



NORTH SHORE OF LAKE SUPERIOR
REMEDIAL ACTION PLANS

MEETING MINUTES
THUNDER BAY REMEDIAL ACTION PLAN (RAP)
Public Advisory Committee (PAC)

May 6th, 2015 - 7:00 P.M.
Health Sciences North Building (HS), Rm. 1029
Lakehead University – 955 Oliver Rd., Thunder Bay, ON

ATTENDANCE

Jim Bailey	Lakehead University – RAP Office
Alan Cheeseman	Wilderness North
Tammy Cook	Lakehead Regional Conservation Authority (LRCA)
Greg Grabas	Environment Canada (EC)
Jean Hall-Armstrong*	Thunder Bay Field Naturalists (TBFN)
Ashleigh Marchl	Resolute Forest Products
Samuel Pegg†	Lakehead University – RAP Office
Manit Rappon	Lakehead University – Chemistry Department
Kathy Sakamoto	Lakehead University – Graduate Student (Biology)
Mark Serediak	PAC Member

* *Co-Chair*
† *Recorder*

REVIEW OF ACTION ITEMS OF MARCH 11, 2015

ACTION ITEM #1 OF MARCH 11TH/15: Remedial Action Plan Office to research whether or not a shoreline naturalization plan was developed for the Thunder Bay Area of Concern.

Jim Bailey reviewed the action items from the previous minutes which included determining whether a formal shoreline naturalization plan was developed for the Thunder Bay harbour. According to research done by the RAP office, no official plan was ever developed for the entire Thunder Bay shoreline; however, specific shoreline rehabilitation plans and their subsequent actions were a component of several projects such as Sanctuary Island, the wetland habitat of NOWPARC and the embayments at the mouth of the Kaministiquia River.

STATUS: Complete

The other action item J. Bailey mentioned was that the PAC could review the Delisting Criteria relating to fish habitat and populations at a future meeting to see if there were any wording changes that needed to be made. At the March 11, 2015 PAC meeting Terry Marshall brought up a number of questions relating to the delisting criteria and wondered if the criteria were realistic or if they needed to be revisited.

ACTION ITEM #2 OF MARCH 11TH/2015: PAC to discuss at a future meeting the Delisting Criteria relating to fish habitat and populations to see if they are satisfied with the wording or if any changes need to be made.

STATUS: In progress

The minutes of March 11, 2015 were approved.

PRESENTATIONS

Thunder Bay Wildlife Habitat and Populations

GREG GRABAS

Presentation available at www.infosuperior.com

Greg Grabas presented an update on the degradation of wildlife habitat and degradation of wildlife populations beneficial use impairments. He began the presentation with a review of the delisting criteria mentioning that there were two different criteria for wildlife populations, one developed by the PAC and one developed by the International Joint Commission (IJC). The two delisting criteria are as follows:

- [Fish Populations](#)
- [Wildlife Populations.](#)

Regarding the wildlife habitat criteria, G. Grabas highlighted the word "degradation" noting that to protect something from further degradation one needs to be aware of the current conditions.

G. Grabas continued to describe how suitable habitat reference sites are selected based on an index of biological integrity for wildlife communities, specifically bird and amphibian communities. These biological indices are developed from suitable metrics that demonstrate a direct relationship to increasing physical or chemical disturbance. G. Grabas then noted a number of suitable reference sites selected outside the Area of Concern (e.g. Hurkett Cove, Cloud Bay, Sturgeon Bay) and a number of reference sites within the area (e.g. Neebing Marsh, Chippewa Marsh, Northern Wood Preservers Marsh). Once reference sites have been selected, G. Grabas went on to say that land use data would be combined with water sample data including key parameters like pH, conductivity, turbidity, temperature, Nitrogen and Phosphorus. He said this combination of factors would result in an index indicating the quality of habitat.

G. Grabas continued by describing the process used to quantify habitat for marsh birds, amphibian, submerged aquatic vegetation, and aquatic macroinvertebrates. He then presented information about relationships between the breeding marsh bird communities highlighting areas of obvious and probable concern. He presented similar information about community relationships for macroinvertebrate, amphibian, and vegetation communities. He also noted that next steps include collecting more data as well as making a decision about the significance of differences between reference sites (based on boxplot data comparing sites within and outside of the area of concern). He said that all of this information would be taken into account to decide upon the status of, “Degradation of Wildlife Habitat” and, “Degradation of Wildlife Populations.”

