical problems and was deferred to 2009/2010 as was the site requested for Manigotagan Lake.

Water Quality - All scheduled water quality sampling was conducted with the following exceptions:

- Cedar Lake - community concerns
- Little Churchill River - logistical issues
- Lake Winnipegosis (one site) - weather

Lower Trophic Level - Power analyses supported the approach that was taken for soft bottom grab sampling but new sites are needed for problem sites as noted below.

- Setting Lake (near shore) - depth
- SIL (near shore) - substrate too hard
- Granville Lake (near shore) - depth
- Lake Winnipegosis (near shore) - too shallow

Rock basket sampling as an indication of benthic production on hard bottom (primarily riverine sites) was somewhat successful with difficulties retrieving baskets noted due to high water. Additionally Cedar Lake sampling was not conducted owing to community concerns and the need for more community consultation and the Little Churchill River site could not be accessed and was dropped from the protocol.

Fish (small and large bodied) - All scheduled fish sampling was conducted with the following exceptions:

- Cedar Lake - community concerns
- Little Churchill River - logistical issues

**Community Consultations** - various community meetings/conversations were performed by MB Water Stewardship (see **Attachment 4**). In general the program was received positively when it was explained that: 1) it arose from Crown Aboriginal Consultations and issues expressed by communities and 2) that more dialogue and discussion would be forthcoming with communities.

### **Emerging Issues**

Data Management Strategy - From a data management perspective, it was recognized that there is an issue with respect to coordinating data management given that the MOU approach is characterized by: 1) multiple entities (MB, MH, NSC, Canada), 2) with multiple data collection programs at varying stages of program development (e.g. hydrometric monitoring is a longstanding mature program whereas erosion/sedimentation monitoring may require significant modifications to address system wide monitoring needs), 3) using multiple products as database platforms - (e.g. Oracle, Microsoft, Kisters, etc.), and 4) configured using multiple database designs / configuration.

It was agreed at the Working Group level that there is a need is for a coordinated approach to data management and that an Aquatic Ecosystem Environmental Data Management Plan is required.

Erosion / Sedimentation - It was also recognized that a coordinated approach to erosion/sedimentation was required to fully monitor water management regime effects on the aquatic ecosystem. As opportunity presents itself, this will be pursued in the future.

## **Attachment 1**

### **MOU**

#### **Memorandum of Understanding about Program of LWR/CRD Monitoring Activities, dated October 16, 2006.**

The Government of Manitoba and Manitoba Hydro are committed to work together on matters relating to monitoring of hydrometric (water level and stream flow) and environmental data in certain areas in the Lake Winnipeg Regulation and Churchill River Diversion system.

Manitoba and Manitoba Hydro have the common objective of developing a program of activities ("the activities"), building on the existing monitoring program of Manitoba Hydro, that would provide objective information about hydrometric and environmental effects of hydro-electric development on agreed rivers and lakes comprising the Lake Winnipeg Regulation and Churchill River Diversion systems ("the system"). The information from the activities could be of benefit to Manitoba, Manitoba Hydro and other interested parties, including communities in the area of the Lake Winnipeg Regulation/Churchill River Diversion project. Objectives of the program of activities would include:

- (a) assisting in evaluating whether and to what extent the water regime in areas of the system is or will be affected by the addition of additional hydro-electric facilities;
- (b) assisting in identifying adverse effects and positive effects resulting from effects on the water regime; and
- (c) assisting in considering measures that may be undertaken to address any identified adverse effects.

Manitoba and Manitoba Hydro may establish additional objectives of the activities.

Manitoba and Manitoba Hydro recognize that Manitoba Hydro has made commitments to monitoring and follow up programs as part of the environmental licensing process for the Wuskwatim Generating Station. These commitments will be considered in developing the activities.

The program of activities will be reviewed each year and annual workplans will be developed by Manitoba and Manitoba Hydro to assist in achieving the program of activities. The agreed workplan for the fiscal year ending March 31, 2007 is attached as Appendix A to this Memorandum.

Manitoba and Manitoba Hydro will consider methods of making information from the activities available to interested parties.

It is intended that the nature and scope of activities will be developed starting in Fiscal Year 2006-07 (starting April 1, 2006) and will continue until Manitoba and Manitoba Hydro agree to no longer proceed with a program of activities.

As part of the development of the annual program of activities, Manitoba and Manitoba Hydro will consider the resources each will provide in order to carry out the activities

It is intended that Manitoba and Manitoba Hydro personnel will prepare an Annual Report to be delivered to the Minister of Water Stewardship and the Minister of Conservation, on behalf of Manitoba and to the President and CEO of Manitoba Hydro. Additional reports may be prepared as Manitoba and Manitoba Hydro determine to be appropriate. The Annual Report may include:

- a description of the activities for that year;
- a description of any information determined as a result of the activities;
- information about any circumstances where water levels or flows were outside of ranges provided for in licences;
- methods of making the information available to interested parties and to the public;
- any other matters that are considered appropriate. It is expected that Manitoba and Manitoba Hydro will make the Annual Reports available to the public.

