

COASTAL HABITAT RESEARCH PROGRAM

STEERING COMMITTEE

SIGNED MINUTES OF THE 2nd MEETING HELD IN CHISASIBI ON OCTOBER 12, 2016

PRESENT: Alain Tremblay – Hydro-Québec
Carine Durocher – Hydro-Québec
Jean-Philippe Gilbert – Hydro-Québec
Marc Dunn – Niskamoon
Norman Cheezo – Eastmain
Réal Courcelles – Hydro-Québec
Nadia Saganash – Niskamoon
Robbie Tapiatic – Chisasibi
Simon Marcotte – Hydro-Québec
William Blackned – Wemindji

GUESTS: Violette Pachanos – Niskamoon
André Tessier – Hydro-Québec
John Paul Murdoch – Niskamoon
Louis Kanatewat – Chisasibi
Roderick Pachano – Chisasibi

CHAIR AND SECRETARY

Mr. Marcotte chaired the meeting of October 12, 2016. Mr. Tessier acted as Secretary.

AGENDA

The meeting began at 3:15 p.m. The Chair reviewed the agenda. Ms. Durocher said that she and Messrs. Tremblay and Gilbert had prepared a work plan covering all of the oceanography, land-use and waterfowl studies. She recommended presenting the work plan before reviewing Mr. Short's proposal.

Mr. Murdoch said that he agreed, as long as the three main study priorities were preserved.

Mr. Pachanos asked why this plan had been developed.



Ms. Durocher responded that one of the SC's responsibilities was to develop a Comprehensive Research Program. She said that it is necessary to have the big picture to be able to effectively coordinate the activities with the schedules of the different studies set out in the program. She added that the researchers directing the studies would need to communicate with one another to share the information gathered from each one.

Mr. Murdoch said that since Mr. Short's study was already in progress, coordinating everything properly would pose a challenge.

Mr. Pachanos and Ms. Saganash asked for an electronic copy of the presentation Mr. Short gave at the first SC meeting.

Mr. Dunn sent the presentation to Ms. Saganash and Mr. Pachanos by e-mail.

Ms. Durocher asked to have the item "Literature review on eelgrass Cree knowledge" added to the agenda.

At Mr. Dunn's request, the item "Boat rental rates" was added to agenda under "Miscellaneous."

SC – 9 – 2016 EELGRASS RESEARCH PROGRAM 2016-2019

Messrs. Tremblay and Gilbert and Ms. Durocher gave a PowerPoint presentation dated October 12, 2016, entitled *Guidelines for Eelgrass Research Program 2016–2019*. A copy was appended to the minutes. Mr. Tremblay said that the objective of the presentation was to put eelgrass-related problems into perspective within the plant's overall environment.

Oceanography

Mr. Tremblay began the presentation with the oceanography component, which includes a section on regional oceanography, and the component on river input, which allows for measurement of local parameters.

In response to a request for clarification from Mr. Dunn, Mr. Tremblay explained that stable isotopes are like footprints for a river and make it possible to ascertain whether the water at a given site comes from the ocean or from a river and, in the latter case, which river it comes from.

Mr. Murdoch asked whether the proposed sampling stations would replace the original plan to use the Amundsen research vessel.

Mr. Tremblay responded that this type of station was being used as part of the follow-up of the Rupert diversion and that, if special focus were placed on the regional aspect, these stations could be used instead of the Amundsen and at a lesser cost.

Mr. Pachanos said that the Crees also want eelgrass to be studied as a fish habitat, since fish is an important resource for land users.

Mr. Dunn agreed that fish as a resource could be included in the study objectives, but said that special attention must be paid to waterfowl, including geese. To avoid creating any limitations, he suggested that the objective of the Comprehensive Program refer to resources that are important to the Crees, with special focus on waterfowl.

Mr. Tremblay said that the objective would be reworded to take these comments into account. He added that the results obtained could also be used for fish.

Mr. Pachanos said that the parameters studied (salinity, water temperature, nutrients, turbidity, etc.) should also include sedimentation.

Mr. Gilbert responded that these are the parameters Mr. Short mentioned in his presentation, but other parameters could also be considered and could be added while developing the program.

Mr. Murdoch said that there would have to be a certain amount of built-in flexibility to be able to incorporate or reject elements during program development.