DISCUSSION

1. **J. Hall-Armstrong asked what the original wording was for these two beneficial use impairments.**
J. Bailey responded that the original terminology was "Degradation of Wildlife Populations" and "Loss of Wildlife Habitat". G. Grabas noted that when talking about wildlife habitat you can lose AOC habitat through infilling, sheet piling creating "hardened shoreline" and other actions which virtually eliminate habitat. He pointed out that alternatively, the area of habitat might not decrease but the quality of habitat could be negatively impacted.
2. **J. Hall-Armstrong noted that reference sites within the Area of Concern were all protected areas. She asked if these reference sites were a true cross-section or representation of AOC conditions. She added that along the Kaministiquia River many areas that were once wetlands were wetlands no longer.**
3. *G. Grabas said that it goes back to the habitat survey that was done in 2002. He said it would have been difficult to justify having surveyors examining non-wetland areas. He added that examining these areas provided a much better idea of the quality of existing wetland habitat.*
4. **J. Hall-Armstrong reiterated that the key question was not whether specific locations like the Neebing or Mission Marshes were impaired but whether overall wildlife habitat and populations were impaired.**
5. **J. Hall-Armstrong said that there is other habitat besides wetlands and that wildlife does not distinguish between habitat types. She added that only including protected wetland habitat as reference, or study sites, did not take into account the variety of disturbances that impact AOC habitat.**

6. **M. Rappon asked whether pH data for water had been included in the study.**
G. Grabas replied that it had not.
M. Rappon said it would be a good idea to include this information as pH is an important determinant of the health of aquatic organisms.

7. **J. Bailey said he was surprised that the numbers presented indicated that Northern Wood Preservers Marsh was in better condition than many of the wetlands in the St. Mary's River AOC.**
G. Grabas replied that in the St. Mary's River area there is a lot of clay and boat traffic and turbidity is quite high. He also pointed out that sampling was done on only one day. He said the data might be different if data from another day, or several days, was used.

8. **J. Bailey asked about next steps.**
G. Grabas replied that the plan was to collect more data within the year. He mentioned that Northern Bioscience completed all of the work over the last year. He said they would be going on to do bird and amphibian surveys. He said plants, invertebrates, and water quality were being examined by the University of Windsor. He mentioned that the work of Northern Bioscience is done under the marsh monitoring plan through Bird Studies Canada. He said they would be going out three times for Bird Studies Canada with 10 days in between sampling in an effort to capture early and late breeders.

9. **J. Bailey asked if habitat had been studied in other AOCs and if so, whether any significant conclusions had been arrived at.**
G. Grabas replied that habitat had been examined in the Bay of Quinte on Lake Ontario. He said that conditions in that location were much different, noting the presence of large wetland areas, lack of development and good water quality. He said this made it difficult to draw parallels between Bay of Quinte and other Lake Ontario AOCs, much less Thunder Bay on Lake Superior. He said that an alternative method had been arrived at for Lake Ontario AOCs whereby, on average, conditions could not drop more than one or two standard deviations over the sampling period. He emphasized that there is great variance in quality between Lake Ontario sites while in Thunder Bay there is much less variability in overall quality of sites.

UPDATES

Government Agencies

GREG GRABAS

G. Grabas informed the PAC that marsh assessments are being completed at sites within the Thunder Bay AOC this year. He said that toxicology work is still ongoing for bird deformities and problems with reproduction.

Thunder Bay North Harbour

GREG GRABAS

G. Grabas provided an update on the North Harbour project noting that the sediment management options report is still being finalized as there had been a great deal of discussion around it. He also mentioned that Environment Canada's sediment group has been focused on Randle Reef in Hamilton Harbour. He said he hoped for more attention on North Harbour contamination in June.

1. **J. Hall-Armstrong asked if the PAC could be provided with an updated timeline for the North Harbour project.**

G. Grabas replied that North Harbour is on the agenda for the next RAP Implementation Committee (RAPIC) meetings scheduled for fall 2015. He said that once this issue had been discussed an updated timeline would be provided to the PAC.

RAP Office Activities

JIM BAILEY

J. Bailey provided an update on Lakehead University Remedial Action Plan Office activities including a workshop focused on study of Cloud Lake. Cloud Lake (an inland lake located southwest of Thunder Bay) He said the lake has experienced frequent algae blooms and declining fish populations. He said the goal of the workshop was to bring together interested parties to share scientific information and develop an environmental monitoring plan for the lake to quantify conditions. He said the ultimate purpose of this Cloud Lake monitoring work was to address identified issues.

J. Bailey informed the PAC that an open house would be held in Nipigon on May 7th to present information on the status of completed actions to address Beneficial Use Impairments. He said a water management plan had been implemented on the Nipigon River which had assisted the fishery, an upgraded wastewater treatment plant had been built for the Town of Nipigon and a stormwater management plant was being completed for the Town of Nipigon, amongst several other substantial actions. He said a potential outcome was delisting the Nipigon Bay Area of Concern.

The next event he mentioned was the Lake Superior Youth Symposium being hosted by Churchill High School. He said the RAP office would provide a tour of the George Creek rehabilitation project for the students as well as an overview of Thunder Bay Harbour from a lookout to which the group would hike.

J. Bailey also mentioned that Frank Edgson and himself had met with Ontario Power Generation to discuss the latest iteration of the water management plan for the Kaministiquia River. He said Frank had raised concerns about water level fluctuations affecting the fishery and that Frank had also invited the Ontario Ministry of Natural Resources and Forestry to provide a presentation on sturgeon at an upcoming PAC meeting.

NEXT MEETING

The next meeting is tentatively scheduled for September 2015.

ADJOURNMENT

The meeting was adjourned at 9:03 p.m.