Manitoba and Manitoba Hydro may amend this Memorandum from time to time by further Memorandum.

  
for Manitoba

  
for Manitoba Hydro

Oct. 16, 2006  
Date

06 09 06  
Date

## Attachment 2

### Technical Experts Meetings

- January 18, 2008 -  
AGENDA
  - Round Table review of November 2007 Workshop - lessons/advice for 2008/09 program development.
  - Concept of “Piloting” the monitoring program
  - Timelines - review of milestones and key dates to ensure a 2008/09 program can be implemented.
  
- April 18, 2008  
AGENDA
  - Final review of comprehensive inventory report
  - Final review of Nov WQ/AE Workshop summary
  - Review of draft 08/09 Pilot program
  - Additional items (time permitting)
    - Hydrometric station review (e.g. new stations required??)
    - Community / FN consultation needs/approach
  
- July 10, 2008  
AGENDA
  - Review first round of water quality sampling
  - Finalize benthic sampling locations
  - Confirm fish sampling approach
  
- September 26, 2008  
AGENDA
  - NSC and MWS - high level status of field activities (...done, yet to do and noteworthy issues).
  - NSC update on budget (combined with item #1)
  - preliminary planning/thoughts on pilot program wrap up/reporting
  - FN/Community dialogue process

### Attachment 3

**Coordinated Aquatic Monitoring Pilot Program (CAMPP)  
2008 Wrap-up Workshop  
Canad Inn Fort Garry, 1824 Pembina Highway  
December 11, 2008**

#### AGENDA

- 8:30 am Continental Breakfast
- 9:00 am Welcome, introductions, meeting objectives - Gary Swanson
- 9:30 am CAMPP Water Quality Program - Jennifer Havelock / Megan Cooley
- 10:10 am CAMPP Fisheries Program - Don Macdonald / Karl Kroeker
- 10:50 am Break (refreshments and snacks provided)
- 11:05 am Ecosystem Modeling Project Status/Update Presentation - DFO Science
- 11:45 am MB Hydro Green House Gas Program - Bob Gill
- 12:05 pm Lunch (provided)
- 1:00 pm Lake Winnipeg Benthos Sampling Program - Brenda Hann / Nicole Armstrong
- 1:20 pm CAMPP Benthos Program - Friederike Schneider-Vieira
- 2:00 pm Discussion item - - utility of GHG monitoring data for system respiration / ecosystem health determinations and possible inclusion in CAMPP
- 2:30 pm Break (refreshments and snacks provided)
- 2:45 pm 2009-10 Program - additional parameters, sites, issues, FN/community meetings etc.
- 3:45 pm Workshop wrap-up / next steps
- 5:00 pm Adjourn

**Note:** Presenters are asked to observe their allocated time. To maintain some structural consistency among the three CAMPP presentations, these talks should focus on: 1) identifying the program objectives, 2) high level summary of sampling/program successes, and 3) recommendations for addressing and/or identification of outstanding issues/challenges associated with the 2008/09 program.

As this is a workshop, CAMPP program presenters are asked to leave a minimum of 1/3 of their 40 minute time allotment to be directed at resolving outstanding questions / issues for 2009/10 program. The Lake Winnipeg Benthos and MB Hydro GHG presentations have been added to the agenda to provide a general overview of existing programs that may benefit CAMPP in the future.

## **Attachment 4**

### **Listing of CAMPP Community Discussions/Presentations**

Community/Resource Management Board (RMB) meetings attended by Don Macdonald (unless otherwise noted):

**March 7, 2008.** Southern Indian Lake Environmental Monitoring Technical Committee

**April 22, 2008.** NE Region MB Conservation Regional Meeting.

**May 7, 2008.** Southern Indian Lake Environmental Monitoring Steering Committee.

**May 21, 2008.** Chemawawin RMB and Napanee Bay Fisherman's Association (Easterville) attended by Grant McVittie (MWS).

**May 26, 2008.** Meeting of commercial fishermen in Moose Lake attended by Grant McVittie (MWS).

**May 27, 2008.** Norway House Fisherman's Co-op.

**July 10, 2008.** Nisichawayasihk Cree Nation (NCN) RMB.

**August 5, 2008.** Chemawawin Cree Nation (CCN) office in Winnipeg to discuss CAMPP and resolve questions regarding consultation. Meeting was cancelled by CCN's consultant.

**August 27, 2008.** Chemawawin RMB (Easterville)

**Sept. 16, 2008.** Fox Lake RMB.

**Oct. 2, 2008.** Norway House RMB.

**Dec. 3, 2008.** Nelson House RMB.

**Dec. 4, 2008.** Norway House Environmental Monitoring meeting.

**Dec 9, 2009.** Southern Indian Lake Environmental Monitoring Steering Committee.

**Feb. 3, 2009.** Southern Indian Lake Environmental Monitoring Technical Committee.

**Feb. 20, 2009.** Nelson River Sturgeon Board.

**Feb. 25, 2009.** CCN office in Winnipeg.