Ms. Durocher said that, in addition to salinity, the analysis of further parameters would make it possible to consider other elements stemming from traditional knowledge.

Mr. Pachanos expressed concern that all of the possible interactions between the parameters may not be fully considered and that we may not have the answers to all of the questions at the end of the program.

Mr. Tremblay said that it is possible that we will not have all the answers at the end of the three-year research program. However, the objective of implementing the Comprehensive Research Program is to examine the interactions between parameters, rather than study the parameters individually.

Mr. Dunn said that there is the risk of not getting all the answers, even if every effort has been made to obtain them.

Mr. Pachanos said that flexibility will indeed be important, as the parameters affecting eelgrass in the Chisasibi area may be different than those observed in Eastmain.

Mr. Tremblay said that the studies done for the Comprehensive Program must provide an overall picture of the situation. We will have to decide which parameters to consider, while taking geographical differences into account as much as possible. We won't be able to study all the parameters at the same time, but we can't make a general extrapolation based on local data, either. The researchers will have to work together.

Mr. Dunn said that the researchers will also have to be flexible and if new hypotheses emerge, they will have to be discussed. He added that the researchers will have to be accountable and report their findings to the SC and the Cree communities on a regular basis and not just at the end of the three research years, since we will need to arrive at conclusions, make recommendations and propose actions throughout the program.

In reference to Transport Canada's regulation on boating safety, Mr. Murdoch said that Niskamoon is not bound to comply with the same requirements as those set out in Hydro-Québec's internal safety directives.

Mr. Gilbert said that the sizes of the required boats also depend on the equipment to be transported and installed in the water.

Mr. Pachanos said that some people in Chisasibi have been trained as boat operators and that people in Eastmain and Wemindji have received similar training. Therefore, there are people available in the communities who are qualified to navigate farther than 20 kilometres from the coast.

Mr. Tremblay suggested extending regional coastal waters sampling to 20 kilometres from the coast. He added that at this time, there is no need to conduct sampling in James Bay any farther out than 20 km.

Mr. Dunn asked whether the Amundsen should be used to take samples in the bay farther out than 20 km from the coast.

Mr. Tremblay said yes.

Mr. Tapiatic reported that there is a lot of erosion upstream of La Grande 1 powerhouse and that there recently was a big landslide in one of the tributaries. He asked what effect this will have on eelgrass. He said that we need to keep in mind that this happens.

Mr. Tremblay said that since turbidity is being measured, this is a factor that will come out very fast.

Mr. Murdoch asked whether all of the studies together will allow for the development of a model, or whether they will only give us a snapshot of the overall picture.

Mr. Tremblay answered that this is what we will be able to determine; we may end up with something in between.

Mr. Courcelles asked whether we know how many rivers are to be sampled to determine their isotopes.

Mr. Tremblay said that the biggest rivers will be sampled – maybe 15 or more. He added that the work methods are still being discussed and that the details will come later.

Mr. Dunn asked what effect offshore input will have on eelgrass, as opposed to river input.

Mr. Tremblay responded that we need to analyze the isotopes in the main rivers identified on the basis of their watersheds. He suggested using a Beaver to take samples.

Mr. Gilbert said that the rivers between the Harricana to the south and Cape Jones to the north could be considered. He emphasized that the choice must make it possible to round out Mr. Short's work. In addition, sampling has to be carried out for a few years.

Waterfowl

Mr. Gilbert continued with the presentation, discussing the objectives and approach proposed for the program's waterfowl component.

According to Mr. Tapiatic, the hunters said that during the aerial goose inventory, the observers couldn't count the geese because they weren't moving and remained hidden in the eelgrass beds.

Mr. Kanatewat agreed, saying that the geese only move during night time to go to feeding grounds.

Mr. Murdoch said that the surveys would need to be coordinated with the land users. He asked whether any inland surveys would be done.

Mr. Gilbert said that the surveys would have to be conducted during hunting season for the results to be reliable. He added that he wants to get the Canadian Wildlife Service (CWS) involved. In addition, we will have to determine the best way to do the surveys if we want to get the land users' support and cooperation.

Mr. Dunn said that the land users will have to be involved if we expect them to believe the results. He said he is not a big fan of using a helicopter because each time we are in the air, we create a gap between what people see and what they believe. He added that it will not be easy to strike a balance between the use of a helicopter and the goose hunt.

Mr. Gilbert said that we could ask the land users to conduct the surveys, but they would have to be consistent from one year to the next (i.e., same people used and same sites sampled) to ensure that the data is reliable.

Ms. Durocher asked whether a goose harvest registry could be set up like the catch registry we created for cisco.

Mr. Dunn said that this could be done, but it would be a tool to round out the survey data.

Mr. Gilbert added that it would be less accurate as a means of estimating a population.

Mr. Blackned asked how high the aircraft would fly and whether the geese would be counted from the photographs taken.

Mr. Gilbert responded that the aircraft would fly at a high altitude.

Mr. Dunn emphasized that, regardless of the approach selected, the land users will have to be informed of the survey plan.

Mr. Pachanos asked what the difference is between density and abundance.

Mr. Gilbert responded that abundance refers to the total number of geese counted, while density is the number of geese present in a given area or habitat.

Mr. Pachanos asked whether a distinction will be made between long-necked and coastal geese.

Mr. Gilbert said that this question would have to be discussed with the CWS.

Mr. Murdoch asked whether the CWS can say how many geese migrate south and how many migrate north.

Mr. Gilbert responded that there is data on this and that more and more geese seem to be going south and coming north without stopping.

Ms. Saganash asked when the last CWS survey was done.

Mr. Gilbert answered that it was done a while ago.

Ms. Saganash said that the CWS has taken inventories of waterfowl in the Chibougamau area over the last two years.

Mr. Gilbert said that these surveys were carried out with Ducks Unlimited and focused on small areas of 25 km². He added that this method is inappropriate for the surveys we want to do.

The meeting paused at 4:40 p.m. and resumed at 4:55 p.m.

Land use and Cree knowledge

Ms. Durocher presented the objectives and work methods planned for the studies on land use and traditional knowledge.

Mr. Murdoch said that we want to ask land users about eelgrass distribution since 1975. He wondered whether it would be appropriate to refer to a specific date, since people tend to use timelines as reference points, as in the case of Chisasibi (before and after

construction of the La Grande complex) or Waskaganish (before and after construction of the access route), or before and after a community was relocated.

Ms. Durocher explained that 1975 is being used as a reference point because it pre-dates the project and the Crees can easily associate it with the signing of the JBNQA; however, there should also be a reference point from the mid-1990s, when the first signs of the decline in eelgrass appeared. Other time markers could also be considered.

In reference to Mr. Short's presentation at the first meeting, Mr. Murdoch said that traditional knowledge could be useful to the researchers and used the core samples Mr. Short wants to take as an example.

Ms. Durocher said that traditional knowledge should be gathered at the beginning of the study program because it would contribute to other components of the study, including sampling areas.

Mr. Tremblay agreed that Cree knowledge can be very useful and said that we should build on it when conducting other specific research studies.

Concerning the timeline, Mr. Dunn said that the researchers must submit a progress report to the SC every year. He said that this requirement must also be included in future research agreements. It will then be up to the SC to produce a summary of the three-year program and present the results to the communities.

Mr. Marcotte asked whether any sampling is planning in the winter.

Mr. Tremblay responded that winter sampling will be conducted on salinity and turbidity, but that it will be more expensive.

Mr. Dunn said that Cree knowledge can be gathered in 2017, but that land users will have to be consulted on a continual basis throughout the program.

Mr. Courcelles reiterated that the study will be completed over a period of three years, i.e., until summer 2019. He said that a summary will be produced after that, meaning that the field surveys will be done in winter 2019 and other surveys (such as those for waterfowl) will be carried out in spring 2019.

Mr. Dunn suggested that the Cree members of the SC examine the proposal presented for the study's oceanography, waterfowl and land-use components and submit their comments to the SC in two weeks. The Secretary will send them a copy of the presentation. Draft versions of the study terms of reference—at least for the project's main components—will then have to be prepared and discussed before the end of the year.

Mr. Dunn brought up the following general comments from the Cree members concerning the undated document Dr. Short had forwarded to the committee:

- There is available equipment that can be used to reduce costs.
- A study on the algae that are choking out eelgrass beds should be included in the proposal.
- Sulfur has been found in the ground in some eelgrass habitat areas.
- There is too much emphasis on salinity.
- The validation of satellite images should be properly explained to land users so that they can understand the process.

Mr. Courcelles said that at the end of the day, the SC needs to have access to complete and detailed terms of reference.

Ms. Saganash asked whether Dr. Short would be conducting a sampling survey in winter 2017. She was told that no such survey is planned.

Mr. Gilbert said that, generally speaking, more information is required about what Dr. Short wants to do. He said that he had prepared a three-page document setting out his own comments along with those of Mr. Tremblay and Ms. Durocher. Mr. Dunn asked Mr. Gilbert for a copy of the document so that he could add the comments from the Cree members. Mr. Gilbert gave him the document. All comments will be discussed in the next two weeks and then forwarded to Dr. Short.

Mr. Dunn said that during his field visit to Eastman and Wemindji, Dr. Short noted that the water was very turbid and said that this may lead him to review his research protocol.

Mr. Gilbert expressed doubt over the relevance of some components of the study proposed by Dr. Short. He cited the tank experiments in particular, saying that a lot of time could be invested in trying to find the exact combination of factors that would yield a plant similar to what is found in James Bay, but that the appropriate and possibly more detailed analyses conducted in situ would give us the same results.

Mr. Dunn asked Mr. Gilbert what he thinks of Dr. Short's proposal to map eelgrass using hyperspectral satellite imagery.

Mr. Gilbert said that this method could make it very difficult to distinguish eelgrass from other aquatic plants, saying that it is not easy to see the vegetation clearly if there are waves or conditions are cloudy, and that it would require a lot of validation in the field.

Mr. Dunn asked to what extent we can say yes or no to Dr. Short, who is convinced that his method is effective. Mr. Dunn said that this is the most problematic aspect of the program.

Mr. Murdoch said that he is not much in favor of this method, since the farther away you are from the land users, the more you lose credibility.

Mr. Gilbert asked about the cost of acquiring satisfactory satellite images and suggested having the land users delimit the eelgrass beds by boat, as was done during the inventory taken in the 1990s.

Mr. Tremblay added that using the land users would also make it possible to measure other parameters on site, such as turbidity.

Mr. Pachanos was open to the idea of using the land users, saying that they could not only map the current location of the eelgrass beds, but could also identify where they were in 1975. He added that people will trust this method.

Mr. Gilbert said that we could also have the land users collect the data listed in point 5 of Dr. Short's proposal.

Mr. Dunn said that he would contact Dr. Short the following day to inform him of the SC's position.

SC – 11 - 2016 REVIEW OF THE DRAFT MINUTES OF THE 1st MEETING

The members agreed to postpone discussion of this item until the November meeting.

**SC – 12 – 2016 LITERATURE REVIEW ON EELGRASS CREE
KNOWLEDGE**

The members agreed to postpone discussion of this item until the November meeting.

SC – 13 – 2016 BUSINESS ARISING FROM PREVIOUS MEETING

Copy of the Monitoring Committee Agreement to Mr. Pachanos

Mr. Dunn said that he had given Mr. Pachanos a copy of the Agreement at the first meeting.

Method for measurement of nutrients used at La Romaine to Mr. Short

Mr. Gilbert said that at the last meeting, he had not understood that this was a formal request from Mr. Short. He said that he would forward the methodology to Mr. Short.

Contact with the Canadian Wildlife Service (CWS)

Mr. Gilbert said that he had not taken note that he was supposed to contact the CWS to invite them to participate in the Comprehensive Program.

Ms. Saganash said that she had contacted Cédric Peintre at the CWS and that he had asked for a formal invitation from the SC to participate in the Comprehensive Program.

Mr. Dunn said that he would draft a letter and send it to the SC secretary, who would distribute it to the members for comment during the conference call on October 28. Mr. Dunn said that he would prepare the final version and have it signed by Ms. Pachanos, the Chairwoman of the Niskamoon Corporation.

SC – 14 – 2016 MISCELLANEOUS

Equipment rental rates

Mr. Dunn said that, given the nature and scope of the planned research programs, it would be advisable to review Niskamoon's equipment rental rates. He proposed writing a memo concerning this issue, which would be discussed at the November meeting.

SC – 15 – 2016 NEXT MEETINGS

The next meeting will take place by conference call on Friday, October 28, 2016, at 10:00 a.m.

Another meeting will be held at the Duke Street offices in Montréal on Tuesday, November 29, 2016, at 10:30 a.m.

A further meeting is planned in Wemindji on Thursday, January 26, 2017.

The meeting adjourned at 6:30 p.m.